SUB 20 167 -1

Environmental Protection Agency
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Johnstown Castle
Co. Wexford

60 Beaubec
Dublin Road
Drogheda
Co. Louth

Dear Sirs,

I wish to make the following observations / comments on the EIS and Waste License Application submitted by Indaver Ireland Re the Carranstown Waste Management Facility. (Meath Co Council Planning REF No 01/4014).

I would appreciate if you could acknowledge my above correspondence. I can also be contacted by phone at 041 9842551.

Yours Sincerely

James Behan 09/05/02.

James Behan.

Location of Site;

Indaver have stated in their EIS (section 6.1 & 6.2) and Waste License (section C) that the proposed site location is only 200m from the existing Platin quarry. The quarry is approximately 35 hectares in size and 200ft deep.
Indaver have failed to assess the impact of daily production operations in the quarry to the proposed site and also the impact the quarry has on the air dispersion model in sizing the emission stack, its GLC's, and influence on plume dispersion.

There are routine daily explosions in the quarry to extract limestone. Indaver have failed to assess the impact of these explosions on their incineration process.
Such explosions will cause both vibrational and electrical interference. This interference will effect the calibration and monitoring of process and environmental conditions on site. When explosion's occur motors on vibrational filters or air suction systems could trip out, also electrical interference could effect the dosing requirements and calibration on activated carbon / urea injection and also the operational efficiency of wet scrubbing systems. Auto sampler's and emission data logging equipment on the main stack could trip out.(How effective is the AMESA adsorption method for monitoring of dioxins and furans under such conditions). Vibrational interference may also effect shaft alignments and result in excessive maintenance and downtime.

EIS (section 2.10.3) relates to the suitability of site selection under WHO guideline criteria.
Indaver have incorrectly ranked the sensitivity of the site w.r.t "Coastal wetlands" and "Coastal areas for shellfish and fishing".
In the EIS and Waste License (Attachment D 2.1, section 5.1) they state that they will utilise an underground water storage tank 1500 m cubed for the storage of rain water from 40000 m sq of hard standing. This rain water will accumulate from roof surfaces and operational access and service areas of the plant. At times of heavy rainfall they can periodically discharge this effluent to a nearby ditch which drains into the river Nanny, this in turn passes through Julianstown and Sonairte (National Ecology Centre) which is adjacent to a large wildlife preservation and wetlands area, and passes onwards to enter the sea at Laytown. Laytown and Bettystown beach is used extensively during the year for coastal trawling.
In reality this effluent will contain a cocktail of silt, toxic ash and heavy metals from dust accumulations that are washed off roof and paved surfaces (GLC 's can accumulate inside site areas from the dispersion model). This in turn will feed into the Nanny system and effect the Wetlands and coastal system. The sensitivity of the sites should be ranked as high.

Air Dispersion Modelling;

EIS (section 4.4.2) & Waste License (Attachment H1.1, H1..2) deals with the Air Dispersion Modelling. It states in the EIS that the terrain has been considered flat for the dispersion model, and that the change in the terrain within the vicinity of the site is not significant enough to influence plume dispersion.

The EIS again has failed to take into consideration the impact of the adjacent quarry and size and congestion of the cement silo farm on the dispersion model.

The terrain is certainly not flat, as there is a depression in the landscape ie. the quarry only 300m from the proposed emission stack. The quarry is 35 hectares in size and 200ft deep / 75m (this is almost twice the height of the proposed stack 40m). The Platin cement silo farm should be considered as a ridge as the 12 silos are higher than the proposed stack, neither of these conditions were applied to the ISC 3 dispersion model.

The limestone quarry under normal climatic conditions would have a different degree of absorption / radiation - transfer of heat than the surrounding agricultural grasslands. At the interface of the above two systems ie. close to the emission stack there is a greater degree of air movement / turbulence. This has not been considered in the dispersion model.

The model has predicted that maximum ground level concentrations of emissions occur approximately 200m NE of the stack. This is still almost within the site boundary. The maximum exhaust flow rate at the discharge temperature of 100 degrees C will be 232,237M cubed / HR. Under certain climatic conditions the GLC's will stay on site, be consumed through the air intake system again, and result in the creation of saturated and higher levels of GLC.

The summary to section 4.4.4 of the EIS "Potential effect of emission via a 40m stack"- states

"In summary, at sufficient high concentrations the emissions from the waste to energy plant can have a wide variety of toxic effects and could impact on human health either as a result of direct inhalation or ingestion of water and food sources. However, due to sophisticated flue gas cleaning systems at the plant and the dispersion of the emissions from the stack, these substances will pose no threat to human health or the environment".

The EIS and Waste License has failed to assess correctly the impact of the quarry and silo farm on the air dispersion model and also on the operational and environmental efficiency of the proposed facility.

Disposal of Boiler Ash and Flue Gas Cleaning Residue;

EIS (section 2.5.4) and Waste License (Attachment B9) deals with the disposal of boiler ash and flue gas residue. Directive 91/689/EEC states that the above residue and ash is hazardous to landfill if it contains properties listed in H1- H14 of the "Waste Catalogue and Hazardous Waste List".

Indaver will hold up to 300 tonnes of the above ash and residue on site, it takes approximately 1 week to do analysis from leachate test, this will determine if the material is classed as hazardous or non hazardous. If the situation arises that the above material

fails the test and is classed as Toxic or Class 9. Then the inventory of this material on site falls into the category of exceeding the Lowe Tier Threshold and is thus classified as a **Seveso Site** under SI 476 of 2000.

Natural Gas main pipe line running through site;

There is an existing main natural gas pipe line from Drogheda to Navan which runs under the proposed site. It is situated between the warehouse and reception hall / sorting plant. The gas main diameter is 300mm @ 60 Bar .The length of pipe under the site map ref 2666-22-DR-012 is approx 300 metres. "Natural Gas" is listed as one of the 51 "named substances" under the First Schedule of the Regulations in SI 476.
The service / turning yard to the warehouse is located directly over the main gas pipeline. If a spillage of Corrosive material e.g hydrochloric acid, or caustic occurs from an IBC or carbide when being unloaded in the service yard, There is the likelihood that this could enter the surface water drains and penetrate through to and rupture the gas main. The potential for a sudden mass release of gas at 60 Bar pressure and subsequent catastrophic event qualifies this facility as a **Seveso site** under SI 476, there is a potential for a major accident involving one or more dangerous substances at the site.

Attachment C6.1 Existing Hydrogeology;

The bedrock aquifer in the vicinity of the site is classified as Rf – regionally important with fissure flow. Any potential contamination of clay on site and falling rain water will move horizontally along the clay to the wet drain to the west of the site. This drain runs into the Nanny river.

Attachment C8 Noise;

Ref table 3.1 Daytime and night-time noise monitoring results have only been recorded for periods of 30 minutes at each of the monitoring points. This does not give a true representation of a 12 hour period.

Attachment D1. K&L Trade Effluent;

The waste license specifically states that will be no trade effluent generated on site. Yet the waste license does not detail how water used for he purpose of the following will be disposed of;
Cleaning of floor surfaces.
Cleaning of heat exchanger surfaces at maintenance.
Cleaning of metallic / mesh screens and filters.
Cleaning of vessels after desludging or clean down.
Washing and cleaning / maintenance of scrubber systems.

Attachment D2.1 Description of Unit Operations;

The Waste License (section 4.2.3) does not give details on the chemicals used to suppress odours in the waste bunker when the facility is not operational. They are not listed in section E5.1. It does not discuss the effects of incineration of these chemicals on start up.

Section 4.6.5 details abnormal situations that can arise in the evaporating spray tower due to the failure of the nozzle or rotary atomiser used to spray liquid to cool the combustion gases. It details preventative maintenance that will be carried out on a weekly or fortnightly basis, whereby the nozzle and atomiser are removed. The waste license does not address what happens in the interim period to the combustion gases when these nozzles are removed and the cooling efficiency is reduced.

Section 4.10.3 Table 4.1 Details comparisons of Typical Emission Data with EU Limit Values. Most of the emissions NO2, S02, and heavy metals are approximately half the EU limit Value. The combined effect of a second incinerator facility operating at Courtlough near Balbriggan only 8 miles away will increase the cumulative emission concentrations to EU limit Values. (There is also the reality of a third and fourth incinerator at Ringsend and Monaghan, all within a 30 mile radius, which will further increase the cumulative concentrations).

Section 4.11.1 states that a solidification plant "may" be installed at the facility. Yet Section D1 M&N of the waste license application (Details of site infrastructure) lists the solidification unit as being one of the main building on site. There is thus inconsistency in the license application, w.r.t the management of potentially toxic waste. There is also no hazardous landfill site in the area to take toxic waste.