

Indaver Ireland Limited

IE Licence Review Application

IED Article 46, 47, 48 Compliance

Reference: LA010332

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This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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1. Compliance with Industrial Emissions Directive (IED) Article 46, 47, 48

1.1 Article 46

1. Waste gases from waste incineration plants and waste co-incineration plants shall be discharged in a controlled way by means of a stack the height of which is calculated in such a way as to safeguard human health and the environment.

Applicable. Indaver have one main emission point at the stack which has a height of 65m above ground (95.5mOD).

A detailed air quality assessment has been prepared and submitted as part of this application (refer to Attachment 7-1-2).

A detailed baseline air quality assessment and calculation of the stack height has previously been carried out based on maximum emission limits permitted by part 3 of Annex VI and maximum operating conditions (110% thermal load) at the plant for 365 days per year. The calculated stack height of 65m above the ground level (95.5mOD) of the plant will ensure that human health and the environment are protected.

2. Emissions into air from waste incineration plants and waste co-incineration plants shall not exceed the emission limit values set out in parts 3 and 4 of Annex VI or determined in accordance with Part 4 of that Annex.

As outlined in the Operational Report in Attachment 4-8-1, the flue gas treatment system ensures that the emission limit values set out in part 3 of Annex VI are met with ease. The proposed emission limit values in Attachment 7-4-1 reflect those of part 3 of Annex VI and also consider the BAT-AEL's which are applicable for normal operating conditions.

For the proposed development, the waste to energy plant will continue to be the dominant source of air emissions associated with the facility. The increase in waste is predominately in the treatment of aqueous wastes which, when evaporated, is converted to water vapour in the flue gas flow. As the flue gas flow is corrected to standard, dry conditions, the total flue gas flowrate will not increase. In any event, the facility will still comply with its licensed emission limit values and maximum flue gas flowrate and thus the increase in waste tonnage proposed will not cause a significant impact to the ambient air quality.

An increase in the maximum flowrate of 183,700 Nm³/h to 200,000 Nm³/h for the existing plant has been modelled in the assessment included with this application due to an instrument measurement issue at the top end of its range.

If in a waste co-incineration plant more than 40 % of the resulting heat release comes from hazardous waste, or the plant co-incinerates untreated mixed municipal waste, the emission limit values set out in Part 3 of Annex VI shall apply.

Indaver is an incineration plant. This is not applicable in this case.

3. Discharges to the aquatic environment of waste water resulting from the cleaning of waste gases shall be limited as far as practicable and the concentrations of polluting substances shall not exceed the emission limit values set out in Part 5 of Annex VI.

There are no process effluent discharges to the aquatic environment.

Wastewater arising from process activities is reused in the process or tankered offsite for treatment in a licensed facility in the Republic of Ireland. Domestic wastewater produced onsite (sanitary wastewater from toilets, washrooms and the canteen) is treated onsite by PuroFlo systems which then pass through a percolation area to ground.

4. The emission limit values shall apply at the point where waste waters from the cleaning of waste gases are discharged from the waste incineration plant or waste co-incineration plant.

There are no process effluent discharges to the aquatic environment.

Wastewater arising from process activities is reused in the process or tankered offsite for treatment in a licensed facility in the Republic of Ireland. Domestic wastewater produced onsite (sanitary wastewater from toilets, washrooms and the canteen) is treated onsite by Puraflo systems which then pass through a percolation area to ground.

5. Waste incineration plant sites and waste co-incineration plant sites, including associated storage areas for waste, shall be designed and operated in such a way as to prevent the unauthorised and accidental release of any polluting substances into soil, surface water and groundwater.

Storage capacity shall be provided for contaminated rainwater run-off from the waste incineration plant site or waste co-incineration plant site or for contaminated water arising from spillage or fire-fighting operations. The storage capacity shall be adequate to ensure that such waters can be tested and treated before discharge where necessary.

All wastes, raw materials and residues from the plant are handled on hardstanding areas either indoors or in areas with controlled drainage systems.

Storm water is passed through an underground oil interceptor before draining to the attenuation pond where it is analysed by an automated analyser and subsequently monitored before release. Contaminated run-off arising from firefighting operations are contained by collection in the stormwater drainage system and draining to both the underground contaminated water tank and by overflow when full to the attenuation pond.

Fuel oil and ammonia for use in the process are stored in double skinned tanks with leak protection on concrete hardstanding areas. The tanker unloading area (for aqueous ammonia and fuel oil), which is located adjacent to the fuel tank, is provided with cut off drains to collect any spillage that may occur during loading or unloading. A holding tank is in place, which ensures that any spills/leaks are contained within the unloading area during tanker unloading.

Solid waste is stored in a concrete waste bunker which is designed to contain any leachate generated by the waste. Liquid wastes for treatment are stored in a double skinned tank and are unloaded into the tank within a designated concrete contained area which is not connected to the main surface water drainage network.

Bottom ash, boiler ash and flue gas cleaning residues generated from the different process stages at the site, are contained within the internal structure of the building. Additional protection is provided through manned loading, fully enclosed transport systems and tanks and spill containment procedures which are in place in the event of an ash spill.

Bottom ash shall be stored at dedicated areas within the ash handling building and tipping hall, on concrete hardstanding with contained drainage or other buildings agreed by the Agency.

The bottom ash is quenched in a water bath upon discharge from the furnace. In the event of a release of water from the wet bath, spilled material is contained in the area and any material reaching indoor drains will be contained in the internal drainage recovery tanks where the water can be removed for treatment or reused within the treatment process. The wet bath will be inspected and maintained as part of the site's maintenance programme.

The existing site stormwater drainage system has been designed in general accordance with Sustainable Drainage Systems (SuDS) principles. Contaminated run-off arising from firefighting operations are contained by collection in the stormwater drainage system and drain to both the underground contaminated water tank and by overflow when full to the attenuation pond which provide sufficient retention capacity.

Refer to the Operational Report (Attachment 4-8-1) and Environmental Management Techniques (Attachment 9-1) for further information of the prevention of contamination and accidental emissions on site.

6. *Without prejudice to Article 50(4)(c), the waste incineration plant or waste co-incineration plant or individual furnaces being part of a waste incineration plant or waste co-incineration plant shall under no circumstances continue to incinerate waste for a period of more than 4 hours uninterrupted where emission limit values are exceeded.*

The cumulative duration of operation in such conditions over 1 year shall not exceed 60 hours.

Indaver adheres strictly to this Article as part of its standard operating procedures.

This is enforced by Condition 3.21.2 of the IE Licence W0167-03.

1.2 Article 47

Breakdown

In the case of a breakdown, the operator shall reduce or close down operations as soon as practicable until normal operations can be restored.

Indaver complies with Article, which is enforced by Condition 3.21.1 of the IE Licence W0167-03.

Actions to be taken outside of normal working hours have been detailed in the site Emergency Response Plan (refer to Attachment-9-1-Environmental-Management-Techniques accompanying this application).

1.3 Article 48

Monitoring of Emissions

1. Member States shall ensure that the monitoring of emissions is carried out in accordance with Parts 6 and 7 of Annex VI.

The measurements relating to air polluting substances in Part 6 are carried out on the parameters and with the frequency specified in Attachment 7-4-1 on the main emissions from the plant. The re-calculation for Oxygen for the concentrations of the relevant substances is made in accordance with the formula in Part 7.

2. The installation and functioning of the automated measuring systems shall be subject to control and to annual surveillance tests as set out in point 1 of Part 6 of Annex VI.

Indaver ensure that the measurements are carried out in accordance with the correct norms as agreed with the Agency. Indaver carry out annual surveillance tests in accordance with the conditions of the licence.

3. The competent authority shall determine the location of the sampling or measurement points to be used for monitoring of emissions.

All monitoring points are sampled in agreement with the Agency. Monitoring points are clearly labelled and named and sampled by suitably competent persons.

4. All monitoring results shall be recorded, processed and presented in such a way as to enable the competent authority to verify compliance with the operating conditions and emission limit values which are included in the permit.

The reporting of emissions from Distributed Control System is automated in such a way that the results are standardised as per the conditions of the licence. This ensures that the results are directly comparable to the emission limit values.

5. As soon as appropriate measurement techniques are available within the Union, the Commission shall, by means of delegated acts in accordance with Article 76 and subject to the conditions laid down in Articles 77 and 78, set the date from which continuous measurements of emissions into the air of heavy metals and dioxins and furans are to be carried out.

Article 48(5) of the IED is not applicable to the Operator.