EC-45-3 - Written Response (calculations transmitted directly to EC)

The ship will carry four grades of FUEL to conform to the IMO MARPOL Annex VI NOx Emission Limits and Fuel sulphur limits in different jurisdictions. The marine grade diesel required under Canadian/IMO regulations for use in port will be used. If Tier III regulation is enacted, BIM will be obliged to follow the regulation if the technology becomes available. IFO 380 is one of the fuels to be used in Canadian water.

The NOX and SOX emission factors were based on emission testing on the prototype for S80ME-C9 from MAN, which is one of the diesel engines under consideration for the final design. Testing was carried out using marine diesel fuel with a 0.3% S content. For the SO2 emission estimates in transit in Canadian waters requested by EC, IFO 380 with sulphur content between 1-1.5% is used. SO2 emissions were scaled from 0.3%S to represent 1.5%S content. PM emissions factors are not available for the specific engine but were taken from generic data from the MAN manufacturer.

The emissions for NOx, SOx, and PM were estimated by Hatch and verified by RWDI, but are a very preliminary number. This is because the ship design is not firmed up yet, and the engine is not picked yet. We based our estimation using best available information, and the emission estimate (kg/h) provided is for guidance purposes only. Please see the calculation spreadsheet provided for details.