Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

OFFICE OF LICENSING & GUIDANCE

M E M O R A N D U M

TO:	Each Board Member
FROM:	Kieran O'Brien
DATE:	1 October 2004
RE:	Application for Waste licence from Indaver Ireland, Ringaskiddy County Cork, Reg. No. 186-1

Application Details	
Class of activity:	Classes 7,8,11,12 & 13 of the Third Schedule Principal activity Class 8 : " Incineration on land or at Sea" Classes 1,2,3,4,6,9 & 13 of the Forth Schedule
Licence application received:	23 April 2003
Notices under Article 14(2)(b)(ii) issued:	31 July 2003
Information under Article 14(2)(b)(ii) received:	15 September 2003
EIS received:	23 April 2003
Notice under Art 13 issued:	31 July 2003
Information under Article 13 received:	15 September 2003
Article 39A(6)(a) issued:	26 November 2003
Supplementary material submitted by applicant	6 April 2004
Submissions received:	7
Site notice inspected:	12 May 2003
Site visits:	12 May 2003,

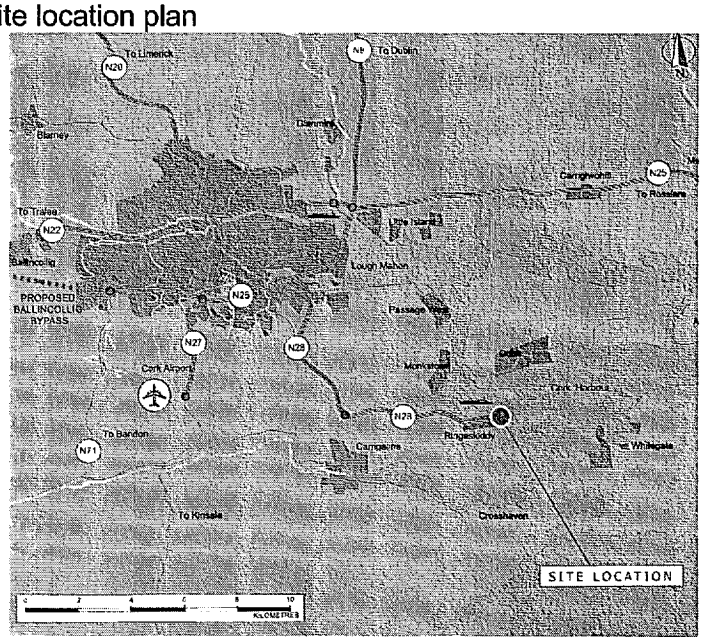
Company

Indaver Ireland is a wholly owned subsidiary of Indaver NV a Flemish waste management company which was set up in 1985 by the Flanders Government in partnership with private industry. The company employ in the region of 800 people and have operations in 11 European countries. Indaver NV is in involved in a wide

range of waste management activities including solvent recycling, composting, glass recycling, sorting of packaging paper and cardboard, landfill and hazardous and non hazardous waste incineration. The company have obtained accreditation to ISO 9002 and Indaver in Flanders have attained accreditation to ISO 14001.

- Indaver Ireland propose to construct a waste management facility at Ringaskiddy Co. Cork. The site is situated at the north-western end of the Ringaskiddy peninsula and occupies 12 hectares. It is situated adjacent to the main road to Haulinbowlin Island and the old Ispat Ltd. steel works site.

Figure 1: Site location plan



The proposed facility incorporates the following three elements:

- Community recycling Park
- Waste transfer station
- Incineration with heat recovery and electricity generation.

Community Recycling Park

The proposed Recycling Park consists of a "Bring Bank" where the public can bring material including cardboard, glass, aluminium cans, textiles batteries, waste oil and fluorescent tubes for recycling. The parks proposed operating hours are 10.00 to 19.00 weekdays and 10.00 to 14.00 on Saturday. Waste accepted at the park will be sent off site to suitable recycling facilities. The Community Recycling park is designed to accept in the region of 260 tonnes of waste per annum.

Waste Transfer Station

It is proposed that the industrial hazardous and non-hazardous waste will be sorted and repackaged where necessary. Material will either be exported for treatment off site or transferred to the incineration plant for on site incineration. The waste transfer station has been designed to handle 15000 tonnes of industrial hazardous and non-hazardous waste per annum.

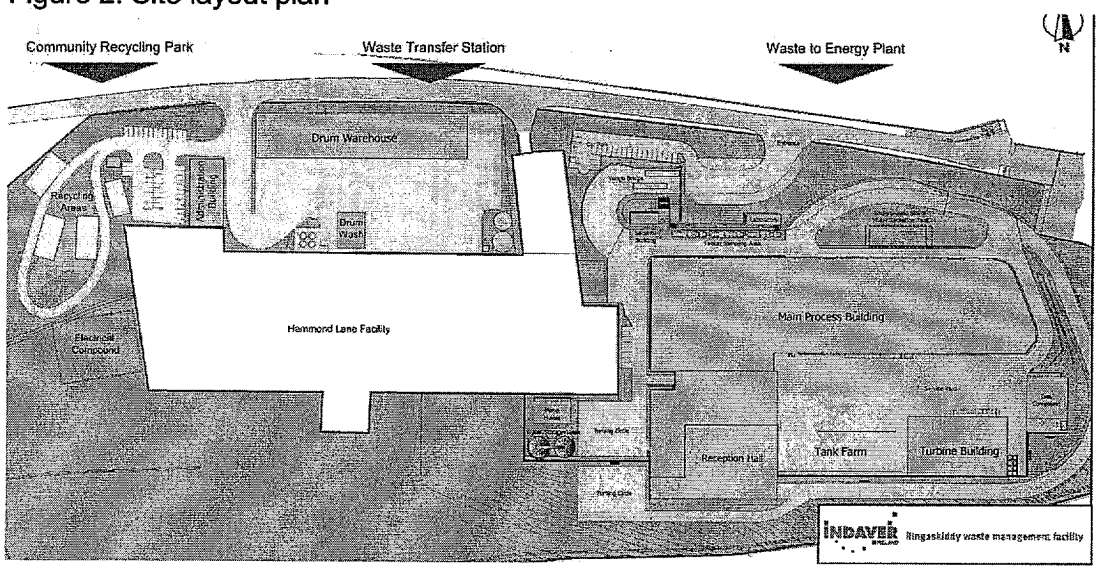
Incineration Plant (Waste to Energy Plant)
The development of the incineration plant is proposed in two phases.

Phase 1 consists of a fluidised bed incinerator with post combustion chamber for the treatment of hazardous and non-hazardous solid and liquid waste. The phase 1 plant has a nominal capacity of 100,000 tonnes waste per year and a design thermal input capacity of 49.3MW continuous load. The waste input capacity is dependent on the calorific value of the waste. The maximum capacity of waste input is 150,000 tonnes per year. Phase 1 workforce is expected to be 50

Phase 2 consists of a moving grate incinerator for the treatment of non-hazardous solid industrial, commercial and household waste. The Phase 2 plant has a nominal capacity of 100,000 tonnes per year and a design thermal input capacity of 38.7MW continuous load. The waste input capacity is dependent on the calorific value of the waste. The maximum capacity of waste input is 150,000 tonnes per year. It is proposed that Phase 2 will be located within the main process building constructed to house Phase 1. The decision to proceed with Phase 2 will be taken following an evaluation of the waste strategy of the local authority and the requirements of other waste producers. The licence application has been submitted for both Phase 1 and Phase 2.

Activities at the waste transfer station and the incineration plant are proposed on a 24 hours a day 7 days a week basis with waste acceptance from 09.00 to 19.00 weekdays and 09.00 to 14.00 on Saturday. No waste acceptance is proposed on Sunday.

Figure 2: Site layout plan



On the southern and western boundaries there is agricultural land and to the east there are cliffs and the shore. The Hammond Lane metal recycling plant is located in the centre of the site and the proposed facilities will encircle this facility(see area in white in Figure 2 above).

In November 2001 a planning application was lodged with Cork County Council for the construction of the Community Recycling Park, the Waste Transfer Station and Phase 1 of the Incineration Plant.

In April 2003 the County Manager proposed a material contravention of the Cork County Development Plan which would allow for the granting of planning permission for the project.
In May 2003 Cork County Councillors did not approve a material contravention of the Development Plan and as a result Cork County Council refused the planning application. This decision was appealed to An Bord Pleanala and An Bord Pleanala held an oral hearing in September/October 2003 and subsequently granted planning permission on the 16th January 2004.

EIS
An EIS was submitted with application and additional information under Article 13 sought and received by the Agency. The EIS including the additional information has been assessed and I am satisfied that it complies with the EIA and licensing regulations.

Process Description

Community Recycling Park
The proposed community recycling park consists of a group of containers arranged along a one-way looped roadway where members of the public can deposit items into dedicated containers. Containers for the following items are to be provided:

> Cardboard, newspaper and magazines, glass, aluminium drink cans, textiles, foot ware, batteries, waste oil and fluorescent tubes.

Once the containers are full, they are to be removed from the site to appropriate facilities for recycling.
It is also proposed to accept household hazardous waste including waste oil, paints, batteries florescent tubes, detergents and medicines. Other wastes to be accepted include plastic, electronic and electrical waste, ferrous metals and non-ferrous metals. It is not proposed to accept kitchen waste and odour and vermin should not present a problem at the community recycling park. The community recycling park is to be supervised during hours of operation.

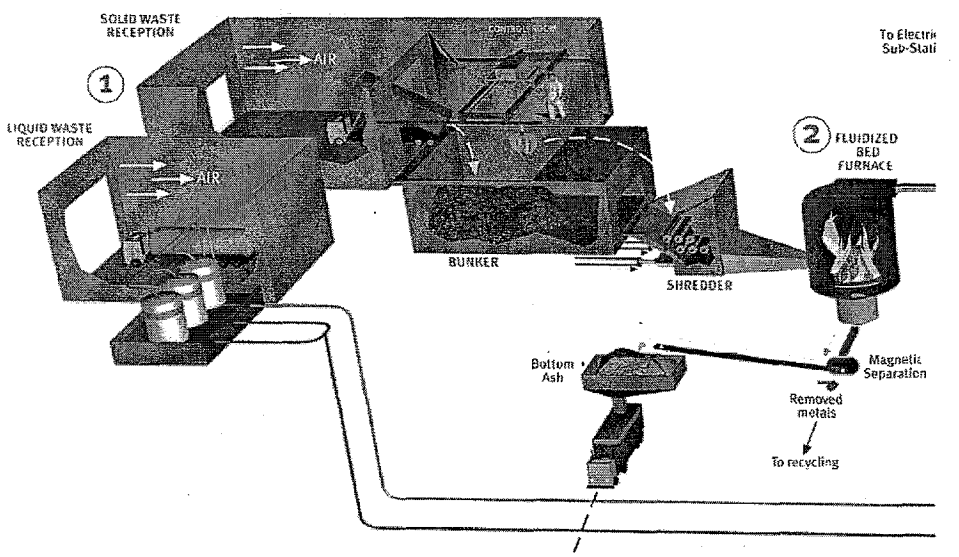
Waste Transfer Station
The waste transfer station consists of a drum warehouse, storage compound, bulk storage tank farm and a drum wash and repack facility.

Incineration Plant
The development of the incineration plant is proposed in two phases. Phase 1 consists of a fluidised bed incinerator with post combustion chamber for the treatment of hazardous and non-hazardous solid and liquid waste. Phase 2 consists of a moving grate furnace for the treatment of non-hazardous solid industrial, commercial and household waste.

Trucks carrying waste into the incineration plant are weighed and checked for radioactivity. Radioactive waste is not accepted at the facility.
Following the assessment and approval of the waste for input into the incineration plant the truck is released for unloading.
Solid waste is deposited in a bunker within an enclosed reception hall and liquid waste is unloaded from tankers to bulk storage tanks or injected directly into the post combustion chamber.

Phase 1 - Fluidised Bed Incinerator
Solid waste including sludge is introduced into the incinerator from feed hoppers equipped with shredders onto a bed of sand, which is fluidised by an upward movement of air. Primary combustion air is blown through the sand and secondary combustion air is blown across the top of the sand bed. The maximum operating temperature within the fluidised bed furnace is 950°C and residence time from 10 minutes to an hour depending on the waste stream.
Bottom ash and sand is removed from the base of the furnace at approximately 600°C and the sand is recovered and returned to the furnace for reuse. Combustion off gas from the fluidised bed is ducted to the post combustion chamber.

Diagram of Phase 1 - Fluidised Bed Incinerator

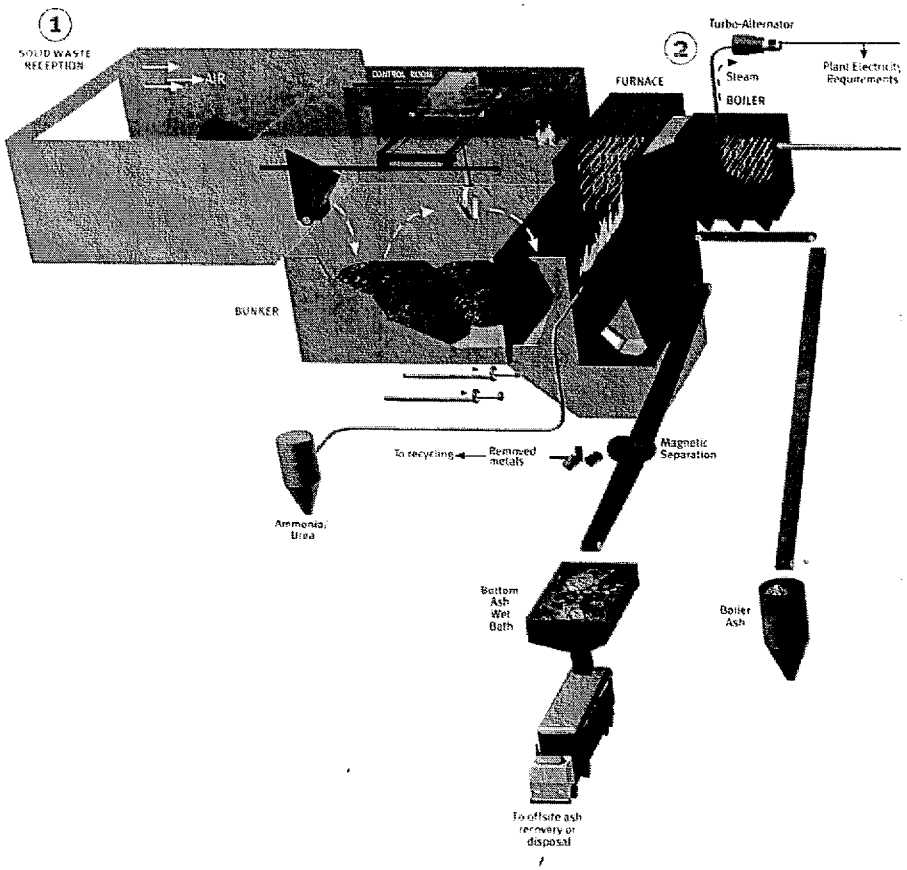


The temperature within the post combustion chamber is controlled to ensure minimum-operating temperature of 1100°C (or 850°C where waste with less than 1% halogenated organic substances (as chlorine) is to be incinerated). The post combustion chamber is designed to ensure that a residence time of at least 2 seconds is achieved.

The post combustion chamber temperature is controlled by the use of natural gas and is equipped with lances to allow the direct injection of liquid waste streams for incineration. The post combustion chamber may also be operated on its own as a liquid incinerator when the fluidised bed furnace is not operating.

Phase 2 - Moving Grate Incinerator
The moving grate incinerator is designed for the incineration of non-hazardous solid industrial, commercial, and household waste. Waste is fed from the bunker into a feed hopper that will feed the moving grate furnace. The moving grate mechanism transports the waste from the feed point at one end of the furnace to the ash point at the other. The residence time for waste within the furnace is approximately one hour. The top of the furnace is designed to ensure that a residence time of at least 2 seconds at 850°C is achieved for off gas from the combustion within the furnace.

Dig. of Phase 2 - Moving Grate Incinerator



Each incinerator is to be equipped with a dedicated flue gas cleaning system. The flue gas cleaning system is similar for both Phase 1 and Phase 2 with the addition of an electrostatic precipitator between the boiler and the spray tower for Phase 1 the fluidised bed incinerator which is not necessary for Phase 2.

The flue gas cleaning system is to comprise the following components:

- Selective non-catalytic reduction (SNCR) of NOx using urea or ammonia
- Electrostatic precipitator (fluidised bed line only)
- Evaporating Spray Towers with lime injection
- Baghouse Filter with activated carbon and lime
- Scrubber packed tower (lime/caustic)
- Baghouse filter with activated carbon and lime

The final stage incorporates a plume re-heater that is designed to bring the temperature up from approximately 60°C to 100°C to reduce the formation of a visible plume.

Use of Resources

The PD requires the licensee to carry out an audit of the energy efficiency of the site within one year of the date of the commencement. The PD also requires the licensee to identify opportunities for reduction in the quantity of water used, the recovery/recycling of residues and the optimisation of fuel and raw material usage on site.

Fuel

Gas will be used for the initial heat up of the combustion chambers and as an auxiliary fuel to maintain the required temperature in the combustion chambers. Gas oil will be used for the operation of on-site vehicles and the operation of the emergency generator.

Electricity

The thermal energy generated by the burning of the waste will be converted into electricity by a conventional steam cycle. Economisers are also incorporated into the system to recover low grade heat into the boiler feed water Approximately 18MW of electricity will be generated from the two incinerators with approximately 14MW exported to the national grid.

Water

It is estimated that 120,000 tones of water annually will be used in the process. Surface water collected in the Incineration Plant will be used in the process as far as practicable.

Incineration of Waste Directive 2000/76/EC

This directive covers incineration and co-incineration plants but excludes a number of plants treating specific waste. The incineration plants proposed by Indaver at Ringaskiddy falls within the scope of this directive. This directive sets out specific requirements on the operation and design of incineration plants including the delivery and reception of waste, operating conditions, air emission limit values, discharges to waters, residues, controlling and monitoring and abnormal operating conditions. The PD as drafted has taken account of the provisions of this directive.

European Communities (Control of Major Accident Hazards involving Dangerous Substances) Regulations, 2000 (SI 476 of 2000)

The proposed activity falls within the scope of these regulations due to the quantity of solvent to be stored on site. Due to the inventory levels the site will be a lower tier site. A copy of the required notification to the HSA as required under S.I. 476 of 2000 has been included in the application documents.

Proposed Determination

Air:

Incineration plant:

There are two main emissions to air from the Incineration plant. One from the Fluidised Bed Incinerator and one from the Moving Grate Incinerator. Proposed emissions limit values as set out in the licence application and as provided for in the PD comply with the Incineration of Waste Directive 2000/76/EC.

Dioxin reformation in the flue gas heat recovery system is minimised by the design temperature gradient and ensuring that the boiler system is kept clean.

Combustion gases from the waste incineration are treated in a five-stage abatement system before emission to air. Each incinerator is equipped with a similar system with the addition of an electrostatic precipitator for the fluidised bed line.

Stage 1
Selective non-catalytic reduction (SNCR) is to be employed for the reduction of oxides of nitrogen(NOx). Optimisation of conditions within the combustion chamber will minimise NOx formation however to meet the emission limit values NOx reduction will be required. Ammonia will be used to react with NOx in the first stage of the boiler to generate nitrogen gas and water vapour.

Stage 1(a)
An electrostatic precipitator will be installed on the fluidised bed line only. This filter is designed to collect dust and any sand that has become entrained in the flue gas leaving the boiler.

Stage 2
Evaporating Spray Towers are designed to cool the flue gas and for the neutralisation of acid gases before it passes on to further stages of abatement.

Stage 3
Activated carbon and lime is to be injected into the flue gas leaving the spray towers for the removal of metals, trace organics and dioxins/furans by filtration in a downstream baghouse filter.

Stage 4
A scrubber packed tower with lime/caustic is to be used to scrub acid gases from the flue gases that are not removed in Stage 2

Stage 5
The final stage comprises a bag house filter with activated carbon and lime injection. This will act as a final polish for the removal of trace levels of dioxin/furans metals and hydrocarbons. The final stage also incorporates a reheat plume suppression system.

Control and monitoring of these abatement systems to ensure that they function efficiently has been included in the PD.

The PD also required the licensee to carryout a Test programme/Commissioning Plan for each incinerator before it is put into operation. This test programme must demonstrate that the incineration plant can comply with the operating conditions as set out in the licence. The licensee is also required to establish criteria for operation and control of the abatement equipment and the control of waste composition and input to ensure compliance with the emission limits as set out in the licence. The operation of the incinerator outside the agreed test programme is prohibited until authorised by the Agency.

Vent losses from bulk tanks are to be collected in a common header and ducted to the post combustion chamber. In the event that the post combustion chamber is not available, the vents will be ducted to a backup activated carbon system.

The facility will be equipped with an emergency generator for use in the event of a mains power failure. Emissions will be minor and used only in emergencies or for routine maintenance.

Fugitive emissions and odour controls include the requirement for dust curtains on the entry/exit points from the buildings where waste is accepted and the installation and maintenance of negative pressure in the waste reception area. Back up equipment is also required for critical waste handling equipment. The installation of an odour management system and regular odour patrols is also included in the PD.

Waste Transfer Station:
There are no significant point source emissions to air from the Waste Transfer Station. Minor emissions will arise from the repack building where repacking and cross pumping of drums and drum washing will be carried out. The repack building vent is to be ducted to a canister type activated carbon unit as a final polish before emission to air. Spent activated carbon is sent to incineration plant for disposal. The tank farm is equipped with a nitrogen blanket system to minimise losses with a relief vent to the activated carbon unit.

Community Recycling Park:
There are no point source emissions to air from the Community Recycling Park Fugitive emissions should not be an issue. The park is required to be supervised during opening hours and locked when closed. All containers are required to be removed when full.

Impact of Air Emissions on Receiving Environment.
Air dispersion modelling of typical and maximum emissions from the facility for both Phase 1 Fluidised Bed Incinerator and Phase 2 Moving Grate Incinerator was carried out using the USEPA ISCST3 model. The more advanced AERMOD model was also used for comparison and this indicated that the ISCST3 model is conservative. In addition, the SCREEN3 model was used to assess the impact of emissions under unusual meteorological conditions adjacent to a water body.

Deposition modelling of dioxins/furans and metals was also carried out.
Cumulative assessment of emissions taking into account other significant emissions in the area including local industry and other incinerators was also conducted.

An extensive baseline air quality assessment was also carried out and submitted as part of the application. The parameters assessed included the pollutants likely to be emitted and controlled by the PD.

Background concentrations of these parameters have been either measured or estimated and the predicted maximum ground level impacts added to these background values before comparison with appropriate Air Quality Standards (AQS) and guidelines.

Parameter	Modelled Impact	Modelled Concentration ($\mu g/m^3$)	Typical background levels ($\mu g/m3$)	Impact ($\mu g/m3$)	Comparison AQS ($\mu g/m3$)
(Assumes 30% NO_x converts to NO_2)	99.8%ile of hourly values	153	20	173	200 Note 1
(Assumes 75% NO_x converts to NO_2)	Annual Average	17	10	27	40 (for protection of human health) Note 1
Total NOx ($NO + NO_2$)	Annual Average	22	10	32	30 (for protection of vegetation) Note 1
SO_2	99.7%ile of hourly values	124	20	144	350 Note 1
	99.2%ile of daily values	41	10	51	125 Note 1
	Annual Average and Winter (1 October to 31 March)	5.7 2.3	10	16 12	20 (for protection of ecosystems) Note 1
Total Dust referenced to PM_{10}	90.5%ile of daily values	3.9	20	24	50 Note 2 20 Note 3
	Annual Average	1.1	20	21	40 Note 1

Note 1: SI 271 of 2002 NO_2 AQS to be met from 2010
Note 2: SI 271 of 2002 - As a 90.5 percentile of 24-hour averages from 1/1/2005 and an indicative limit as a 98 percentile of 24-hour averages from 1/1/2010
Note 3: SI 271 of 2002 - Indicative limit from 1/1/2010

Modelling results indicate that the maximum ground level concentrations will occur near the sites southern boundary and decrease significantly away from this location.

Annual level of total NOx predicted is marginally above the standard of 30 $\mu g/m^3$ for the protection of vegetation. However this maximum is predicted to occur near the southern boundary of the site for the maximum operation of both Phase 1 and Phase 2 emitting at maximum emissions continuously. The ambient quality standard as set out in S.I. 271 of 2002 is based on measured data i.e. monitoring at specific locations by the chemiluminescence method and predicted data is conservative in relation to monitoring data. The monitoring points directed at the protection of ecosystems and vegetation are also to be sited more than 20 km from agglomerations or more than 5 km from other built-up areas, industrial installations or motorways. The predicted impact of oxides of nitrogen is therefore not considered to present an impact that would breach the ambient standard.

Ambient monitoring for dust was carried out using a PM10 sampler located near the north entrance to the site. The predicted maximum impact is located to the south of the site and estimated background based on this sampling is considered to overestimate the background levels. The contribution from on site emissions is small and a major nearby source of dust emissions has since closed. The ambient quality standard as set out in S.I. 271 of 2002 is based on measured data i.e. monitoring at

specific locations and the emissions of dust is therefore not considered to present an impact which would breach the ambient standard.

Parameter	Modelled Impact	Modelled Concentration (µg/m3)	Typical background levels (µg/m^3)	Impact (µg/m3)	Comparison AQS/ EAL (µg/m3)
HCl	99%ile of hourly values	18	0.5	19	50 [Note 1]
HF	98%ile of hourly values	1.7	0.003	1.7	3.0 [Note 2]
	Annual Average	0.11	0.003	0.11	0.3 [Note 2]
TOC	98%ile of hourly values	18	100 [Note 3]	118	260 (Toluene [Note 4])

Note 1: Danish C-value for HCl
Note 2: TA Luft 2002 Immission value for protection of highly sensitive animals, plants and material goods.
Note 3: Reported by applicant.
Note 4: WHO 2000 guideline for toluene.

The emissions of mercury from the incinerators for both the vapour phase and particle-bound mercury have been modelled. Emissions of other metals have been evaluated and wet and dry deposition rates determined.

Parameter	Modelled Impact	Modelled Concentration (µg/m^3)	Typical background levels (µg/m^3)	Impact (µg/m3)	Comparison AQS/ EAL (µg/m^3)
Mercury	Annual Average, (vapour phase and particulate)	0.0056	0.006	0.011	1 [Note 1]
Cd and Tl	Annual Average	0.0024	0.0025 (urban)	0.0049	0.005 (Cd) [Note 1]
Sb+ As +Pb +Cr+Co+Cu Mn+ Ni + V	Annual average Maximum 1 hour	0.049 1.42	0.030 [Note 2] 0.009 (Sb)	0.079 0.143	0.15(Mn) [Note 1] 5 [Note 3]
As (at 0.0015 mg/m^3)	Annual average	0.003	0.003 (urban)	0.0045	0.006 [Note 4]

Note 1: WHO Air Quality Guidelines for Europe 2nd Edition 2000
Note 2 : Background concentration for Mn including cumulative impact
Note 3: Based on Occupational Exposure Limit (OEL)/100.
Note 4: Proposed Assessment Threshold EU COM (2003) 423 final

Maximum emission of 0.0015 mg/m^3 were estimated for As and Ni from the data available from incinerators in Belgium. At this emission the contribution to ambient levels at the max ground level concentration is 0.0015µg/m^3. It is not considered necessary to set individual limits on metals within the group considering the nature of the abatement system, the control of waste input and the emission profile.
Cadmium and thallium modelling results indicate that ground level concentrations are below the relevant air quality standard. Background concentrations of As and Cd were monitored however the detection limits could not achieve the low limits of the proposed standard and in the absence of local sources background levels for arsenic of 0.003µg/m^3 and for cadmium and thallium of 0.0025µg/m^{3}were used. These values reflect urban or industrial areas and therefore represent a worst-case scenario. These impact were determined under a very conservative scenario and actual impacts are expected to be significantly below these values.

Dioxins and furans:
The emissions of dioxin like compounds have been evaluated from the incinerators. Modelling carried out was based on the mass of each dioxin/furan congener, based on an estimated profile, emitted at maximum emissions as set out in the Incineration of Waste Directive 2000/76/EC and in the PD. Emissions are predicted to be one tenth of these levels based on monitoring data from other incinerators with similar flue gas abatement systems. Emissions of both the vapour and particle phase have been determined. Deposition modelling was carried out and the deposition flux for each congener was calculated.

There is no ambient air quality standard or deposition standard for dioxin/furans. In the absence of such a standard the predicted cumulative impact, background and process contribution, has been compared to ambient levels determined nationally and internationally.

Concentration of dioxin/furans at location of maximum impact from Indaver

Parameter	**Modelled Impact**	**Modelled Concentration**	**Typical background levels** Note 1	**Impact**	**Comparison** fg/m^3
Dioxins and furans (at ELV of 0.1 ng/m^3)	Annual Average	11 fg/m^3	18 fg/m^{3} Note 1	29 fg/m^3	Ireland Rural 2.8 – 7 Belgium Rural 17 – 51 Urban 52 - 128

Note 1: Based on dioxin monitoring and cumulative impacts with non-detects taken as limit of detection

Deposition flux dioxin/furan at location of maximum impact from Indaver

Parameter	**Modelled Impact**	**Modelled Deposition** $pg/m^2/day$	**Nearby Sources** Note 1 $pg/m^2/day$	**Impact** $pg/m^2/day$	**Comparison** $pg/m^2/day$
Dioxins and furans (at ELV of 0.1 ng/m^3)	Annual Average	3.98	0.22	4.2	Germany Rural 5 – 22 Urban 10 –100 UK 3.2 – 28 Flanders Rural 0.7 – 11 Urban 3.4 - 25

Note 1: Cumulative impact in the absence of Indaver

In consideration of the recommendation of the USEPA and WHO the applicant has assessed the risk to human health by a risk assessment analysis by determining the impact as a daily intake to a Maximum At Risk Individual(MARI).

The WHO Tolerable Daily Intake (TDI) for dioxins/furans is 1-4pg I-TEQ/kg of body weight /day. This is defined as the intake over a lifetime that is considered to be without appreciable health risk. This included the total exposure including air, water, soil and food.

The MARI was assumed to live at the point of maximum deposition and to be a subsistence farmer who obtained all their food (vegetables, milk and meat) from this location. The predicted intake was predicted to be in the order of 0.3 pg I-TEQ/kg of

body weight /day which is less than the lower WHO TDI. This modelled impact was determined under a very conservative scenario and actual impacts are expected to be significantly below this value.

Emissions to Waters:

There is no process effluent generated on site that is discharged to waters. All process wastewater from the incineration plant will be collected and reused in the process. Boiler blow down, water treatment effluent and scrubber water will be used in the evaporating spray towers. Effluent from the Waste Transfer Station drum washing area will be collected for treatment in the incineration plant or off site disposal. No process wastewater will arise in the Community Recycling Park.

Emissions to Sewer:

There is no process effluent generated on site that is discharged to sewer. Sanitary effluent from the on site workforce is to be treated by onsite package plant before discharge to the Cork County Council Sewer.

Surface Water:

Surface water from the facility is to be collected in three separate dedicated systems.

In the Incineration Plant collected surface water is to be used in the process. Excess surface water collected is to be discharged to the county council storm water sewer via a monitoring chamber. If surface water monitoring indicated contamination then the contaminated surface water will be retained for treatment on site or disposal off site.

Similarly, surface water from the hard standing areas of the Waste Transfer Station is to be tested for contamination and discharged to the county council storm water sewer if it is confirmed to be uncontaminated.

Roof water and car park surface water from the Water Transfer Station and surface water from the Community Recycling Park is to be discharged to the county council storm water sewer via an oil interceptor.

Proposed surface water retention facilities are considered to be adequate.

Waste:

Solid waste residues from the incineration plant will include the following:

Residue	**Predicted total tonnes per annum from both incinerators in operation**
Bottom ash	23,000
Electrofilter residue	5,000
Boiler ash	3,200
Flue gas cleaning residues	6,900
Gypsum	2,600

Monitoring of waste residues is set out in the RD and all waste disposal off site is at appropriately approved facilities and require the prior agreement of the Agency.

Noise:

The site is situated adjacent to the main road to Haulbowlin Island and the Ispat Ltd. steel works site. On the southern and western boundaries there is agricultural land and to the east there are cliffs and the shore and the Hammond Lane metal recycling plant is located in the centre of the site. Nearby noise sensitive locations include private residences to the west and southwest of the site with the nearest private dwelling approximately 100m west of the site boundary. A maritime college is also under construction on an industrial site across the main road to Haulbowlin Island to the north of the site. The daytime noise environment is dominated by traffic and nearby industrial facilities.

Noise sources on site are process and building services plant and vehicle movements.

Noise emissions from the facility have been predicted based on the proposed plant and vehicle movements in accordance with ISO9613. Predicted impacts at noise sensitive locations are all below the night time guide level of 45dB(A)Leq and therefore no significant impact is predicted.

Waste acceptance at the facility is restricted to the hours of 09.00 to 19.00 Monday to Friday inclusive and 09.00 to 14.00 on Saturdays. Waste acceptance is not permitted at the facility on Sundays or on Bank Holidays without the written approval of the Agency

Noise limits in accordance with the Agency's Guidance Notes for Noise in Relation to Scheduled Activities of 45 dB(A)L_{Aeq} night time and 55 dB(A)L_{Aeq} day time have been set at noise sensitive locations. In addition a noise survey is to be carried out annually.

Habitats

The site is located in an industrial zone in the lower harbour adjacent to the a public access area to the sea front. The site has no designation and there are no designated areas in the immediate vicinity of the site. Within the lower harbour area there are a number of designated sites as follows:

Proposed NHA,

001987 Cuskinny March

001076 Rostellan Lough, Ahada Shore and Poulnabibe

001084 Whitegate Bay (Proposed)

001990 Owenboy River

001979 Mounkstown Creek

001066 Lough Beg (also SPA)

Assessment of the proposed emissions indicate that there would be no significant impact on proposed Natural Heritage Areas or Special Protection Areas in the area.

Submissions:

Seven submissions were received

Submission No. 1 – 25 April 2003

Mr. Maurice Fitzgerald, Shanbally, Ringaskiddy County Cork

This submission consists of a two-page letter headed "Objection" signed by Mr. Fitzgerald. Mr. Fitzgerald states that he objects to the proposed decision to grant a licence to pollute the air and the waste management facility at Ringaskiddy. Mr. Fitzgerald sets out the grounds of his submission under a number of paragraphs as follows:

1. Reference is made to material contravention (Planning) and it is stated that Ringaskiddy is a port area and used regularly as a sea site area for recreational use.

   Response:

   While this is a planning issue the PD addresses all the environmental issued in relation to the Ringaskiddy port area.

2. Atmospheric discharges would create serious health risk to the human population.

   Response:

   Emissions to atmosphere have been assessed and emissions as controlled by the PD do not present a serious risk to the human population. This issue is further detailed under Impact of Air Emissions on Receiving Environment above.

3. Road infrastructure is inadequate and the development would result in high levels of noise and grit and increased accidents.

   Response:

   This is a planning issue and a matter for the planning authority.

4. There is insufficient data relating to toxin releases regarding sewage and effluent discharges.

   Response:

   Detailed information has been supplied in relation to effluent. Data on sewage discharges to sewer has also been supplied.

   See "Emissions to Water" and "Emissions to Sewer" of this report above.

5. There is insufficient data and technical information relating to emergency facilities should licence limits be exceeded.

   Response:

Adequate information was supplied on the proposed response to emergencies and the minimisation of emissions in the event of an emergency. The PD further provides for specific conditions relation to accidents emergences and the shut down of the facility which incorporates an automatic system of waste feed shut off in the event that an emission limits value may be exceeded.

6. There is insufficient data relating road quality construction

   Response:

   This is a planning issue and a matter for the planning authority.

7. There is insufficient data relating landscape proposals

   Response:

   This is a planning issue and a matter for the planning authority.

8. 24 hour Dioxin releases have been linked to cancers and may produce sterility and birth defects.

   Response:

   The emission of dioxins and the risk to health effects have been dealt with under Impact of Air Emissions on Receiving Environment above.

9. Serious health treats exist to psychological development of children at the local school from "dioxide" emissions. Reference is made to Section 9.8.1 of the EIS and it is stated that it does not preclude the possibility of other harmful effects like diabetes; DNA damage; carcinogenic compound release and immunotoxic effects.

   Response:

   It is unclear what dioxide is referenced here. There are no significant dioxides apart from oxides of nitrogen and these emissions and their impacts have been addressed in the PD. The health effects of emissions of "dioxins" have been dealt with under Air Emissions on Receiving Environment above.

10. Ringaskiddy could not sustain a toxic incinerator in addition to the existing licences to pollute the air.

    Response:

    The impact of the proposed incinerator has been assessed taking account of the existing background including the existing incinerators in the area. Emissions from the proposed

incinerator and the existing incinerators do not in combination present a significant environmental impact.

11. Insufficient noise level information on turbine and its effects

Response:

The impact of the proposed development in relation to noise including the proposed turbines has been supplied. Noise emissions from the activity will not be significant and should not result in nuisances in the area.

12. Up rooting of flora and fauna in particular badgers

Response:

The impact of the development due to the construction and placement of building and facilities is no different than any other general development.

13. Effects on harbour view

Response:

This is a planning issue and a matter for the planning authority.

14. Air quality and traffic danger effects on Naval Base recruit training.

Response:

Air quality and the impact of emissions from the proposed facility have been assessed and no impact on Naval Base recruit training in the area is predicted. Traffic is a matter for the planning authority

15. Insufficient planning notices

Response:

The planning notices are a matter for the planning authority. The site notice and newspaper notice for the licence application has been assessed and were found to comply with the relevant regulations.

The Agency wrote to Mr. Fitzgerald on 25 April 2003 explaining the regulations in relation to making submissions and advising him that his letter would be treated as a submission.

Submission No. 2 – 9 June 2003

The Development Applications Section of the Department of the Environment, Heritage and Local Government (formerly Dúchas)

This submission consists of a one-page letter signed by Ms. Treasa Langford.

Ms. Langford states that the application has been evaluated and confirms that the department has no objection to the proposed licence from a nature conservation perspective.

Submission No. 3 – 25 February 2004

Passage West Town Council

This submission was made by e-mail and post and consists of a one-page letter signed by the town clerk Mr. Niall O'Keefe. Mr. O'Keefe states that at the February meeting of the Passage West Town Council that a motion was adopted as follows:

" That the Passage West town council call on the Environmental Protection Agency to consider the submissions made by the specialists and experts in the environmental field at the An Board Pleanala Oral Hearing into the proposed incinerator at Ringaskiddy, when considering the application by Indaver Ireland for an operating licence."

Response:

In response to this submission the Agency wrote to Mr. Niall O'Keefe Town Clerk noting that the documents referred to in the submission were not enclosed and that if the Town Council wished to have specific documents considered that these should be submitted to the Agency.

No further submission was received from the Passage West town Council.

Submission No. 4 – 3 March 2004

Micheál Martin T.D. Minister for Health and Children

This submission is a one-page letter addressed to Kieran O'Brien signed by the minister. Minister Martin explains that he has been contacted by a number of residents concerning the proposed incinerator at Ringaskiddy.

Minister Martin asks for a comment on the suitability of the proposed incinerator for Cork Harbour. In particular, he asks for a view on suitability of Cork Harbour as a site for a thermal incinerator. The Minister states that thermal inversions are often experienced in Cork Harbour and refers to the World Health Organisation's guidelines on the unsuitability of sites that experience thermal inversions for incinerators. The minister explained that the residents are concerned that an accident would occur at a time of a thermal inversion and that emissions would be retained in the Harbour and not disperse.

Response:

An additional SCREEN3 dispersion model was used to assess unusual meteorological including thermal inversion conditions that may occur. This modelling in combination with the ISCST3 model indicates that there will be no significant impact as a result of the proposed emissions. The adequacy of the

assessment of the impacts and in particular the dispersion models is discussed further under Submission No. 6 below.

The RD provides for the minimisation of emissions in the event of an accident including the phased shutdown of the incineration plant.

Submission No. 5 - 25 May 2004

Process & Industrial Design Consultants Ltd.

This submission consists of a single page letter signed by Mr. Peter H North. Mr. North states that he will be submitting "initial comments" on the application with the next two weeks.

Mr. North further states that there are serious and substantive reasons for the rejection of the application as invalid inappropriate and incorrect and that that a new application should be required taking note of the comments.

Response:

Mr. North did not supported his allegations and statements with any facts or data.

Mr. North has made an additional submission (See submission 7 below) and stated that it has been made on behalf of EAST CORK FOR A SAFE ENVIRONMENT and CORK HARBOUR ALLIANCE FOR A SAFE ENVIRONMENT (Chase).

The issue raised in Mr. North's one page letter are repeated in his second submission and are dealt with under submission 7 below.

Submission No. 6 - 06 September 2004

Cllr Marcia K D'Alton

This submission consists of a ten-page letter with attached map and three cross section elevations of the lower harbour area.

The submission is set out under a number of headings and these are dealt with below:

1. Introduction

Cllr D'Alton stated that she objects strongly to the granting of a licence to Indaver on behalf of her constituents and for the environmental protection of Co. Cork. Cllr D'Alton states that the site selection undertaken is entirely contrary to best practice and in direct contravention of WHO guidelines and contravenes entirely the European Commission's advice. Cllr D'Alton supplies references to these guidelines but does not include them in her submission.

Response:

The Agency wrote to Cllr D'Alton in response to this letter explaining the regulations in relation to making submissions and advising her that the letter would be treated as a submission.

The WHO reference is a 118 page 1993 publication entitled "Site Selection for new hazardous waste management facilities" This book sets out guidance for new sites for the collection, treatment, storage and disposal of hazardous waste.

The European Commission's advice reference is available on the Europa.eu web site and is a one-page extract from "Incineration - environmental impacts and mitigation measures" on site selection. The document lists the major factors to be considered during site selection. Indaver in their application also refers to this document and have used it as a basis for site selection criteria. The specific issues are dealt with below.

2. Site selection procedure

Cllr D'Alton describes the site selection procedure as a desk study and considers that environmental issues were not considered until the last four sites were examined. She considers that the final site is unsuitable as it is at sea level at the bottom of a steep hill over looking an amenity beach at the side of an eroding cliff. She considers that the site is too close to residential areas in particular the town on Cobh and considers the visual impact to be unacceptable. Cllr D'Alton details the general environment and activities within 2km to 5km of the site.

Response:

The site selection process is detailed in the EIS and takes account of the relevant guidance including WHO. While some issues raised are a matter for the planning authority the site is not considered to present any difficulties for the proposed facility in relation to environmental protection. The site base level is approximately +6meters O.D. on the north east side of a hill that rises to a maximum of 43 meters. The cliff which rises from beach level at the north east site boundary to approximately 10 meters to the south east of the site does not present any problems for the facility or its operation as proposed.

3. The proposed site within the Cork Harbour context

Cllr D'Alton refers to the description of the lower Cork Harbour in the EIS and considers that the area is subject to localised meteorological conditions. She considers that steep topography, the marine environment, and differing land use contribute to the occurrence of regular thermal inversions. She makes reference to the WHO and stated that sites where regular thermal inversions occur should never be considered for hazardous waste incinerators. Cllr D'Alton considers that the area is not suitable due the prevalence of thermal inversions and she justifies this with reference to local observation and a statement by the Chief Fire Officer Cork County Council at the planning oral hearing that inversions occur 5% of the time in the Cork area. Cllr D'Alton has attached to her submission a map of the lower harbour area and a selection of three cross sections showing the relative heights form Cobh Ringaskiddy and Crosshaven.

Response:

The three cross-sections attached to the submission have been drawn using two different scales for the vertical and horizontal. The vertical scale has been magnified by a factor of approximately 40 and the profile does not present a true reflection of the existing topography. Cllr D'Alton's claim that there is a high prevalence of thermal inversions is not supported by any specific data. The applicant has supplied significant information on the metrological considerations in determining the appropriate data and dispersion assessments carried out. Weather data from Roches Point at the entrance to Cork Harbour and Cork airport have been discussed and compared. Data from Cork Airport was used for the model as this was the nearest station with suitable metrological data. The weather data does not support Cllr D'Alton's assertion that thermal inversion

occur frequently and that the site is therefore unsuitable for a hazardous waste incinerator.

4. Air dispersion modelling undertaken by Indaver
5. Appropriate dispersion modelling of the Lower Cork Harbour area

Cllr D'Alton considers that while the models used are authentic and well respected they have been applied improperly and with inappropriate data. She details the topography of the area with reference to the EIS and considers that the models used are unsuitable to determine the dispersion and that the metrological data used is inappropriate. Cllr D'Alton provides data on temperature, rainfall, air and ground frost, wind speed snow/sleet and fog for Roches Point and Cork Airport and considers that the weather can not be considered to be similar as claimed by Indaver and therefore the weather data for Cork Airport can not be used.

Cllr D'Alton considers that the lower harbour should be considered to have complex topography and metrological conditions. She references a Government Minister in New Zealand who recommends that in very rugged hilly or mountainous terrain, along coastlines that the model CALPUFF should be used. Cllr D'Alton calls for the collection of detailed wind data at the site in Ringaskiddy for a minimum of one year and the use of CALPUFF to determine impacts.

Response:

Cork Airport is the nearest station with suitable metrological data and in consideration of the comparisons between Roches Point and Cork Airport and the effect on the dispersion model and calculated impacts it is considered to represent an adequate assessment. It is also noted that the impacts calculated represent the worst-case situation and the actual impact is expected to be significantly less.

6. Conclusion

Cllr D'Alton states that she is an environmental engineer and that she is ashamed that members of his profession prepared and attempted to justify the dispersion modelling in the application and considers that this makes a mockery of the legislation and guidelines for the protection of human health and the environment. Cllr D'Alton refers to the EPA Act 1992 Section 52 and Section 4 and considers that to grant a licence to Indaver based on the air dispersion modelling presented in the application would be a breach of the Agency's remit under Section 52 of the EPA Act 1992.

Submission No. 7 - 09 September 2004

This submission received by e-mail and post consists of a one page cover letter from Mr. Peter H North and a sixty-five page document containing detailed submissions on the waste licence application under a number of headings. The issues raised are dealt with under these heading below.

Mr. North stated that the submission has been made on behalf of EAST CORK FOR A SAFE ENVIRONMENT and CORK HARBOUR ALLIANCE FOR A SAFE ENVIRONMENT (Chase).

Cover letter

Mr North states that there are serious concerns relating to false and misleading information. He states that this could impact on an EPA Director and calls for the consideration of the matter to be transferred to an outside competent authority.

He states that all the points raised in the submission should be explicitly answered and fully reflected in the decision of the Agency or they will be raised elsewhere.

Position of the Project Manager and Operations Manager are considered essential to the validity of the licence application and until these positions are filled and their CV's available the application should not be processed. Mr North states that it is essential to be able to comment on the qualifications, experience and competence of the holders of these positions.

Response:

While Mr North states that, he has concerns regarding false and misleading information he does not detail any specific data here.

The appointment of directors to the Agency and the operation of the Agency in the determination of licence applications are controlled by statute. The Agency is the competent authority tasked with the assessment and determination of licence applications and there is no provision in the Act or the regulations for the consideration of a licence application by an outside authority.

The application form specifically required information on the technical competence and site management of the proposed facility. Detailed information was supplied by Indaver including information on management structure, job descriptions and qualifications requirements. Condition 1.1 of the RD also requires the prior agreement of the Agency for any alteration in the Site management infrastructure or control with adverse environmental significance

Condition 2.1 and Condition 2.2 of the RD further require the licensee to employ a suitably qualified and experienced installation manager and that personnel performing specifically assigned tasks are qualified on the basis of appropriate education, training and experience. Prior to the commencement of waste activities, the licensee is required to submit written details of the management structure of the facility to the Agency. Any proposed replacement in the management structure is also required to be notified in writing to the Agency.

1. Introduction

Mr North states that the submission is a preliminary review and that a further, more comprehensive review will be published.

He states that the EPA has not merely to consider conditions of a licence but also if a licence should be granted at all.

He considers that the preliminary review indicates grounds for rejecting the licence and that there are also serious doubts that any such facility should be licensed, in this or any other country.

2. Scope and Complexity

Facility

Mr North states that the Agency is required to consider the impacts and implications of a wide range of activities and lists these in relation to the proposed activities. He states that these are inter-related and must be considered on several levels including design, construction, commissioning, operation, etc.

He also states that they must be considered in the context of dynamic rather than the static national waste handling and treatment situation. In particular he lists issues related to hazardous waste, municipal waste and other issues including impact of EU Directives, changes in industrial manufacturing, source segregation, recycling, population density, district heating and utilization of low grade waste heat.

Underlying Documentation

Mr North refers to directives and regulations and considers that interpretation is required and that they are technically dated when issued. He considers that they represent a minimum level to be applied.

Mr North lists a number of documents and states that these documents are relevant and have been employed by Indaver in support of the application or by the EPA, DoE and Government Ministers to support mass burn mixed waste incineration. He states that these documents are to be challenged.

The listed documents include the following:

- "Inventory of Dioxin and Furan Emissions to Air, Land and Water in Ireland for 2000 and 2010" EPA 2002
- Investigation on PCDDs / PCDFs and several PCBs in Milk Samples" FSA 2002
- "National Hazardous Waste Management Plan – Strategy Study" EPA, 1998
- "National Hazardous Waste Management Plan" EPA, 2001
- "National Waste Database Report for 1998" EPA,2000
- "Sustainable Development – A Strategy for Ireland" 1997
- "Health and Environmental Effects of Landfilling and Incineration of Wastes - A Literature Review" HRB, 2003
- "County Council, Waste Management Plan" various, 1997 – 2004

Mr North states that these documents are in need of review and are superficial, erroneous, selective, deceptive, inadequate, out dated and of low technical quality. He states that it is on these documents that the waste management strategies and systems for the next 20 to 30 years are being based. Mr North states that these documents are being reviewed by specialist professionals and set out a time frame between December 2004 and March 2007 and additional reviews of waste treatment options.

Mr North considers that from preliminary analyses that the proposed facility will not be considered as BAT or even good practice within 5 to 10 years.

Assessment Techniques

Mr North questions the application of BAT(NEEC), Life Cycle Analysis, Integrated Waste Management and BPEO to waste management in general and in particular mass burn mixed waste incineration. He states that there has been no

obvious examination of incineration under the concept of safety, health and the environment and that a technology must go through a full and proper examination if it is to be introduced.

Response:

Section 40 of the Waste Management Act allows the Agency to grant a licence, subject to, or without, conditions or to refuse to grant a licence.

The design, construction, commissioning and the operation of the facility have been considered in the determination of the licence. The RD as drafted provides for the construction, commissioning and operation of the facility.

The licence application has been assessed with regard to relevant environmental management plans, EU Directives and regulations.

The documents listed by Mr. North while referenced in the application do not form part of the application. Mr North does not provide specific detail of the issues associated with these documents and how they effect the determination of the licence. The licensing regulations provide for the making of submissions and objections within specific time frames and the time frame up to 2007 for document review in relation to the making a further submissions is not considered reasonable.

3. EPA

Mr. North states that the EPA's role is set out in Irish Statute and also EU Directives and that it is not just a licensing and enforcement agency but also adviser to government undertaken research activities.

Mr. North questions whether the Agency has resources to discharge its responsibility.

He considers that significant expertises and experience is required from the EPA and doubts that the Agency has the technical capabilities and resources to review the application and the ability to monitor or enforce any licence that may be granted.

Mr North calls on the Agency to obtain expertise if required that have the confidence and respect of the organisations representing public concern on the subject.

Mr North states EPA must review the application in the context of wastes management plans, policies and technical requirements. Mr North states that documents directly employed, or referenced, by Indaver must be employed in any assessment.

Response:

The staff of the Agency have wide range of expertises and experience and the Agency is the competent authority tasked with the assessment and determination of licence applications. The Agency may obtain advice and assistance from outside its own resources as required.

4. EU and National Policy

Mr North refers to Indaver reference to obligations and policy objectives as required by EU Directives and regulations in making a justification for the proposed facility and in particular the issues of trans-frontier shipments and proximity. Mr North considers that these issues do not support the requirement for the facility. He states that while he accepted that there should be an aspiration to provide hazardous waste facilities in each country he does not consider that it is viable and, in the movement away from the trans-frontier shipment of waste, the application of the principal of proximity should be tempered with realism in terms of economics and overall environmental costs.

Response:

The licence application has been assessed with regard to relevant environmental management plans, EU Directives and regulations.

5. Necessity

Mr North refers to Indaver's justification of the facility in the application and details the percentages of hazardous waste exported, treated on site and waste to be incinerated in the proposed facility. Mr North considers that there is no necessity for the facility and that it will not be competitive in cost or eliminate the export of waste to any great extent.

Mr North calculates the effect on the reduction in landfilling of waste from the operation of the municipal and non-hazardous wastes incinerator. He considers that when the residues are taken into account the effect on landfill reduction is not significant.

Mr North examines the energy recovery of the proposed facility and compares it to power plants and considers it to be very inefficiently generated. He considers that waste solvent could be better used in industrial CHP plant.

Response:

The proposed facility cannot be compared to power plants in examining the efficiency of energy production. The activity is primarily an incinerator. The waste input as a fuel source and the provision of facilities for waste handling and the abatement of emissions will not result in an overall energy efficiency in the range of power plants or dedicated CHP plant. The use of high calorific value solvents in on site CHP plants is carried out on a number of sites in Ireland and controlled as the incineration of waste. This is not feasible on many sites and in many cases; it cannot be used as alternative fuel. The incineration of these solvents with heat recovery is considered the best option.

6. Options

Mr North discusses the assessment of options to the proposed facility and the need for a professional and objective analysis. He challenges a number of assumptions in relation to the options for further treatment of waste made in relation to assessing options. Mr North lists a range of treatment options for both hazardous waste and non-hazardous waste.

Mr North comments on landfilling and the desire to reduce landfilling and find alternatives for reuse of inorganic waste.

Response:

While the further treatment of certain wastes can be undertaken in many cases, this is not practicable either due to the nature of the waste of the presence of contaminants. Waste treatment options for waste generated on licensed sites are considered as part of the EMP for that site.

The RD provides for the analysis of waste residues from the facility and the recycling of these residues where appropriate.

7. Technology

Mr North discusses the technology options for both hazardous waste and non-hazardous waste. He considers that while oxidation is more appropriate to hazardous waste that a biological option is feasible for non-hazardous waste and that non-thermal options are not adequately considered.

Mr North also considers that alternative thermal options have been dismissed too quickly for cost reasons.

Mr North considers that mass burn, mixed waste incineration does not represent the best environmental option and has been responsible for major environmental problems in the past. He states that this activity will create substantial quantities of dioxin and the re-direction of dioxins into solid wastes in not the answer. He expresses his concern for the failure of the flue gas treatment and the releases of dioxins to the air. He considers that a proper assessment of the facility must include comparison of the total environmental impact of this facility with alternative technologies He considers that the selection process has been flawed and appears to have been deliberately biased in order to justify a pre-selected technology.

Response:

Indaver have explained in their licence application why the proposed technologies are the preferred options allowing them flexibility in light of the expected changes in the waste streams and waste disposal market. Indaver have discussed the technology options including non-thermal options and the reasons for the preferred option.

The reformation of dioxin/furans is minimised by optimal design and the provision of cleaning systems within the boiler (Condition 3 of the RD).

The provision, control, operation and maintenance of the flue gas abatement systems are detailed in the RD. Emergencies and abnormal operations are also provided for to ensure minimum emissions during such periods and the requirement for corrective actions as necessary.

8. Waste Application

Mr North provides 32 pages of detailed references to the waste licence application as supplied by Indaver. He make a number of comments regarding compliance with the licence application form and considers that the application is not valid.

Mr North progresses through the application form and comments and makes statements under each heading. In general many statements are made without further comment. Mr North's submission has been examined in detail under the various headings. In many cases specific issues have been raised that are clearly addressed in the RD or elsewhere in this report. In such cases I have not commented on them further here. Where relevant I have dealt with the issues raised in the response below.

Response:

The application form is a guide for the applicant in making a licence application and while it does reference the licensing regulations non-adherence to the form does not constitute an invalidation of the application. The application has been assessed and complied with the requirements of the regulations.

In relation to the open option for flue gas abatement as set out in the application the applicant had in response to a request for additional information set out the specific system to be installed. The RD provided for the maintenance and control of this system.

The RD provided for the development of detailed procedures for the acceptance of waste and the control of waste feed to ensure the control of the incinerator and compliance with emission limit values.

The RD requires a test/commissioning programme for each incinerator that must demonstrate that the incineration plant will comply with the required control and limits as set out in the RD. The licensee is prohibited from operation of the incinerator until satisfactory completion of the test/commissioning programme.

The RD provides for a comprehensive testing of waste residues before the determination of their disposal.

The RD sets out detailed requirements for site management and includes the requirement to operate an environmental management system.

9. Environmental Impact Statement

Mr North provides 16 pages of detailed references to the EIS. Mr North progresses through the EIS and comments and makes statements under each heading. In general many statements are made without further comment. Mr North's submission has been examined in detail under the various headings. In many cases specific issues have been raised that are clearly addressed in the RD or elsewhere in this report. In such cases I have not commented on them further here. Where relevant I have dealt with the issues raised in the response below.

Response:

The incineration plant as provided for in the RD complies with the requirements of the Incineration of Waste Directive 2000/76/EC.

In many cases, Mr North deals with planning issues and as these issues are not subject to licensing, they are not dealt with further here.

Mr North makes a number of criticisms of the assessment of the existing environment and the determination of the impacts from the proposed activity. While some difficulties were experienced with the ambient monitoring, the

monitoring undertaken together with the assessment of the contributions from local sources is considered to adequately determine the receiving environment. The assessment of the impacts is also considered adequate.

10. Commissioning, Operation and Breaches of Licence Conditions

Mr North is concerned that commissioning is not addressed in the application and makes some suggestions in relation to time scale and restriction on waste until the incinerator is full commissioned.

Mr North makes some suggestions regarding the response that the Agency should have to breaches of licence. In particular, he considers that certain waste types should be restricted and further commissioning required in the event of on going breaches.

Response:

The RD requires a test/commissioning programme for each incinerator that must demonstrate that the incineration plant will comply with the required control and limits as set out in the RD. The agreement of the Agency is required for the operation of the incinerator following the test/commissioning and restriction on waste input may be imposed to ensure compliance with the licence as part of this agreement.

The RD provided for incidents and emergences in Condition 9 including emissions that do not comply with the requirements of the licence.

Recommendation:

I recommend that the Proposed Determination be issued subject to the conditions and for the reasons as drafted for all the waste classes of waste activity applied for in the application (Classes 7,8,11,12 & 13 of the Third Schedule and Classes 1,2,3,4,6,9 & 13 of the Forth Schedule)

Signed

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Kieran O'Brien