

**INSPECTORS REPORT ON A LICENCE REVIEW APPLICATION**

<b>To:</b>	DIRECTORS
<b>From:</b>	CIARA MAXWELL, INSPECTOR - LICENSING UNIT
<b>Date:</b>	13 <sup>th</sup> JANUARY 2005
<b>RE:</b>	APPLICATION FOR A REVIEW OF WASTE LICENCE FROM INDAVER IRELAND LIMITED, LICENCE REGISTER 36-2

**Application Details**

Type of facility:	Hazardous and non-Hazardous Waste Materials Transfer Facility, incorporating a Solvent Blending Plant
Class(es) of Activity (P = principal activity):	3 <sup>rd</sup> Schedule: 11, 12, 13(P) 4 <sup>th</sup> Schedule: 1, 13.
Quantity of waste managed per annum:	Currently: 22,710 tpa Proposed: 50,000 tpa
Classes of Waste:	Household, commercial and industrial waste, including industrial sludges, wastes from thermal processes (except thermal waste treatment facilities), healthcare/agricultural waste, beverage industry waste & hazardous waste.
Location of facility:	Tolka Quay Road, Dublin Port, Dublin 1.
Licence application received:	18/08/2003
Third Party submissions:	
Dept. of the Environment, Heritage and Local Government:	Received 12/08/2004
Eastern Regional Fisheries Board:	Received 05/09/2003.
EIS Required:	Yes
Article 14 Notices sent:	19/03/2004
Information under Article 14 received	05/07/2004
Article 14 compliance date:	12/01/2005
Site Inspections:	16/09/2003 (P. Carey – Site Notice Inspection. Site Notice was compliant.) 08/09/2004 (C. Maxwell & P. Byrne Site Visit)

**1. Facility**

Indaver Ireland Limited, (hereafter referred to as Indaver Ireland), has submitted this application for a proposed extension to its waste transfer station, located at Tolka Quay Road in Dublin Port. Indaver Ireland exports

hazardous waste from Ireland to Britain and other European countries for recovery, disposal or treatment. The existing facility is operating under waste licence Reg. 36-1, which was issued 26/02/1999. Note that the licensee had been trading under the name MinChem at that time. Notification was received by the Agency, 20/01/2005, that the licensee had changed its name from MinChem Environmental Services to Indaver Ireland Limited. Indaver Ireland is part-owned by Indaver NV, Belgium. I am satisfied that this name-change does not constitute a transfer of licence under Section 47 of the Waste Management Act, 1996.

The site is currently licensed to accept both hazardous and non-hazardous waste. The total quantity of waste throughput will increase, from 22,710 tonnes per annum (tpa) under the current licence, to a total of 50,000 tpa, under the proposed review. The proposed extension includes a solvent blending facility. Planning permission for the proposed extension, incorporating solvent blending plant, was granted by An Bórd Pleanála on 29/07/2003, (Ref. PL 29N.201402).

Waste solvents, transported in bulk road tankers from Indaver Ireland's industrial customers, will be mixed proportionally in accordance with their calorific value (CV). The blended waste can then be used as a fuel, for example in cement kilns. Heretofore, because of the variable calorific value of some of the waste streams the only option for disposal was incineration. All of the blended waste will be exported to the UK or continental Europe, as there are currently no facilities in Ireland licensed to use waste solvents as fuel.

The proposed expansion will be carried out in two phases:

- Phase 1 - provision of the solvent blending module and ancillary facilities, which would take approx. 5 months to complete; and,
- Phase 2 - the construction of a warehouse for paper/magazine storage, which would take approx. 3 months to complete.

The facility is located in Dublin Port on land that was reclaimed in 1972 with the subsoils of the area, mainly sandy fill. The land is owned by the Dublin Port Company, Port Centre, Alexandra Road, Dublin 1. There are no residential areas within a radius of approx. 700 metres.

When the facility is fully operational it is expected that the total workforce on site will increase from 22 to a maximum of 25 employees. The transfer station is currently licensed to operate from 0800hrs to 1800hrs Monday to Friday. Agreement was sought and received 29/07/2002 (WL 36-1/AK12PC) to extend the operating hours to 0800hrs to 1900hrs Monday to Friday. The licensee now requests that these hours are extended to 24 hours a day, 7 days a week as it may be necessary to operate the Blending Plant on a shift basis during peak times and to accommodate vehicles arriving at the site. Due to the location of the facility in Dublin Port, the industrial nature of the area and the absence of any residential areas nearby, it is proposed to agree to the operating time extension.

### **1.1. Classes of Activity**

The classes of activities for which the applicant has applied are marked overleaf. The principle activity is indicated by (P).

<b>Waste Management Act, 1996</b>			
<b>THIRD SCHEDULE Waste Disposal Activities</b>		<b>FOURTH SCHEDULE Waste Recovery Activities</b>	
1. Deposit on, in or under land (including landfill).	-	1. Solvent reclamation or regeneration.	<b>X</b>
2. Land treatment, including biodegradation of liquid or sludge discards in soils.	-	2. Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).	-
3. Deep injection of the soil, including injection of pumpable discards into wells, salt domes or naturally occurring repositories.	-	3. Recycling or reclamation of metals and metal compounds.	-
4. Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons.	-	4. Recycling or reclamation of other inorganic materials.	-
5. Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment.	-	5. Regeneration of acids or bases.	-
6. Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1. to 10. of this Schedule.	-	6. Recovery of components used for pollution abatement.	-
7. Physico-chemical treatment not referred to elsewhere in this Schedule (including evaporation, drying and calcination) which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1. to 10. of this Schedule (including evaporation, drying and calcination).	-	7. Recovery of components from catalysts.	-
8. Incineration on land or at sea.	-	8. Oil re-refining or other re-uses of oil.	-
9. Permanent storage, including emplacement of containers in a mine.	-	9. Use of any waste principally as a fuel or other means to generate energy.	-
10. Release of waste into a water body (including a seabed insertion).	-	10. The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system.	-
11. Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.	<b>X</b>	11. Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.	-
12. Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.	<b>X</b>	12. Exchange of waste for submission to any activity referred to in a preceding paragraph of this Schedule.	-
13. Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.	<b>P</b>	13. Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.	<b>X</b>

## 1.2. Class Description

### Waste Management Act, 1996: Third Schedule

Class 13. *Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.*

#### Principle activity

The principle activity refers to the storage of waste streams at the facility prior to onward movement of the waste materials where it will be subject to disposal, e.g. incineration.

The principle activity will remain the same as in the original licence, although there will be an increase in the licensed tonnage. It involves the following storage and loading/unloading activities:

- Offloading and storage of packaged material arriving at the transfer station;
- Loading of packaged material from storage into containers; and,
- Storage of full loads (bulk and packaged) & partial loads (packaged) transiting the transfer station.

Class 11. *Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.*

It may be necessary to send material from the blending facility for disposal, instead of recovery.

Class 12. *Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.*

This activity is to cover the repackaging of any packaged wastes arriving at the facility, which do not meet the acceptance criteria laid down by Indaver Ireland or the regulatory authorities. These activities include:

- Over-drumming;
- Cross pumping; and,
- Re-drumming.

#### **Waste Management Act, 1996: Fourth Schedule**

Class 1. *Solvent reclamation or regeneration.*

The blending plant is designed to mix/blend solvents in order that they may be sent to facilities that will use them as a fuel. This type of activity is not currently licensed at the transfer station.

Class 13. *Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.*

This activity is currently licensed at the Indaver Ireland site and involves the following operations:

- Packaged and bulk waste material being stored on site prior to onward shipments to a waste recovery site; and
- Wastes such as waste electrical and electronic material, fluorescent tubes and fridges being loaded and stored in containers prior to shipment to a recovery facility.

This type of activity will also apply to the following proposed operations on site:

- Storage of solvents in the tank farm for the blending plant prior to dispatch to facilities for use as a fuel; and,
- Storage of waste newspapers and magazines in the warehouse prior to dispatch off site for recycling.

## 2. Operational Description

### 2.1 Nature and Quantities of Wastes

Under the current licence the facility can accept a total quantity of 22,710 tpa of waste per annum. Since licensing, wastes accepted has comprised mainly of hazardous waste (e.g. 13,600 tonnes hazardous, and 1,900 tonnes non-hazardous waste accepted in 2002).

Under the review, the total quantity will increase to 50,000 tpa. Approximately, 38,000 tpa will comprise hazardous waste, of which 20,000 tpa will be directed to the proposed Solvent Blending Plant. The remaining 18,000 tpa will be exported for recovery/treatment/disposal. Of the c.12,000 tpa of non-hazardous waste to be accepted, c.10,000 tpa will comprise newspaper and magazines.

The broad classes and quantities of waste proposed for acceptance are listed in *Schedule A.2* of the RD (Recommended Decision). The RD specifies that explosive and radioactive wastes shall not be accepted at the facility.

### 2.2 Facility Design

#### 2.2.1 Infrastructure

The site occupies an area of approximately 0.8 hectares. The current facility comprises the following elements:

- 2 storey office building and car parking;
- Marshalling yard and parking area for trucks, bulk tankers and container storage;
- Segregated (and covered) packaged waste (e.g. 200L Drums, Intermediate Bulk Container (IBC)) storage building or drumstore;
- Firewater tank (50m<sup>3</sup>) and pump house;
- Repackaging room (for non-compliant or defective packaged material);
- Storm water retention tank; and,
- Emergency bulk tanker storage bay/quarantine area.

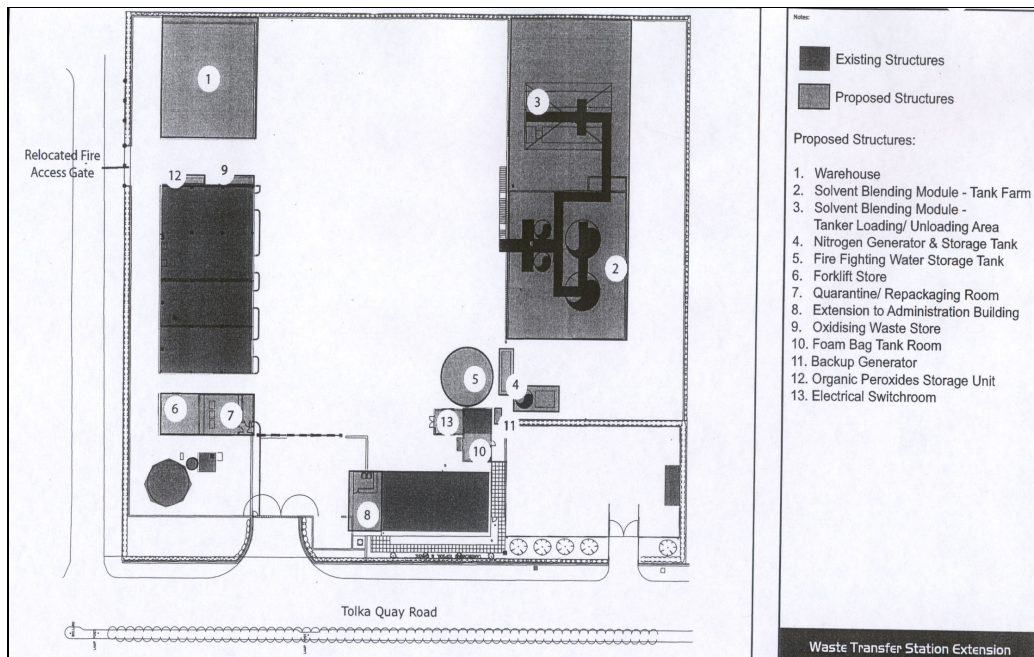
The proposed transfer station extension will involve the provision of the following:

- Solvent blending module
  - Bulk tanker loading/unloading area (will also serve as Bulk Tanker emergency quarantine bay following demolition of the existing quarantine bay)
  - Tank farm comprising 700 m<sup>3</sup> of tank storage
    - (2 x 300m<sup>3</sup> - 11.5m high; 6m diameter)
    - (2 x 50m<sup>3</sup> - 8.5m high; 3m diameter)
  - Liquid nitrogen storage tank (9.5m high);
- New firewater storage tank (505m<sup>3</sup>);

- New waste repackaging/quarantine room;
- Forklift store;
- Electrical switchroom;
- Dry warehouse (general storage, e.g. empty drums, waste paper);
- Tanker cleaning equipment; and,
- Laboratory (may be located within an extended Administration building if an on-site laboratory is deemed necessary).

Phase two of the extension will involve the construction of a warehouse for the storage of newspapers and magazines.

A plan showing the proposed layout of the extension to the transfer station is given below.



**Figure 1** Layout of Waste Transfer Station - Proposed

### 2.3 Operational stages

There are essentially three operations proposed for this facility. They are:

- Transfer station;
- Blending plant; and,
- Newspaper/magazine warehouse.

### 2.3.1 Transfer Station

The primary operational activities of the Transfer Station are and will continue to be:

- Acceptance and recording of drummed, packaged or bulk waste;
- Storage and segregation of this waste;
- Assembling loads for transport to disposal/recovery sites; and,
- Storage of ISO tank containers (i.e. bulk liquid intermodal freight containers), box containers and trailers.

Indaver Ireland has established detailed working procedures for the acceptance, handling, storage and dispatch of wastes. Procedures for the 'Acceptance of waste at the transfer station', which includes transit loads (i.e. full consignments as either packaged material in containers or bulk liquid in tanks) and 'Inspection of packages for carrying waste' were submitted as Attachment E.3.2. of the application. The procedure for 'Loading containers for shipment' is supplied in Attachment E.4. The latter Attachment includes procedures for 'Spill Clean-up' and 'Repackaging of waste'.

### 2.3.2 Blending Plant

#### Waste Acceptance Procedure

Prior to accepting a waste stream from a customer, each waste stream will be analysed and given a waste acceptance number. This characterises a waste stream from a particular customer. Every load, upon arrival at the blending plant, will be sampled using a dip-tube at the tanker loading/unloading area and analysed for certain parameters, including Gas Chromatography, to compare the waste's "fingerprint" with the original sample from that company.

#### Compatibility Testing

It is proposed that wastes are tested for compatibility using the ASTM Waste Compatibility Test Standard (Attachment D.2.C). This method includes three main tests:

- Commingled waste compatibility;
- Polymerisation potential; and,
- Water compatibility.

This test method does not highlight delayed or slow reactions. Indaver Ireland will also carry out an 'In-House Test Procedure' against some standard solutions and solvents and a mixture test with the contents of the bulk storage tank (Attachment D.2.1.4). Mixture tests will be monitored for up to 10 minutes for reaction, miscibility and temperature increases to ensure that any slower reactions are observed. Condition 5 requires that this procedure be submitted for Agency approval prior to the acceptance of any waste to the Solvent Blending facility.

Positive outcomes in any of the above tests would result in the material being deemed unsuitable for blending and returned under full documentation to the customer or sent off-site under TFS documentation for alternative treatment/disposal.

A draft procedure for 'Bulk Tanker Sampling and Unloading at the Blending Plant' has been prepared (Attachment E.4). The RD requires that a procedure for the Blending Plant operation and the loading of the blended fuel into bulk tankers shall be drafted during the commissioning phase of the project (Condition 5).

### Solvent Blending

Having satisfied the acceptance criteria and compatibility tests, waste will be discharged from the bulk tanker to one of the 50m<sup>3</sup> tanks from the loading/unloading area. (Note: this step may be by-passed in the event of wastes with very low solids content. In such circumstances waste is pumped directly to the larger solvent storage tanks.) From the smaller tanks it is pumped to one of the 300m<sup>3</sup> tanks where the final solvent blend is produced. Blending will be achieved by venturi mixers (or similar devices).

The licensee also requests the option to use portable tanks on-site to allow transfer of drummed solvent to the tank farm. The RD requires the licensee to prepare procedures in relation to the movement of drummed solvent waste to the tank farm. These procedures shall be agreed with the Agency prior to the commencement of such waste transfers on-site (Condition 5).

### Tanker Cleaning

It is necessary to clean bulk tankers on a regular basis to remove residual waste. Currently, there are tanker-cleaning facilities available off-site within Dublin Port. Indaver Ireland has requested to have a bulk tanker cleaning facility installed on-site. The tanker cleaning facility, if installed, will be for washing bulk tankers that have unloaded at the blending plant. The RD specifies that the tanker-cleaning facility cannot be used as a commercial tanker-cleaning service (Condition 5).

The equipment will be housed in a standard 40' freight container remote from the tanker cleaning area and will consist of boiler, compressor and pumps. A minimum separation distance of 15m must be maintained between the boiler and bulk solvent storage tanks, (assuming that the solvents have a calorific value equivalent to Petroleum Class 1), in accordance with SI 313 of 1979 (Petroleum Regulations).

The spinners (devices inserted into tanker for cleaning) and the control equipment will be located in the tanker loading/unloading area. Following cleaning, the operator will remove the spinners and inspect the tanker from above to ensure that it has been fully cleaned. A cleaning certificate will then be issued.

All cleaning operations will take place within the tanker loading/unloading area. All washing liquids from the tanker cleaning process will be collected on-site and either transferred to the tank farm, (i.e. mixed with the solvent wastes stored on-site), or stored in suitable storage containers awaiting transfer off-site for disposal/recovery. The RD specifies that no washings shall be discharged to the surface water collection system and that all tanker washing shall take place within the bunded tanker loading/unloading area (Condition 5).



### **2.3.3 Newspaper/Magazine Warehouse**

The warehouse will be used to store newspapers and magazines prior to shipment abroad for recycling. No putrescible waste mixed with the newspapers/magazines will be accepted from customers. The paper waste will be stored on the floor of the warehouse and will be periodically loaded into freight containers for shipment.

## **3. Use of Resources**

### **3.1 Fuel**

Diesel is used to power one of the forklift trucks. Annual usage is in the region of 700 litres. The level of usage is not expected to increase greatly until Phase Two of the development when a bobcat or front loader will be used to load magazines/newspapers in the newspaper warehouse.

### **3.2 Electricity**

Electricity is used on site to power the air compressor and to charge the electric forklift truck. It is also used for the office and other lighting requirements. To date, average annual electricity use is approximately 52,638 kWhrs.

The proposed extension to the transfer station will require a new power supply to operate the tank farm and control equipment. However, the increase will not be known until the new operation has been fully established.

### **3.3 Water**

Water is used to test fire hydrants and safety showers on site and also for domestic use in the offices. Usage has not been monitored, as the quantities seem to be very low. It is not envisaged that water usage will increase due to the proposed extension. However, if tanker-cleaning equipment is installed, there will be a maximum demand of approximately 4m<sup>3</sup>/hr.

### **3.4 Nitrogen**

Nitrogen will be used as a blanketing device inside the bulk solvent storage tanks and also in road tankers during loading and unloading. This acts as a safety device to suppress solvent vapour and to form an inert barrier between solvents and any possible source of ignition. Expected usage is estimated at 50,000Nm<sup>3</sup> per annum.

### **3.5 Activated Carbon**

Activated carbon (or similar abatement technology) will be used for air emissions abatement at the tank farm and the repackaging room. Estimated usage of activated carbon will be 2 tpa.

Condition 8 of the RD requires the licensee to assess resource use and energy efficiency.

## 4. Emissions

### 4.1 Air

There are no significant emissions to air from the facility with the exception of fugitive emissions. The licensee states (EIS submitted with the waste licence review application 18/08/2003, Section 9.4.2) that air emissions will be below the TA Luft Class I Emission Limit Values (ELVs) of 0.1kg/hr.

The main emissions to air are identified as follows:

- Dust generation and vehicle exhaust emissions during construction activities.
- Fugitive emissions during tanker loading/unloading, tanker sampling, leaks from pump seals, valve seals and flanges, tanker cleaning (if installed), sludge /debris removal from tankers.
- Minor emissions from laboratory hood (if located on-site), repackaging/cross-pumping of drums, breathing & working losses from storage tanks.
- Exhaust emissions from various items of plant: fire pumps, back-up generator, site vehicles and boiler (if tanker cleaning facilities are installed).

There are a number of abatement steps proposed for the facility. These comprise vapour extraction through activated carbon beds, (or similar abatement technology), in the repackaging room and tank farm.

The solvent storage tanks in the tank farm will be kept under a nitrogen blanket to minimise Volatile Organic Carbon (VOC) emissions. This blanket will be kept at a constant pressure. In the event of a pressure increase, a relief valve will activate until the set pressure is re-established. The off-gases from this venting process will be released through emission abatement equipment. The licensee has proposed activated carbon or similar technology. The final decision on the type of emissions abatement technology will be taken at detailed design stage. The RD requires emission abatement equipment such as activated carbon to be installed prior to commissioning of the tank farm (Condition 5).

Tanker loading/unloading and sludge removal from tanks (via sieving or filtration) will operate as a closed system. Dry-link couplers will be used on both the tankers and fixed installations during transfer operations (Condition 5). Any small drips that arise from breaking these connections will be absorbed with chemical spill pads. These pads will be immediately packed into UN approved drums for appropriate disposal off-site when full. Condition 10 of the RD requires the licensee to provide for containment and absorption of any spillage.

Minor emissions will arise from the repack building where repacking and cross pumping of drums is carried out. The repack building vent is to be ducted to a canister type activated carbon unit as final polishing before emission to air.

Currently, Indaver Ireland is required to undertake annual ambient air quality monitoring at two locations on-site, Drawing No. 11037\CD\019 Rev. B. The parameters measured are VOCs and Total Particulates. The RD, *Schedule D.2.4*, stipulates annual air monitoring at these two locations, until the tank farm is operational and thereafter quarterly monitoring, or as otherwise agreed with the Agency. *Schedule D* specifies six-monthly monitoring of abatement associated with the tank farm and the repackaging room. Condition 5 requires the licensee to regularly undertake, and to maintain records of, testing, monitoring and maintenance of the activated carbon filter units, or other approved emission abatement, at the tank farm and repackaging room.

## 4.2 Emissions to Sewer

### 4.2.1 Trade/Process Effluent

There is no trade effluent discharged by this facility. There will be effluent from the tanker-cleaning process, if this equipment is installed. It is proposed that effluent will be directed to the tank farm after the cleaning process. If it cannot be directed to the tank farm then it will be periodically collected, stored and sent off-site for disposal at a licensed facility. No tanker-cleaning effluent shall be discharged to the surface water collection system (Condition 5).

### 4.2.2 Sewerage

As is currently the case, domestic sewerage will be discharged to the public foul sewer on the Tolka Quay Road. This sewer is routed to the water treatment plant at Ringsend. There will be no on-site treatment of this effluent.

## 4.3 Emissions to Surface Waters

There are no direct emissions to surface waters.

## 4.4 Emission to Local Authority Surface Water Sewer

Under the existing licence, 36-1, Indaver Ireland (trading as MinChem) was granted consent by Dublin Corporation to discharge storm water to the surface water sewer on Tolka Quay Road, subject to prescribed emission limit values and a number of general conditions. This surface water sewer discharges directly to the receiving waters of Dublin Bay.

Currently, the liquid discharged from the facility consists of surface water run-off from hardstanding areas of the transfer station and the roofs of the drumstore areas. Upon visual inspection and pH testing surface water is collected in the main sump and pumped into a 170m<sup>3</sup> storage tank via an activated carbon unit. After further monitoring, liquid is discharged to the surface water sewer in a batch discharge system.

The current application includes proposals for (i) storm water from the un-bunded, hardstanding areas and roofs and (ii) rainwater run-off from the tank farm bund and the tank loading/unloading area of the solvent blending plant.

#### **4.4.1 Storm water from the un-bunded, hardstanding areas and roofs**

It is proposed that the batch discharge system is replaced by one of direct discharge of storm water from the un-bunded hardstanding areas and roofs. This water will drain via a Class 1 oil/petrol interceptor (Condition 3), to an in-line monitoring chamber with an overflow weir. Here, the discharge will be monitored for TOC, pH and conductivity. Should a trigger level be reached for any parameter, water will be diverted to the 170m<sup>3</sup> storm water retention tank.

An automated penstock valve will control the flow so that there is no discharge of non-compliant run-off to the surface water sewer. Condition 9 requires the licensee to submit a proposal for setting trigger and action levels and details of the response programme if such levels are reached.

#### **4.4.2 Rainwater run-off from the tank farm bund and the tank loading/unloading area of the solvent blending plant**

The rainwater from the tank farm bund and the loading/unloading area of the solvent blending plant will drain via a flame arrester to an underground tank. This water will be tested for contamination prior to release to the storm water drainage network. If contaminated it will be sent off-site for disposal.

#### **4.4.3 Section 52 Consent**

Dublin City Council was notified of the proposed changes in emissions to surface water sewer under Section 52 of the Waste Management Act, 1996. Discharge consent was granted (06/10/2004), subject to 15 specific conditions and 6 general conditions, stated emission limit values (ELV's) and monitoring frequency. These requirements have been incorporated into the RD in Conditions 5, 6, 9 & 12 and *Schedules C & D*.

Five additional parameters have been included in *Schedule C* that were not required under the terms of the Section 52 Consent. These are the heavy metals: zinc, copper, lead, chromium and nickel. These parameters were included in the monitoring schedule for 36-1 and should be retained

An annual monitoring charge of €1,524 shall be made payable to the Sanitary Authority.

#### **4.5 Firewater Retention**

The site is currently equipped with a firewater storage tank of 50m<sup>3</sup>. A new firewater storage tank with a capacity of approximately 505m<sup>3</sup> will be installed along with a new diesel fire-pump set. This will feed the following fire protection systems on the site:

- three fire hydrants providing coverage to all areas;

- foam/desludge system at the tank farm; and
- foam cannon local to the tanker loading/unloading area.

In the event of a fire there would be capacity to store approximately 1150m<sup>3</sup> of firewater on the site. There will be three separate elements to the firewater retention system:

1. the tank farm bund with a capacity of 580m<sup>3</sup>;
2. the contaminated water retention tank (i.e. the current storm water retention tank) with a capacity of 170m<sup>3</sup>; and
3. the kerbed yard with a capacity of approximately 400m<sup>3</sup>.

#### **4.6 Fuel Storage Areas**

Currently there are no fuel storage areas on-site. The following equipment requires fuel:

- Diesel forklift – this may be replaced by an electric model;
- Diesel fire pump set – only used in fire situations or during testing; and
- Backup generator – only used in the event of a mains power failure or for testing.

If tanker-cleaning equipment is installed, there will be a boiler associated with it, which will be powered by electricity, gas or diesel. If a diesel boiler is used, then a 1000-gallon diesel tank will be installed. This will be located in a bund, designed to contain 110% of the contents. Since typically only four bulk tankers a day will be washed, the fuel usage of the boiler will be low.

#### **4.7 Waste Storage Areas & Bunding**

Drummed and packaged toxic, corrosive, flammable and ‘dangerous when wet’ waste materials are currently and will continue to be stored in the drumstore. This building will not be changed during the extension. This building is covered, segregated and naturally ventilated. The bunded areas of the drumstore are self-contained. Each area drains to an individual sump. Any liquid that is collected in the sumps is tested prior to removal by a mobile pump. If the liquid is contaminated, then it is collected in drums and sent offsite for disposal.

The licensee has placed bunded units in the vicinity of the drumstore bunding for the storage of drummed and packaged oxidising hazardous wastes, organic peroxides, spontaneously combustible wastes and flammable gases. Each of these is secure and self-contained.

The tank farm will be bunded and there will also be an underground sump remote from the bund. This will enable the removal of any leaks from the bulk storage area and thereby reduce the potential of fire source. The bund and sump will drain to the storm water system by manual valve release (which will fail shut) or by an inline pump. The tanker loading/unloading area is also bunded to collect liquids lost while transferring waste or arising from

quarantine of waste on-site. Storm water arising from the tank farm bund and the tanker loading/unloading area will drain to the underground sump.

The licensee is required to test any liquid collected in sumps or bunds, prior to discharge to the storm water drainage system. If found to be contaminated, it will be sent off-site for disposal. The RD requires that all bunds are tested within 12 months of grant of licence and thereafter at least once every three years (Condition 3).

#### **4.8 Emissions to ground/groundwater**

There are no emissions to groundwater from the site as all areas where liquids are handled and stored are fully bunded and this shall also be the case upon extension of the facility.

A study carried out by K.T. Cullen in 1998, states that the shallow water table on the site is approximately 3m below ground level. The groundwater level is considered to be tidally influenced. Baseline monitoring found that the groundwater was brackish in nature. This study involved the drilling of two monitoring boreholes, monitoring well 2 (MW-2) at the northern boundary and monitoring well 1 (MW-1) at the southern boundary of the site, with a local groundwater gradient, from north to south, of approximately 0.15m.

Water samples from these boreholes have been analysed quarterly. One of the boreholes may have to be relocated to accommodate an extension to the administration building (cf. Drawing No. 11037\CD\020, Rev. A). The replacement of existing monitoring infrastructure may be authorised under Condition 3. The licensee shall notify the Agency of any change in location of the monitoring borehole. The groundwater monitoring regime is specified in *Schedule D*.

#### **4.9 Wastes Generated**

During the construction phase approximately 3,500m<sup>3</sup> of spoil will be removed from the site. This will require approximately 10 Heavy Goods Vehicles (HGV) loads per day for 3 weeks (or approx. 175 HGV loads). The excavated material will be disposed of to a licensed disposal facility. Normal construction working hours are proposed to be 8:00 to 18:00 Mon to Sat. The licensee states that normal operations of the facility and the construction activity will be completely separated by a fence and separate access routes to the facility will be provided.

Incoming wastes from tankers to the Blending Plant will be pumped to the storage tanks via a screening system to remove any solids or debris. Although the technology of the system has not yet been decided upon, it is expected to be a closed system of perhaps sieving or filtration to remove solids. Any solid arisings will be collected, packaged and sent for recovery/disposal.

## 4.10 Noise

The character of the surrounding area is industrial in nature and there are no sensitive residential receptors. The RD requires annual noise monitoring at three locations about the site, *Schedule D*.

## 4.11 Nuisance

### 4.11.1 Litter

There are no sources of litter from the current acceptance of wastes. Litter is controlled by daily site inspections. The main source is external windblown litter.

The RD (Condition 5) specifies that when the newspaper/magazine warehouse is developed, the following features shall be implemented to control litter:

- all collection vehicles will be closed/covered;
- all loading/unloading operations will be carried out inside the warehouse; and
- the floor of the warehouse will be kept clean.

### 4.11.2 Dust

There is potential for dust generation during the construction phases. The licensee proposes to formulate a dust minimisation plan for the construction phases in order to minimise dust generation. This will include:

- regular cleaning and maintenance of roads;
- dampening of the site during dry and/or windy conditions;
- enclosing or covering delivery vehicles with tarpaulins, if necessary; and
- material handling and stockpiling to minimise exposure to wind.

These procedures will be a requirement of the contract documents and will be monitored by the construction manager. The dust minimisation plan will be reviewed at regular intervals during the construction phase to ensure the effectiveness of procedures. Post-construction phase there should be no dust generation as all areas will be hardstanding.

### 4.11.3 Odour

The potential for odour at the current facility is mainly from leaking packages or tanks/containers on-site. Control measures to deal with such incidents include the removal of leaking packages or drums to the repackaging room, which has an extraction fan ducting through a carbon adsorption unit. A leaking tanker would be treated as an emergency situation and until the leakage is fixed or the contents transferred there would be potential for odours.

With the Blending Plant operational, the following control measures will be put in place to minimise odours:

- all delivery tankers will be fully sealed;
- during loading/unloading tankers will be connected to the storage tanks via a closed loop; and
- breathing losses will be ducted through carbon adsorption units (or similar abatement system).

The newspaper/magazine warehouse should not be a source of odour as the newspapers and magazines will be collected as a separate fraction. No putrescible waste mixed with newspapers/magazines will be accepted from customers.

The facility is within Dublin Port and the neighbours to the facility are other industrial/storage sites. The nearest dwelling houses are *circa* 700 metres from the facility. The RD requires that the frequency of ambient air monitoring be increased from annually to quarterly, following commencement of solvent blending on-site (*Schedule D*).

#### **4.11.4 Aerosols**

The blending plant will be a source of aerosol generation. Control measures to minimise the generation of aerosols include:

- the use of double-walled tanks;
- maintaining a nitrogen blanket above tanks; and
- ducting breathing losses through carbon adsorption units (or similar abatement).

#### **4.11.5 Vermin**

A vermin control plan is currently in place on-site. Following completion of the extension this will be re-assessed by the pest control contractor and any additional measures recommended will be put in place.

#### **4.11.6 Flies, birds, pests**

The issue of bird nuisance is not perceived to be a problem with the addition of the blending plant to the existing facility. Kitchen and general waste associated with the office is stored in closed wheelie bins prior to collection.

### **5. Cultural Heritage, Habitats & Protected Species**

The reclamation of the North Wall area between the Tolka and Liffey rivers began in 1728. Therefore, there is unlikely to be any archaeological material dating to the pre-1700's. There will be no impact on archaeological heritage features.

The site itself is of low ecological significance. There are environmentally designated sites in the vicinity of Dublin Port (cf., submission by Ms Yvonne Doolan, Development Application Unit, Department of the Environment, Heritage and Local Government). Subject to compliance with the conditions set out in this RD, particularly in terms of discharge to surface water sewer,



there should be no impact on the North Dublin Bay candidate Special Area of Conservation (cSAC) or on the Dolphins, Dublin Docks, proposed Natural Heritage Area (pNHA), which is a proposed Special Protection Area (SPA).

## **6. Waste Management Plans**

In relation to hazardous waste, the Dublin Waste Management Plan<sup>1</sup> has regard to the recommendations of the National Hazardous Waste Management Plan<sup>2</sup>. The National Hazardous Waste Management Plan acknowledges the increasing reliance on the export market for the recovery and/or disposal of hazardous waste. Solvent recovery and hazardous waste re-use, (which includes incineration with energy recovery and use as a fuel in cement kilns), were among the processes identified as being among the leading recovery options in the late 1990s.

The chemical and pharmaceutical sectors account for the largest proportion of the industrial hazardous waste arisings handled by Indaver Ireland. The proposed solvent blending module will produce blended fuel product, thus providing a recovery option for certain waste streams.

The provision of additional recycling infrastructure for waste paper, (newspaper and magazines), as well as organised collection, will help reduce the quantity of biodegradable waste disposed of to landfill. This is in line with the National Development Plan (2000-2006)<sup>3</sup>.

## **7. Environmental Impact Statement**

I have examined and assessed the EIS and I am satisfied that it complies with the EIA and Waste Licensing Regulations.

## **8. Compliance with Directives/Regulations**

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

Based on the maximum expected inventory levels of hazardous materials to be stored on site, following the proposed extension, Articles 6, 7 and 9 of the Seveso II Directive (i.e. upper tier requirements) will be applicable to the Hazardous Waste Transfer Station. A copy of the notification to the Health and Safety Authority under SI 476 of 2000, which implements Council Directive 96/82/EC, has been included in the application documentation, under separate cover as Attachment B.9.

## **9. Compliance Record**

The compliance history of this facility has been good to date. Few non-compliances have been noted since it was first licensed in 1999. Five audits and a number of site visits have been carried out since grant of licence. No complaints about the facility have been registered. The company have been prompt in their notification of, and response to, incidents.

## 10. Fit & Proper Person Assessment

### *Offences and Convictions*

Indaver Ireland (formerly MinChem) and Indaver NV, Belgium have never been convicted of an offence under the WMA 1996 or any other relevant legislation.

### *Technical Competence & Site Management*

Details of the technical competence of key staff at the facility and the site management structure were submitted in Attachment L of the application. Revised manning and management levels were submitted as additional information (Ref.AddInfo/36-2/241104, received 29/11/2004) following the company's recent re-organisation.

### *Financial Provision*

The applicant has submitted Statements of Accounts for 2001 and 2002 (Appendices 1 & 2, Attachment L). Details of the company's Employer's and Public Liability Insurance and an Environmental Liabilities Risk Assessment, dating from 2000 were also submitted in Attachment L. These have been assessed and demonstrate adequate financial provision.

## 11. Submissions

There were 2 submissions made in relation to this application.

### 11.1 Submission from Mr. Cormac McCarthy, Fisheries Environmental Officer, Eastern Regional Fisheries Board, 15a Main Street, Blackrock, Co. Dublin.

Mr McCarthy makes 4 points in his submission. The Eastern Regional Fisheries Board has no objections to the proposed waste transfer station extension provided that:

1. Dust minimisation measures during the construction phases, (outlined in Section 7.8.1 of the EIS which accompanied the waste licence review application), are adhered to in order to prevent the migration of solids into surface watercourses.
2. The Class 1 hydrocarbon interceptor is properly and regularly maintained, as it will also act as a silt trap. The excessive turbid run-off in the early phase of development will quickly render the interceptor ineffective if not properly maintained.
3. A continuous online monitoring system is installed to test surface water thus facilitating faster containment times in the event of a spillage.
4. The Mitigation measures of Section 11.7 of the EIS – Mitigation Measures, Construction phase - are fully adhered to in order to protect surface and ground waters.

### *Response:*

I have noted these issues and have taken them into account during the assessment of the application and in drafting the RD as follows:

1. Condition 7 of the license requires the preparation of a Dust Minimisation Plan for the construction phases of the project.

2. Condition 3 requires the licensee to provide a silt trap as well as an interceptor and requires that the Class I Interceptor is cleaned on a regular basis. Condition 5 requires that all treatment/abatement, control and monitoring equipment are calibrated and maintained in accordance with the instructions supplied by the manufacturer/supplier or installer or as otherwise specified by the Agency.
3. Condition 6 requires the establishment of trigger and action levels for TOC, conductivity and pH based on monitoring results over a three-month period. Direct discharge to the surface water sewer shall not commence until such time as these levels have been agreed with the Sanitary Authority and the Agency. In the interim period all run-off shall be collected, tested and discharged in the batch discharge system, currently operating on-site.
4. Condition 3 requires the use of the mitigation measures specified in the EIS during the construction phases.

11.2 Submission from Ms Yvonne Doolan, Development Application Unit, Department of the Environment, Heritage and Local Government, Dún Scéine, Harcourt Lane, Dublin 2.

Ms Doolan states her concern that pollution might enter the Liffey that would have an adverse impact on North Dublin Bay candidate Special Area of Conservation (cSAC) and on the Dolphins, Dublin Docks, proposed Natural Heritage Area (pNHA), which is a proposed Special Protection Area (SPA).

*Response:*

The 'Dolphins' mentioned in Ms Doolan's submission refer to Mooring Dolphins, i.e., manmade structures used by nesting tern colonies in the summertime. The RD requires several measures to be taken to prevent pollutants entering the bay. The applicant has bunding installed for storage of hazardous waste. Condition 3 requires the licensee to test the integrity and water tightness of all bunding structures and their resistance to penetration by water within twelve months and thereafter at least once every three years.

The Sanitary Authority's surface water sewer discharges directly to the receiving waters of Dublin Bay. The applicant received approval from the Sanitary Authority to discharge uncontaminated storm water run-off and pre-tested run-off from the tank farm bund and the loading/unloading area to this surface water sewer. The applicant is required to install a silt trap and oil interceptor (Condition 3). The applicant is required to carry out monitoring of the discharge to surface water sewer whenever emissions are taking place (Condition 9). An automatic shut-off valve will activate to ensure that no contaminated surface water run-off is discharged to the surface water sewer.

## **12. Charges**

The RD requires that the licensee pay an annual charge of €14,960 to the Agency to cover the anticipated enforcement effort for the site (including sampling and analyses). This represents a decrease compared with the charge of €16,303 for licence Reg. 36-1 in 2004.

### **13. Recommendation**

I recommend that a reviewed licence be granted subject to the conditions set out in the attached RD and for the reasons as drafted.

In making the recommendation for a review of the waste licence, I have taken into account all information submitted as part of the application, including the Environmental Impact Statement and the submissions.

I am satisfied, on the basis of the information available, that the waste activities licensed hereunder will comply with the requirements of Section 40(4) of the Waste Management Act, 1996.

Signed,

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Ciara Maxwell

### **References**

1. Dun Laoghaire Rathdown County Council, 1998. *Dublin Waste Management Plan*.
2. Environmental Protection Agency, 2001. *National Hazardous Waste Management Plan*.
3. Government Publications Office, 2000. *Ireland – National Development Plan 2000-2006*.

### **Procedural Note**

In the event that no objections are received to the Proposed Decision on the application, a licence will be granted in accordance with Section 43(1) of the Waste Management Acts 1996-2003.