

**REPORT OF THE TECHNICAL COMMITTEE
ON OBJECTIONS TO LICENCE CONDITIONS**

TO:	Directors
FROM:	Technical Committee - Environmental Licensing Programme
DATE:	6 th May 2015
RE:	Objections to a Proposed Determination (PD) issued to Indaver Ireland Limited for an installation at Carranstown, Duleek, County Meath, Licence Register W0167-03.

Application Details

Type of installation:	Waste-to-Energy Installation
Category of Activity under IED (2010/75/EU):	5.2: Disposal or recovery of waste in waste incineration plants or in waste co-incineration plants: (a) for non-hazardous waste with a capacity exceeding 3 tonnes per hour; (b) for hazardous waste with a capacity exceeding 10 tonnes per day.
Class of Activity under the EPA Acts 1992, as amended:	11.3: Disposal or recovery of waste in waste incineration plants or in waste co-incineration plants: (a) for non-hazardous waste with a capacity exceeding 3 tonnes per hour; (b) for hazardous waste with a capacity exceeding 10 tonnes per day.
Licence application received:	23 rd April 2012
PD issued:	28 th November 2014
Third party objections received:	5 th January 2015
Submission on third party objections received:	3 rd February 2015
Regulation 28 letter issued:	17 th February 2015
Regulation 28 response received:	3 rd March 2015
Submissions on Regulation 28 response received:	No submissions received

1. Company and background to this report

This application relates to a review of Indaver Ireland Limited's Industrial Emissions Licence W0167-02, granted as a Waste Licence on 16th February 2011 (and amended to an Industrial Emissions Licence on 31st December 2013), for the Waste-to-Energy Installation at Carranstown, Duleek, Co. Meath. The licence was transferred from Indaver Ireland (branch of Indaver NV) to Indaver Ireland Limited on 29th August 2011.

Indaver Ireland Limited are seeking authorisation for changes at the installation, including:

- (i) Increase of 35,000 tonnes (17.5%) in annual waste throughput, to a maximum waste incineration capacity of 235,000 tonnes per annum (up to 31st December 2019, 220,000 tpa thereafter);
- (ii) Inclusion of additional waste types (hazardous and non-hazardous EWC codes);
- (iii) Extension of waste acceptance and dispatch hours;
- (iv) Additional storage tanks for ammonia (62m³) and fuel oil (44m³);
- (v) Additional package waste water treatment system (30 p.e.) to serve the modular office block;
- (vi) Conversion from temporary to permanent status of two structures (modular office block and spare parts shed). Conversion to permanent status of hardcore area for contractor parking, paved roadway leading to office block, and 22 additional paved car parking spaces.

This report considers four valid third party objections received by the Agency, and one third party submission on the objections, in relation to the Proposed Determination (PD) issued to Indaver Ireland Limited on 28th November 2014. In addition, a letter was issued to Indaver under Regulation 28 of the Environmental Protection Agency (Industrial Emissions) (Licensing) Regulations 2013 seeking further information, to which a response was received on 3rd March 2015. The response was circulated to all objectors and no submissions were received.

2. Consideration of the objections

The main issues raised in each of the objections and the submission on the objections are summarised below. The original objections should be referred to at all times for greater detail and expansion of particular points.

Objectors' Names	Date Received
Veolia Environmental Technical Solutions Ltd.	5 th January 2015
Mr Michael O' Dowd, on behalf of Drogheda Environmental Team and Louth and Meath Health Protection Group	5 th January 2015
Mr Ollan Herr, on behalf of Zero Waste alliance Ireland	5 th January 2015
Mr John Shortt, on behalf of Hollywood and District Conservation Group	5 th January 2015
Submission on objection by Mr Michael O' Dowd, on behalf of Drogheda Environmental Team and Louth and Meath Health Protection Group	3 rd February 2015

The Technical Committee (TC), comprising of Caitríona Collins (Chair) and Caroline Murphy, has considered all of the issues raised in the objections and the submission on objections, and this report details the Committee's comments. The Technical Committee also consulted with the following:

- Agency Inspector David Matthews (Office of Environmental Enforcement) in relation to compliance issues;
- Agency Inspector Brian Quirke (Office of Climate, Licensing, Resource and Research) in relation to the Stockholm Convention; and
- The Finnish Environment Institute in relation to the Ekokem municipal waste incinerators.

In addition, further information was requested from Indaver under Regulation 28 of the Environmental Protection Agency (Industrial Emissions) (Licensing) Regulations 2013 and the response to the request for further information has been considered by the Technical Committee.

2.1 *Veolia Environmental Technical Solutions Ltd.*

Objection 2.1.1 *Fly ash*

Veolia Environmental Technical Solutions Ltd. (Veolia) refers to the minimum storage capacity required for fly ash/flue gas cleaning ash as provided for in Condition 3.9 of the Proposed Determination. In this regard, Veolia contends that the facility should be a Seveso site as it will have the capacity to store more than 200 tonnes of fly ash, which is eco-toxic, onsite. Further, Veolia refers to Schedule C.4 in relation to annual classification of fly ash as hazardous or non-hazardous. In this regard, Veolia contends that the European Waste Catalogue and Hazardous Waste List entries for air pollution control residues are hazardous, being absolute entries with no option to classify them as non-hazardous.

Technical Committee's Evaluation:

The Health and Safety Authority is the competent authority for the Seveso Directive in Ireland.

The minimum storage capacity for fly ash/flue gas cleaning ash provided for in Condition 3.9 of the Proposed Determination remains unchanged from the current licence. In its response to the request for further information under Regulation 28 of the Environmental Protection Agency (Industrial Emissions) (Licensing) Regulations 2013, Indaver confirmed that the concentrations of heavy metals in the flue gas treatment residues measured at the Carranstown installation are significantly lower than those predicted in a Seveso assessment undertaken for Indaver in 2008, and that the proposed amendments at the facility would require no changes to the Seveso status of the site.

Flue gas treatment residues have been classified to date as hazardous waste and are subject to periodic monitoring in accordance with Schedule C.4 of the Proposed Determination. Indaver failed to justify its assertion that changes to the chemical constituents of the flue gas residue, resulting from the proposed acceptance of hazardous waste, are not anticipated because there will be a limited range of hazardous waste types accepted at the installation. It is essential that the nature of the flue gas treatment residues arising during acceptance of hazardous waste is established at the earliest opportunity. Therefore, the Technical Committee considers it appropriate that the frequency of the monitoring required for flue gas treatment residues specified in Schedule C.4 of the Proposed Determination should be increased from biannually to quarterly as it is essential that a sound database of monitoring

is available relating to chemical constituents of the flue gas treatment residues to provide for effective regulation and enforcement.

Flue gas treatment residues can be classified as hazardous or non-hazardous waste, as there are corresponding mirror entries in the European Waste Catalogue, 19 01 13* and 19 01 14. This classification will remain unchanged in the amended European Waste Catalogue, which will apply from 1 June 2015.

Recommendation:

Amend Schedule C.4 Monitoring of Incinerator Residues as follows:

In relation to Flue Gas Treatment Residues

Replace:

“Biannually”

With:

“Quarterly”

Objection 2.1.2: *On-site laboratory*

Veolia states its objection to there being no requirement for an on-site laboratory in the Proposed Determination, referencing its earlier submission relating to the same issue on the licence application. Veolia requests the inclusion of a specific condition in the licence requiring an on-site laboratory. Veolia also makes reference to BAT 69 of the Waste Incineration BREF with regard to analysing incoming waste streams. Veolia expresses concern around the control on incoming waste in terms of risk associated with variability, incompatibility and the required net calorific value.

Technical Committee’s Evaluation:

Indaver operate a hazardous waste transfer station in Dublin Port (W0036-02) where there is access to a laboratory that can determine a wide range of parameters, in line with those required to meet BAT as per the Waste Incineration BREF, with additional access to other Indaver and third party laboratories in Europe. The Technical Committee considers that this is sufficient to meet the needs of the Carranstown installation with respect to analysing incoming waste streams, including the hazardous waste types proposed to be accepted, in line with BAT requirements. The Technical Committee notes that while BAT 69 sets out the parameters that should be tested, it does not specify that the analysis should be conducted on-site.

Recommendation:

No change.

Objection 2.1.3: *Chemical limits for hazardous waste*

Veolia states that there are no limits set for chlorine in the list of chemical limits for hazardous waste presented in Schedule A of the Proposed Determination. Veolia further requests that a chlorine limit be included in the table in Schedule A. Veolia also refers to there being no mention of pH range, flammability or flash point limits, or radioactivity controls in the Proposed Determination.

Technical Committee's Evaluation:

Condition 1.3 of the Proposed Determination states that hazardous waste with a chlorine content of >1% shall not be accepted for treatment at the installation. This limitation has not been reflected in the Schedule A.2 setting out Chemical Limits for Hazardous Wastes.

The chemical limits for hazardous wastes, as set out in the Proposed Determination, are in accordance with Article 45(2)(b) of the Industrial Emissions Directive¹. However, pH range, flammability or flash point limits are not required to be specified. Notwithstanding this, the Technical Committee notes that BAT 69 requires testing for flashpoint to be undertaken. Condition 8.4 of the Proposed Determination addresses waste acceptance/removal and characterisation procedures and Condition 8.4.4 in particular addresses hazardous waste, including physical properties, chemical composition and compatibility/reactivity. The Technical Committee is therefore satisfied that pH range, flammability and flash point are sufficiently addressed in the Proposed Determination.

In relation to analysis for radioactivity, the Technical Committee notes that BAT 69 of the Waste Incineration BREF requires this analysis only where it has not been addressed under BAT 3 through fixed detectors at the plant entrance, which has been addressed in Condition 3.20.10 of the Proposed Determination.

Recommendation:

Amend Table in Schedule A.2 setting out Chemical Limits for Hazardous Wastes as follows:

Insert additional chemical limit:

Substance	Maximum content
Chlorine (Cl)	1%

Objection 2.1.4: *Recovery and disposal*

Veolia states that Condition 7 of the Proposed Determination relating to the calculation to be used for energy efficiency is incorrect as the calculation required is for an R1 facility dedicated to processing municipal solid waste. Veolia contends that, given the waste types proposed to be accepted, this calculation is not applicable. Veolia further contends that the facility cannot be classified as R1, as stated in their original submission, and that the treatment of the hazardous and aqueous waste must be considered disposal.

Technical Committee's Evaluation:

The Proposed Determination does not classify the installation as an R1 installation. The scope of the Energy Efficiency Formula, as described in the European Commission's "Guidelines on the Interpretation of the R1 Efficiency Formula for incineration facilities",

¹ Transposed by the European Union (Industrial Emissions) Regulations 2013 (S.I. No 138 of 2013)

clearly indicates that other waste streams may be accepted at a municipal waste incinerator and that the calculation of the R1 formula is to be done on the actual waste composition treated and not only on the part of the waste input that is classified as municipal. The Guidelines state that non-municipal wastes can be accepted as long as they are specified in the licence in accordance with the relevant directives (IPPC and WID, now IED) and the BREF document, which does not prohibit hazardous waste being treated in a municipal solid waste incinerator.

It was recognised by Indaver in its response on 4th September 2013 to the Article 16 Notice issued by the EPA on 18th July 2013 that D10 (incineration as a disposal operation) is applicable to the installation. While certain wastes consigned for treatment at the Carranstown installation will be subject to D10 rather than R1, due to their type and calorific value, Indaver customers consigning such waste will be so informed in any documentation/records relating to the treatment of such waste, in accordance with Condition 11, as appropriate.

Recommendation:

No change.

Objection 2.1.5: *Calorific Values (CVs) of waste streams*

Veolia states that the CV ranges of the hazardous wastes outlined in Schedule A.2 of the Proposed Determination potentially underestimate the likely true CV of the waste and that the energy derived from the incineration may not be optimised. Veolia further states that, given the potential for layering of liquid wastes in the delivery tanker, it may be difficult for the licensee to ensure that the net CV of the waste entering the incinerator does not exceed 18MJ/kg.

Technical Committee's Evaluation:

Condition 8.4.3 requires detailed written procedures for the acceptance and handling of wastes, including waste inspection prior to discharge into the bunker. Any individual waste stream with a CV above its limit specified in Schedule A.2 will not be permitted to be treated.

The various waste streams will contribute positively or negatively to the net CV of 18MJ/kg specified in Condition 3.28 of the Proposed Determination. The licensee will have to manage the acceptance and introduction of waste and be particularly attentive to high calorific value wastes such that the condition is complied with and the incineration equipment protected from damage. Condition 3.20.12 of the Proposed Determination states that liquid wastes shall be introduced to the furnace by way of direct injection. Condition 8.4.3(i) of the Proposed Determination requires Indaver to carry out waste inspection prior to discharge into the bunker. The potential for layering of liquid wastes in the delivery tanker may cause variability in the CV of the waste stream, which will be addressed by the requirement for waste profiling and inspection set out in Condition 8.4.3.

Recommendation:

Amend Condition 8.4.3 as follows:

Replace:

(i) Procedures for waste profiling from new and known customers, waste inspection prior to discharge into the bunker, and waste characterisation;

With:

(i) Procedures for waste profiling from new and known customers, waste inspection prior to discharge into the bunker **or direct injection into the furnace**, and waste characterisation;

Objection 2.1.6: *Addition of hazardous waste to incinerator*

Veolia states that there appears to be confusion about whether hazardous waste will go directly to the bunker as stated in the inspector’s report or will be subject to the use of a feed equalization system as set out in Condition 8.4.4.3 of the Proposed Determination. Veolia further states that the feed equalization system should take into account BAT 69 and 70 in terms of verification of waste compatibility and reactivity. Veolia requests that the feed equalization system and the corresponding storage requirement be ensured.

Technical Committee’s Evaluation:

Condition 8.4.4.3 of the Proposed Determination sets out the requirement to use a feed equalisation system for solid hazardous waste, while Condition 8.4.3(ii)(c) sets out the requirement for procedures and criteria for ensuring that adequate storage capacity exists in advance of waste acceptance.

In accordance with Condition 8.4.3 of the Proposed Determination Indaver is required to establish, maintain and implement procedures for the acceptance and handling of wastes, including bunker management procedures, which along with Condition 8.4.4, addresses BAT conclusion 69. BAT 70 has been addressed in Condition 8.4.3(vi) of the Proposed Determination. In addition, the proposed arrangements meet the requirements of BAT 71, which addresses the use of a feed equalisation system for solid hazardous waste.

Recommendation:

No change.

Objection 2.1.7: *Hazardous waste volumes*

Veolia states that the quantity of hazardous waste proposed to be accepted at the facility is not insignificant, particularly in terms of volume, and that this further brings into question the requirement for storage.

Technical Committee's Evaluation:

It is acknowledged that 10,000 tonnes of hazardous waste is significant and BAT for hazardous waste had been applied accordingly in the Proposed Determination. The incinerator is designed based on thermal capacity rather than tonnage throughput. The increase in tonnage throughput, including a proportion of hazardous waste, sought by Indaver is for the purpose of increasing the overall average CV of the waste input in order to realise the full potential of the Waste to Energy plant. Condition 8.4.3(ii)(c) sets out the requirement for procedures and criteria for adequate waste storage capacity in advance of waste acceptance and Condition 8.4.2 controls the daily quantity of waste to be accepted so that it does not exceed the storage capacity available for that waste.

Recommendation:

No change.

2.2 Mr Michael O' Dowd, on behalf of Drogheda Environmental Team and Louth and Meath Health Protection Group

Objection 2.2.1: *Health, health patterns and local geography*

Mr O' Dowd expresses concern about health and health patterns in the Louth/East Meath area and the apparent increase in medical problems in the area, citing asthma and leukaemia in particular.

Technical Committee's Evaluation:

The Proposed Determination addresses the risk to human health through the national ambient air quality standards and the inclusion of specific emission limit values. The HSE did not raise concerns about health or health patterns in the area in its submission to the Agency on this licence application.

Recommendation:

No change.

Objection 2.2.2: *Sea-dumping*

Mr O' Dowd expresses concern around sea-dumping of munitions in the area and the exposure to explosive products.

Technical Committee's Evaluation:

The relevance of sea-dumping of munitions to the Proposed Determination has not been made clear by the objector.

Recommendation:

No change.

Objection 2.2.3: *Odour*

Mr O' Dowd expresses concern about the mitigation measures in place to minimise odour nuisance, in particular the decision by Indaver not to maintain the odour abatement unit to extract odorous air from the bunker. In addition, he states that there have been several complaints regarding odour in the Duleek area made to Environmental Officers in Louth. Mr. O' Dowd is seeking that the odour abatement unit to extract odorous air from the bunker remain in place.

Technical Committee's Evaluation:

The odour abatement unit to extract odorous air from the bunker area was installed in August 2012 as a temporary measure, following odour complaints during 2012. The cause of the odour emission was subsequently determined to be the vents in the bunker, following which the seals on the vents were upgraded and the odour issue was resolved. No odour complaints in relation to the installation were made in 2013; one complaint was received in 2014, but the cause of the complaint was not attributed to the licensee. As a consequence, the temporary odour abatement unit was considered unnecessary. The Proposed Determination includes conditions prohibiting odour nuisance (Condition 5.6) due to the installation, requiring odour control measures (Condition 3.10) and odour inspections (Condition 6.10).

Recommendation:

No change.

Objection 2.2.4: *Best Available Technologies*

Mr O' Dowd states that the Waste Incineration BREF has not been included in the Inspectors Report, referring in particular to the appropriate treatment technology for hazardous waste streams. Mr O' Dowd also raises concern about comparisons with the Ekokem Incinerator and the treatment technology used (moving grate versus rotary kiln) with respect to the treatment of hazardous waste.

Technical Committee's Evaluation:

The Waste Incineration BREF has been referred to specifically on pages 8, 9 and 15 of the Inspectors Report, in addition to multiple references in response to the various submissions addressed in the Inspectors Report. Indaver has confirmed that waste with a chlorine content of greater than 1% will not be accepted for treatment at the installation and this restriction has also been included in Condition 1.3 of the Proposed Determination. Through contacting the Finnish Environment Institute, and by assessing the response from Indaver to the request for further information, the Technical Committee confirmed that Ekokem operate two municipal waste incinerators in Finland, using grate technology, whose permits allow the treatment of certain hazardous wastes i.e. waste with less than 1% chlorine content. Plant 1 (permit no. YSO/59/2006) allows up to 30,000 tpa of solid hazardous waste, with less than 1% chlorine content, to be treated. Plant 2 (permit no. 56/2010/1) allows up to 25,000 tpa of solid and liquid hazardous waste, with less than 1% chlorine content, to be treated.

Recommendation:

No change.

Objection 2.2.5: *Bottom ash*

Mr O' Dowd states that the bottom ash should be considered hazardous as the proposal includes burning of hazardous waste. He also suggests conducting test burns, to allow for sampling and analysis of bottom ash. In addition, Mr O' Dowd is seeking that Indaver should be required to use accredited laboratories for testing bottom ash, rather than "*accredited laboratories, where possible*".

Technical Committee's Evaluation:

European Waste Catalogue codes for bottom ash contain mirror entries; therefore bottom ash can be classified as hazardous or non-hazardous waste. In accordance with Condition 3.19 of the Proposed Determination, Indaver is required to undertake a test programme. According to Schedule C.4 Monitoring of Incinerator Residues, bottom ash must be classified as hazardous/non-hazardous on a weekly basis during the hazardous waste incineration test programmes and quarterly thereafter.

Based on Indaver's experience to date, very few laboratories are accredited for bottom ash analysis and the strict requirement in the current licence to use accredited laboratories created difficulties in getting analyses completed. The Inspector's Report recommended approval of Indaver's request for an amendment to "*accredited laboratories, where possible*".

Recommendation:

Amend Note 1 following the Table in Schedule C.4 Monitoring of Incinerator Residues as follows:

Replace:

Note 1: All analysis to be undertaken at an accredited laboratory, where possible, employing accredited procedures

With:

Note 1: All analysis to be undertaken, where possible, at an accredited laboratory, employing accredited procedures. Where a non-accredited laboratory is used, the licensee shall record a written justification for doing so, including the reasons why an accredited laboratory was not available.

Objection 2.2.6: *Waste acceptance*

Mr O' Dowd expresses concern about the increase in waste to be accepted for the purpose of increasing the calorific value of the waste to be incinerated and he requests confirmation whether Indaver are currently accepting 220,000 tonnes per annum. Mr O' Dowd also requests that the provision for acceptance of healthcare waste should be removed from the

licence. In addition, Mr O'Dowd requests a number of test burns to be undertaken prior to any licensing decision.

Technical Committee's Evaluation:

The current licence under which Indaver operates (Reg No. W0167-02) limits the total quantity of waste accepted at the installation to 200,000 tonnes per annum. The Annual Environmental Reports (AERs) for 2012 and 2013 confirm that the quantity of waste accepted at the installation was 205,026 tonnes in 2012 and 220,748 tonnes in 2013. Indaver are not seeking additional healthcare waste types other than those which are already included in the existing licence i.e. non-infectious healthcare/clinical waste, EWC code 18 01 02. In relation to the request to have test burns undertaken, the test programme required under Condition 3.19 gives effect to this.

Recommendation:

No change.

Objection 2.2.7: Chromium

Mr O' Dowd expressed concern that total controls on chromium in the Proposed Determination may not address the more dangerous chromium VI. Mr O' Dowd makes reference to a submission on the licence application made by Mr James Rowntree on this issue.

Technical Committee's Evaluation:

The emission limit to air for chromium, as per Schedule B.1 in the Proposed Determination, is inclusive of chromium VI. The emission limit is 0.5mg/m³ (500,000ng/m³) for the sum of antimony (as Sb), arsenic (as As), lead (as Pb), chromium (as Cr), cobalt (as Co), copper (as Cu), manganese (as Mn), nickel (as Ni), and vanadium (as V), as required by Annex VI (Part 3) of the Industrial Emissions Directive (2010/75/EU).

There are no statutory limits for emissions of chromium VI or ambient air quality standards. However, ambient air quality guidelines can be derived from occupational exposure limits (OELs), by dividing the OEL by a safety factor of 100, creating an Environmental Assessment Level (EAL)². The Health and Safety Authority has published OELs for chromium VI (water soluble and water insoluble), from which EALs can be derived, as set out in Table 1.

Table 1 Derivation of Environmental Assessment Levels for Chromium VI

Chromium VI Compounds	OEL (8-hour reference period) mg/m ³	EAL (as an annual average)	Derived standard	
			mg/m ³	ng/m ³
- Water soluble	0.05	$\frac{OEL}{100}$	0.0005	500
- Water insoluble	0.01	$\frac{OEL}{100}$	0.0001	100

² UK Environment Agency H1 Guidance (Annex F)

Air dispersion modelling was undertaken as part of the environmental impact assessment for the current licence (Reg. No. W0167-02) and was updated in the EIS presented with the licence review application, taking account of increased traffic flow resulting from the proposed increase in waste tonnage accepted, including hazardous waste, and an increase in the maximum volume flow.

The modelling results show that for a process contribution of 0.40ng/m³ for maximum³ operating conditions and 1.93ng/m³ for abnormal operating conditions, plus an annual mean background concentration of 1ng/m³, the predicted environmental concentration of Chromium VI is two orders of magnitude below the derived standard. Table 2 illustrates the calculations.

Table 2 Predicted Concentrations V Standards/Derived Standard

Parameter	Limit type	Emission rate (Maximum) (g/sec)	Annual concentration /Process contribution (ng/m ³)	Annual mean background (ng/m ³)	Predicted environmental concentration (ng/Nm ³)	Standard/ Derived Standard (ng/Nm ³)
Arsenic	Annual Average	0.0022 (Maximum)	0.4	1.0	1.40	6.0*
		0.13 (Abnormal)	1.93	1.0	2.93	
Chromium (except VI)	Annual Average	0.0022 (Maximum)	0.4	1.0	1.40	5000**
		0.13 (Abnormal)	1.93	1.0	2.93	
Chromium VI	Annual Average	0.0022 (Maximum)	0.4	1.0	1.40	100***
		0.13 (Abnormal)	1.93	1.0	2.93	

* EU standard – Council Directive 2004/107/EC (Air Quality 4th Daughter Directive).

** UK Environment Agency standard – Published in *H1 Environmental Risk Assessment Annex F – Air Emissions*.

*** Derived standard, as per Table 1.

Schedule C.1.2 of the Proposed Determination requires monitoring to be undertaken biannually for chromium and its compounds.

Recommendation:

No change.

Objection 2.2.8: *Specific health problem – Guillain–Barré Syndrome*

Mr O’ Dowd expresses concern about *Guillain–Barré Syndrome*, affecting the immune system, stating that there are four confirmed cases in the area but that the cause is not yet known. He requests that no additional waste streams or tonnage should be licensed until the cause of the clustering is determined.

³ Referring to maximum emission limits allowed under the Waste Incineration Directive (2000/76/EC).

Technical Committee's Evaluation:

The HSE did not raise such concerns in its submission to the Agency on this licence application.

Recommendation:

No change.

2.3 Mr Ollan Herr, on behalf of Zero Waste alliance Ireland

Objection 2.3.1: *Failure by the Applicant to justify the proposed licence increase in waste acceptance*

Mr Herr contends that Indaver has failed to justify the need for additional quantities of waste to be treated, including the additional hazardous waste streams. He further states that the commercial reasons given are not grounds for the EPA to grant an amended Industrial Emissions Licence.

Technical Committee's Evaluation:

The CV of the wastes currently being incinerated is around 8.5MJ/kg while the anticipated design average was around 9.35MJ/kg, which means that the full potential of the plant is not being realised as it was designed on thermal capacity rather than tonnage output. The applicant must demonstrate that the increase in tonnage will not cause environmental pollution and will be in line with BAT. The EPA has regard to relevant waste management plans and notes that permission was granted by An Bord Pleanála.

Recommendation:

No change.

Objection 2.3.2: *Inadequate air quality monitoring in Drogheda*

Mr Herr states that the ambient air quality monitoring around Drogheda is inadequate and expresses concern that the levels of air pollution have the potential to increase in Duleek and Drogheda as a result of increases in incineration of waste in the Duleek, Carranstown, Drogheda areas.

Technical Committee's Evaluation:

The air dispersion modelling study undertaken by Indaver indicates that emissions from the installation will not result in a breach of the statutory air quality limits as specified in the relevant legislation (S.I. No. 180 of 2011, transposing the CAFÉ Directive, 2008/50/EC). The emission rates for all pollutants must comply with the emission limit values as modelled and set down in Annex VI of the Industrial Emissions Directive. The emissions limit values set out in the licence will be enforced by the Office of Environmental Enforcement.

Recommendation:

No change.

Objection 2.3.3: *Increased emissions to the atmosphere and adverse impacts on local air quality*

Mr Herr expresses concern that neither Indaver nor the EPA have fully taken into account the cumulative impacts of emissions from the Carranstown Waste-to-Energy facility, the adjacent Platin cement production plant, the Premier Periclase plant and other non-point sources of atmospheric contamination. Mr Herr puts forward a number of recommendations as follows:

- a. That no licence be issued to allow additional increase in burning of waste by Indaver or at Platin cement plant until clean air is achieved in the area;
- b. That any future decision to issue licences for incineration of waste be made only after considering recent ambient downwind air monitoring;
- c. That the charges be increased substantially to cover cost of continuous ambient air monitoring;
- d. That wind direction is monitored along with ambient air monitoring;
- e. That the EPA licences for Indaver, Platin and Premier Periclase be amended in coming years to be consistent with air pollution indicators, referencing EU Directive 2008/50/EC;
- f. That continuous stack monitoring for PM₁₀, PM_{2.5} and other pollutants be undertaken and results made available online;
- g. That the industry producing the pollution that exceeds the Directive limits be required to suspend activities;
- h. That the EPA and Louth local authorities publish a detailed Air Quality Plan;
- i. That the EPA and Louth local authorities publish a Short Term Action Plan to protect children;
- j. That the EPA will be responsive to a request to set up permanent monitoring stations.

Submission on Objection: *Mr Michael O' Dowd, on behalf of Louth and Meath Health Protection Group and the Drogheda Environmental Team*

Mr O' Dowd expresses support for the recommendations made by Mr Herr at points h, i and j above. Mr O'Dowd also refers to the Aarhus Convention, which was not stated in the objection submitted by Mr Herr.

Technical Committee's Evaluation:

Relevant point sources were considered in the air dispersion model, which considered cumulative impacts of the Carranstown Waste-to-Energy installation, the adjacent Platin cement production plant and the Premier Periclase plant. The recommendations put forward by Mr Herr were considered by the Technical Committee as follows:

- a. The EPA can only grant a licence once it is satisfied that it will not cause significant environmental pollution;

- b. Background air quality has been considered in the air dispersion model provided as part of the application for the review of the licence;
- c. The EPA charges reflect the enforcement costs of the Office of Environmental Enforcement and are in line with the polluter pays principle;
- d. A windsock is in place at the plant and continuous monitoring for wind speed and direction is required in accordance with Schedule C.5 of the Proposed Determination;
- e. Notwithstanding the fact that the abovementioned licensees are entitled to apply for a review of their licences at any time, publication of Commission Implementing Decision 2013/163/EU establishing the best available techniques (BAT) conclusions for the production of cement, lime and magnesium oxide means that all relevant licences for the cement, lime and magnesium oxide sectors will, in accordance with section 90(aa) of the EPA Acts 1992, as amended, be re-examined and if necessary reviewed before March 2017 to ensure their compliance with the Industrial Emissions Directive and take into account the new or updated BAT conclusions.
- f. Schedule C.1.2 of the Proposed Determination requires continuous monitoring of particulates (total dust), with quarterly monitoring for PM₁₀ and PM_{2.5}. The air dispersion model included in the EIS indicated emissions from the installation will not breach the EU standards for PM₁₀ and PM_{2.5} included in the CAFÉ Directive. Air quality data is available to view on the EPA website;
- g. The EPA's Office of Environmental Enforcement carries out enforcement of licensed installations in line with its Enforcement Policy;
- h. The EPA has an air quality monitoring programme in place that is in line with the requirements of the CAFÉ Directive and the Irish Air Quality Standards Regulations 2011;
- i. The EPA has an air quality monitoring programme in place that is in line with the requirements of the CAFÉ Directive and the Irish Air Quality Standards Regulations 2011;
- j. The EPA has an air quality monitoring programme in place that is in line with the requirements of the CAFÉ Directive and the Irish Air Quality Standards Regulations 2011;

Recommendation:

No change.

Objection 2.3.4: *Adverse impacts on public health and concerns raised by Drogheda Borough Council*

Mr Herr states that neither the EPA nor Indaver have fully taken into account the adverse health effects of emissions, particularly PM₁₀ and PM_{2.5} and that the Proposed Determination fails to address the requests for more frequent and intensive air quality monitoring around the area. Mr Herr requests that stack monitoring for PM₁₀ and PM_{2.5} should be continuous, and reported to the public at 8-hour intervals.

Technical Committee's Evaluation:

The Proposed Determination requires that all monitoring data are submitted to the EPA on a quarterly basis (Condition 11.7.2). In addition, Condition 2.3.2.11 of the Proposed Determination requires the licensee to maintain a public awareness and communications programme, which provides for public access to information concerning the environmental performance of the installation. Schedule C.1.2 of the Proposed Determination requires continuous monitoring of particulates (total dust), with quarterly monitoring for PM₁₀ and

PM_{2.5}. The air dispersion model included in the EIS indicated that emissions from the installation will not breach the EU standards for PM₁₀ and PM_{2.5} set out in the CAFÉ Directive. The Proposed Determination requires the licensee to notify the EPA of any incidents, including exceedances of emission limit values and records of any such incidents are also publicly available

Recommendation:

No change.

Objection 2.3.5: Failure to consider the European Waste Hierarchy and the use of portion of the wastes to be incinerated as a refuse derived fuel

Mr Herr contends that a substantial proportion of the wastes proposed to be incinerated would be more suited to treatment to produce Refuse Derived Fuel and that the current proposal would result in waste being dealt with by a process lower down the waste hierarchy. He further submits that the proposed additional quantities of waste would result in the downgrading of the facility from “recovery” to “disposal”.

Technical Committee’s Evaluation:

The waste hierarchy is addressed through Conditions 2.3.2.3 (Schedule of Objectives and Targets) and 8 (Materials Handling) of the Proposed Determination. In particular, the Technical Committee notes that Condition 8.5 requires that all municipal waste is subject to pre-treatment, in accordance with the technical guidance document *Municipal Solid Waste - Pre-treatment and Residuals Management* (EPA, 2009). The Proposed Determination provides for both recovery and disposal operations, which represents no change from the existing licence for the installation.

Recommendation:

No change.

Objection 2.3.6: Requirements of the Stockholm Convention

Mr Herr states that the incineration of additional quantities of waste must result in Ireland’s failure to comply with the requirements of the Stockholm Convention, with reference to his earlier submission to the Agency, where he expressed concern about increased quantities of waste resulting in increased dioxin emissions, which according to Mr Herr is not allowed by the Stockholm Convention.

Technical Committee’s Evaluation:

The proposal to introduce 10,000 tonnes per annum of hazardous waste is a substantial modification, and thus the development constitutes a *new source* under the Stockholm Convention and therefore BAT must be applied, as well as Best Environmental Performance (BEP) and emission limit values. Indaver’s proposal complies with the requirements of the Stockholm Convention, and is also consistent with Ireland’s *National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants*. The Stockholm Convention does not prohibit an increase in emissions of dioxins and furans from an individual incinerator,

provided there is compliance with Article 5 and Annex C of the Convention in the application of BAT and BEP. In addition, Indaver is required to comply with the BAT Conclusions set out in the Waste Incineration BREF, which are more detailed and more stringent than those published under the Stockholm Convention⁴.

The Technical Committee considers it appropriate to record compliance with the Stockholm Convention in the licence.

Recommendation:

Amend the "Decision & Reasons for the Decision" as follows:

Insert as the final paragraph:

The requirements of the Stockholm Convention and the *National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants* relating to controls on unintentional releases of persistent organic pollutants (e.g. dioxins and furans) were taken into account in the granting of this licence and, through the application of Best Available Techniques and Best Environmental Practices and the setting of emissions limit values, the objective of the Stockholm Convention, to protect human health and the environment from persistent organic pollutants, is satisfied.

Objection 2.3.7: *Unreasonably short consultation period that also clashed with Christmas*

Mr Herr states that the period allowed by EPA to submit objections was unreasonable, given the Christmas period.

Technical Committee's Evaluation:

The statutory period allowed for submission of objections to a Proposed Determination is 28 days from the date of the notification. Given that the Proposed Determination issued on 28th November 2014, the Agency allowed additional time for the submission of objections to cover the Christmas period, in accordance with Section 87(13) of the EPA Act 1992.

Recommendation:

No change.

⁴ Guidelines on Best Available Techniques and Provisional Guidance on Best Environmental Practices relevant to Article 5 and Annex C of the Stockholm convention on Persistent Organic Pollutants (Published by the Secretariat of the Stockholm Convention on Persistent Organic Pollutants in October 2008).

2.4 Mr John Shortt, on behalf of Hollywood and District Conservation Group

Objection 2.4.1: *Fly ash and bottom ash*

Mr Shortt states that Indaver has failed to provide a cradle to grave roadmap on the treatment of both fly ash and bottom ash and that it is therefore not possible to make a considered judgment on the information submitted.

Technical Committee's Evaluation:

Condition 8.11 specifically addresses matters of storage and treatment of incinerator residues, whether on-site or off-site, where suitable treatment must be agreeable to the EPA. The licence will allow the licensee to seek and utilise outlets (recovery or disposal) at their discretion that are lawful and will not cause environmental pollution. Condition 7.3 of the Proposed Determination requires the licensee to investigate the recovery of materials from incinerator residues.

Recommendation:

No change.

Objection 2.4.2: *Planning permission*

Mr Shortt states that the application to the EPA is in conflict with the planning permission and that the EPA cannot issue a licence for activities which have no planning permission.

Technical Committee's Evaluation:

The objector has not specified how the application is in conflict with planning permission. Planning permission was granted by An Bord Pleanála (Ref. PA0026) on 4th February 2013 under the strategic infrastructure provisions of the Planning & Development Acts for the requested amendments to the existing Waste-to-Energy plant, including increasing the intake of waste to 220,000 tonnes per annum. This permission was amended on 1st August 2014, by An Bord Pleanála following request from Indaver, to allow an intake of waste of up to 235,000 tonnes per annum until 31st December 2019.

Recommendation:

No change.

Objection 2.4.3: *Non-integrated approach to licensing*

Mr Shortt states that the EPA is pursuing a non-integrated approach to licensing and planning and that this contradicts EU legislation.

Technical Committee's Evaluation:

The objector has not made clear what is meant by a non-integrated approach to licensing. The EPA's licensing regime conforms to EU legislation, and through Section 87 of EPA Act 1992 as amended, the EPA liaises with the relevant planning authority.

Recommendation:

No change.

Objection 2.4.4: *Applicant consultation with the community*

Mr Shortt states that the applicant has not consulted with the community and that this is in breach of EPA and planning legislation.

Technical Committee's Evaluation:

The EPA Act 1992, as amended, does not require the applicant to consult with the local community, but in accordance with the licensing regulations any person is entitled to make a submission on the licence application. In addition, the applicant was required to erect a site notice and place a newspaper notice in accordance with Regulation 7 of the Environmental Protection Agency (Industrial Emissions) (Licensing) Regulations 2013 for the information of the public.

Recommendation:

No change.

Objection 2.4.5: *Fine fraction stripping of ferrous and non-ferrous metal fractions*

Mr Shortt requests that fine fraction stripping of ferrous and non-ferrous metal fractions, including lead, from bottom ash residue at the site be made a condition of granting the licence.

Technical Committee's Evaluation:

Under Condition 8.1.2 of the Proposed Determination, Indaver is required to recycle the incinerator residues where appropriate. Condition 8.11.6 specifically refers to recovery and recycling of metals from the bottom ash. The Annual Environmental Reports relating to the existing licence confirm that Indaver is currently recovering ferrous metal from the bottom ash using a magnet and sending this to metal brokers in Ireland.

Recommendation:

No change.

3. Environmental Impact Assessment Directive – Reasoned Conclusion Update

The TC have reviewed the assessment in the Inspector's Report and, taking into account all objections and the submission on objections received, and the contents of this TC report, the TC considers that the likely significant direct and indirect effects of the activity have been identified, described and assessed in an appropriate manner as respects the matters that

come within the functions of the Agency, and as required by Section 83(2A) and Section 87(1G)(a) of the EPA Act 1992, as amended.

It is considered that the mitigation measures as proposed in the Inspector's Report, and as detailed in this TC report, will adequately control any likely significant environmental effects from the activity.

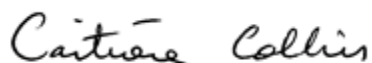
It is also considered that the proposed activity, if managed, operated and controlled in accordance with the licence conditions included in the PD, with the inclusion of the amendments proposed in this report, is unlikely to damage the environment as a whole and the risk of potential impacts occurring is not unacceptable.

4. Overall Recommendation

It is recommended that the Board of the Agency grant a licence to the applicant

- (i) for the reasons outlined in the Proposed Determination, and
- (ii) subject to the conditions and reasons for same in the Proposed Determination, and
- (iii) subject to the amendments proposed in this report.

Signed:



Caitríona Collins, Inspector
for and on behalf of the Technical Committee