



O. Reg. 88/22: Air Pollution – Discharge of Sulphur Dioxide from Petroleum Facilities

Section 36 Sulphur Dioxide Emission Minimization Plan

Nanticoke Refinery, Imperial Oil

December 11, 2023

This Sulphur Dioxide Emission Minimization Plan was prepared in accordance with Section 36 of O. Reg 88/22 (see Table 1). Regarding Sections 8 to 17 of O. Reg 88/22, only the sections applicable to Imperial Oil’s Nanticoke Refinery (the “Refinery”) are included in Table 1.

Table 1: O. Reg 88/22 Section 36 Sulphur Dioxide Emission Minimization Plan Requirements

O. Reg 88 Reference	Proposed Measures to be Implemented	Anticipated Reduction in Sulphur Dioxide (SO ₂) (MT/year) ¹	Expected Implementation Date
Section 9 – SRU with Incinerator	EuroClaus conversion	1923	Year End 2025
	Installation of SRU caustic scrubber		See Note 2
Section 13 – Flares, mass emission rate of SO ₂	Flare gas recovery and flare gas treating	271	January 1, 2027
Section 16 – H ₂ S in Fuel Gas	Amine gas treating system reliability improvements and debottleneck	311	Year End 2025
	Vacuum Off Gas (VOG) tie-in to refinery fuel gas system		June 2025
Section 17- Annual Mass emissions limits, SO ₂	See items listed above.	3733 ³	January 1, 2027

Notes:

1 Anticipated reduction is based on a selected reference year. The reference year reflects steady state operations for the Nanticoke Refinery (e.g., no turnaround). Annual reductions will vary from year to year depending on Refinery operations.

2 Discussions are underway with the Ministry of Environment Conservation and Parks regarding the implementation timeline for the SRU caustic scrubber.

3. Anticipated total site-wide reduction in SO₂ includes measures already implemented to reduce SO₂ (e.g., SO₂ reducing additive).