Environmental Protection Agency
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Ms Claire Downey
Project Co-Ordinator
Indaver Ireland (Branch of Indaver NV)
4 Haddington Terrace
Dun Laoghaire
Co. Dublin

26th June 2009 Reg. No. W0167-02

re: Notice in accordance with Article 14(2)(b)(ii) of the Waste Management (Licensing) Regulations 2004 to 2008

Dear Ms. Downey,

I am to refer to the above referenced application for a revised waste licence relating to the Indaver Ireland Waste Management Facility at Carranstown, Duleek, Co. Meath. Having examined the documentation submitted, I am to advise that the Agency is of the view that the documentation does not comply with Article 12 and Article 13 of the Waste Management (Licensing) Regulations. You are therefore requested, in accordance with Article 14(2)(b)(ii) of the regulations, to take the steps and supply the information detailed below:

ARTICLE 12 COMPLIANCE REQUIREMENTS

1. Classes of Activity

(a) Attachment B.2.2 states that the residue solidification unit has been removed from the proposed facility yet Attachment B.7 identifies Class 7 of the Third Schedule (physico-chemcial treatment) as a relevant class of activity. Please clarify the need for this class, and provide details of the infrastructure/processes and emissions for the solidification of residues prior to disposal off-site, if applicable.

(b) Please provide details of the infrastructure/processes for the recycling or reclamation of other inorganic materials at the facility (Class 4 of Fourth Schedule).

2. Waste Types and Quantities

The Waste Incineration Directive 2000/76/EC (WID) requires the category & quantities of waste for incineration to be stipulated in a licence. You have applied for every EWC code except Chapters 1, 13, 14 & hazardous wastes. This is not in line with the WID requirements or the Agency's recently published technical guidance document on *Municipal Solid Waste – Pre-treatment & Residuals Management.*

(a) You are requested to re-submit a more defined list of waste types and quantities for incineration, and to elaborate on the type and source of waste in relation to each EWC code.

(b) Please explain how waste arriving at the facility will meet the municipal solid waste pre-treatment obligations, as per the Agency's technical guidance document referred to above.

(c) Identify the sources and quantities of sludges that are proposed to be incinerated at the facility, including details of anticipated % dry solids content and calorific values. Describe the technology proposed for feeding sludges to the furnace, and the proposals for odour management during sludge delivery and storage. Provide details of the capacity of the sludge storage vessel.

3. Facility Infrastructure

(a) Please describe the proposed grate type & grate cooling mechanism, having regard to section 2.3.1.2 of the BREF document on Waste Incineration (August 2006).

(b) With reference to Section A.1.6.b *Site Infrastructure Modifications* of the application, please explain why the sorting plant and residue solidification unit have been removed from the plant design, and why a bottom ash handling building has been added. Please clarify what type of sorting plant was initially proposed and how the absence of the sorting plant at the facility will conform to the municipal solid waste pre-treatment obligations.

(c) Identify the key process control parameters and monitoring equipment for each step of the revised flue gas treatment design.

(d) Provide evidence, based on international experience at a similar facility, that the revised flue gas treatment technology proposal (combined semi-wet and dry process with recirculation) has been proven to meet the requirements of the WID.

(e) Describe the waste storage & infrastructural arrangements to be put in place in the newly proposed waste quarantine area in the service yard, that will ensure that appropriate conditions are maintained to avoid odour generation, the attraction of vermin and any other nuisance. Describe the proposed drainage arrangements to be put in place to facilitate periodic floor washing at the waste quarantine area.

(f) Section D.1.k.b of the application states that '*Water collected in the contaminated water diversion tank will be reused in the process where possible, treated on-site, or transported off-site for treatment or disposal*'. Please clarify what type of contaminated water treatment is proposed to be undertaken at the facility, and provide details of relevant infrastructure and emission characteristics.

4. Water Supply & Drainage

(a) Section D.2.8 of the application states that domestic and process water will be supplied from a groundwater well on site. Please confirm whether there is to be a connection to the public watermain for domestic water supply, as discussed at the site inspection of 12/06/09.

(b) Please re-submit the proposed site drainage layout (Appendix D.5: Drawing No. 15013\WL\006) at a more appropriate scale and using different and clear colours to depict the foul and surface water drainage networks.

(c) Section D.1.v of the application states that the '*attenuation capacity for surface water run-off has been increased from 1,500m^3 to 4,700m^3 given that water is no longer re-circulated on site*'. Please determine by calculations the revised attenuation capacity of the site, as discussed at the site inspection of 12/06/09.

(d) Justify the proposal to install a Class II oil separator on the surface water drainage network, having regard to the requirement for a Class I separator in Condition 3.14.2 of the existing waste licence W0167-01.

(e) Justify the use of a surface water discharge rate of 16.98 l/s (based on Dublin City Council's Storm Water Management Policy) in the site drainage design. Provide details of any requirements of Meath County Council with regard to the site drainage design.

5. Air Dispersion Model

(a) Please revise the air dispersion model & report as appropriate, having regard to the following:

(i) In Chapter 7 (Air Quality Study) of the EIS, Table 7.2 shows the mass emission rates (g/s) of pollutants used in the model. The maximum volumetric flow rate emitted from the stack is identified as 204,000 m^3/hour in *Table E.1 Point Source Emissions* in Appendix E.2 of the licence application. The maximum emission rates in Table 7.2 do not correspond to the stated maximum volumetric flow rate. Please confirm what the maximum mass emission rates and flow rates will be and confirm that the model represents the worst-case scenario. Please also assess the modelled dispersion arising from maximum emission concentrations and average flow rates emitted from the stack.

(ii) The revised flue gas treatment design - the model report refers to the previous design (authorised in licence W0167-01) which included wet scrubbing for second stage acid gas and dioxin removal and flue gas reheat prior to discharge to mitigate against visible plume formation.

(iii) The availability of up-to-date source emission data for Irish Cement Platin works, having regard to the revised IPPC licence (Reg. No. P0030-03), which was issued on 10th June 2008.

(b) Justify the rationale for the modelled concentrations of (i) HF under maximum operation and (ii) TOC & Heavy Metals under abnormal operation, having regard to the WID emission limit values.

(c) In the context of the abnormal operation scenarios modelled, please explain the rationale for applying different durations of abnormal operation for each parameter.

(d) Please submit an electronic copy of all files used in the air dispersion model (input, output, meteorological, terrain, buildings data, etc.).

(e) Please clarify which interface to AERMOD and which version of AERMOD was used in the assessment. Confirm whether the model's routine for calculating annual average concentrations has been validated.

(f) Identify the meteorological conditions at which elevated ground level concentrations of pollutants occur. Provide results for the 10 highest ground level pollutant concentrations (including meteorological data) for each modelled year for (i) vapour phase emissions and (ii) particulate phase emissions.

(g) Justify that the background $PM_{2.5}$ and NO_X concentrations used in the assessment are appropriate, given the relatively short sampling periods and the potential for seasonal effects on air quality.

(h) For all background ambient monitoring locations, explain the criteria used for site selection and justify their appropriateness having regard to Schedule 8 *Location of Sampling Points for the Measurement of Pollutants* of the Air Quality Standards Regulations 2002, S.I. No. 271 of 2002.

(i) Review and revise as necessary, the model receptor grids to show finer detail within 1km radius of the site (e.g. 20m x 20m) in order to demonstrate the effect of emissions from the proposed incinerator, as compared to the effect of emissions from neighbouring sources.

(j) Table 7.29 *PCDD/PCDF Relative Emission Factors for Municipal Waste Incinerator (MB-Ref WS)* provides a Total PCDD/PCDF emission concentration of 0.1 ng/m^3 from stack. As this concentration is the WID emission limit for Dioxins and Furans, please clarify whether it is a worst-case scenario. In addition, please justify the appropriateness of using PCDD/PCDF emission factors for a mass burn refractometry system with wet scrubbing (taken from the Database of Sources of Environmental Releases of Dioxin-like Compounds in the United States, USEPA, 1998), given the changes to the proposed flue gas treatment design.

(k) Table 7.34 *PCDD/PCDF Annual Particulate Deposition Fluxes under Maximum Operating Conditions*:- please clarify why the sum of the dry and wet particulate deposition fluxes does not correspond to the figure provided for the combined particulate deposition flux.

(l) Section 7.9 *Polycyclic Aromatic Hydrocarbons (PAHs)*:- please clarify whether the assessment only considers benzo[a]pyrene or were all PAHs considered by weighting each one in terms of benzo[a]pyrene?

(m) Section 7.9.1 *PAHs*:- Are there any independent results available of monitoring of PAHs in emissions from a similar facility?

(n) Table 7.43 *B[a]P Deposition Fluxes*:- please clarify why the sum of dry and wet particulates does not correspond to the figure provided for total particulates.

6. Provide an update on the schedule of plant construction and commissioning works.

7. Identify the relevant class or classes of activity in accordance with Council Directive 96/61/EC concerning integrated pollution prevention and control.

ARTICLE 13 COMPLIANCE REQUIREMENTS

1. Provide a non-technical summary of the Environmental Impact Statement (EIS).

2. Please update the relevant sections of the EIS, having regard to the following:

   (a) Section 5.6 provides details of the previous flue gas treatment system design (authorised in licence W0167-01);

   (b) Section 5.7 provides details of water supply (including volumes) which contradict information in the licence application;

   (c) Section 5.7 provides details of solid waste residues which contradict information in the licence application (quantity of boiler ash and size of boiler ash storage silos);

   (d) Section 5.16.2 refers to 20kV overhead electricity line;

(e) An updated Seveso assessment (dated 9th July 2008) is included in Appendix B.9 of the licence application;

(f) Chapter 7 *Air Quality Study* should be updated to reflect the information requested under Question 5 of the Article 12 Compliance Requirements above, and the updated model results (following correction of terrain data and the stack base elevation) provided in Appendix I.7 of the licence application.

(g) Any other necessary updates.

Your reply to this notice should include a revised non-technical summary (Application Form and EIS) which reflects the information you supply in compliance with the notice, insofar as that information impinges on the non-technical summary.

Please supply the information in the form of a one (1) original plus one (1) copy in hardcopy format within **6 weeks** of the date of this notice. In addition submit sixteen (16) copies of the requested information to the Agency in electronic searchable PDF format on CD-ROM. Please note that all maps/drawings should not exceed A3 in size.

Please note that the application's register number is **W0167-02**. Please direct all correspondence in relation to this matter to *Administration, Licensing Unit, Office of Climate, Licensing & Resource Use, Environmental Protection Agency, Headquarters, PO Box 3000, Johnstown Castle Estate, County Wexford* quoting the register number.

Yours sincerely,

Aoife Loughnane

Aoife Loughnane
Inspector
Office of Climate, Licensing & Resource Use