

# Annual Environmental Report January 2010 to December 2010





## Indaver Ireland Limited

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# ANNUAL ENVIRONMENTAL REPORT

**Waste Licence  
Registration No.:** W0036-02

**Licensee:** Indaver Ireland Limited

**Location of Activity:** Tolka Quay Rd.  
Dublin Port  
Dublin 1

**Attention:** Environmental Protection Agency  
Office of Environmental Enforcement  
McCumiskey House, Richview  
Clonskeagh Road  
Dublin 14

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## **1.0 Introduction**

### **1.1 Reporting Period**

The following is the Annual Environmental Report (AER) for the period 1<sup>st</sup> January 2010 to the 31<sup>st</sup> December 2010 for the waste transfer station and solvent recovery facility located on Tolka Quay Road, Dublin Port, Dublin 1 operated by Indaver Ireland Limited.

This report has been prepared as per schedule F of Indaver's waste licence (Register No. W0036-02).

### **1.2 Description of On-Site Waste Activities**

Indaver commenced operations in 1977 and is one of Ireland's leading companies in the recovery, treatment and disposal of hazardous waste.

Indaver has offices in Dun Laoghaire, Dublin Port and Cork and operates:

- A custom-built hazardous waste transfer station and solvent recovery facility in Dublin Port
- Civic amenity sites in Newcastle West, Killmallock and Mungret on behalf of Limerick County Council.

Indaver is currently constructing a Waste to Energy (WTE) facility in Duleek, Co. Meath. The development is valued at €130 million, and represents the largest ever single investment in solid waste management infrastructure in Ireland. Indaver's Meath facility will use the most advanced technology, to process 200,000 tonnes of waste annually, generating enough energy to meet the needs of 20,000 homes. The development of a thermal treatment plant with energy recovery is in line with the North East Regional Waste Management Plan.

Construction of the facility began in September 2009 and is due for completion in mid 2011. This state of the art WTE facility will provide the Northeast region and surrounding areas with an alternative recovery treatment solution to landfill. It will offer municipal waste collectors and Local Authorities a treatment solution for their residual waste from September 2011.

Indaver currently employs 157 people with 24 of these working at Dublin Port.

Indaver's hazardous waste facility in Dublin Port was initially licensed by the Agency to commence operations on the 26th February 1999 (licence register W0036-01).

Planning permission was granted by Dublin City Council in December 2002 for the construction of a 20,000 tonne per annum solvent recovery facility on the undeveloped area of the site.

A review of the waste licence to include the solvent recovery activities was issued on the 14th July 2005 (licence register no. W0036-02).

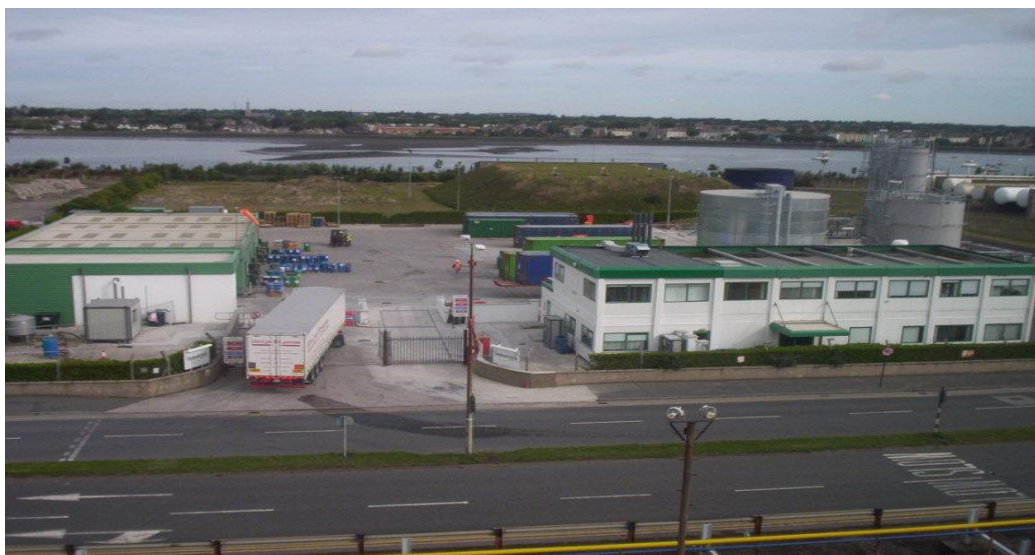
**Transfer Station:**

The transfer station is licensed to accept both hazardous and non-hazardous waste for storage prior to export to the UK and other European countries for final recovery, disposal or treatment. Material can be accepted on site on a 24-hour basis.

Waste materials are stored on site in appropriate containers (drums and IBC's). All waste regulated under ADR/IMDG regulations are stored in UN approved containers. Wastes with different hazardous characteristics are sorted and stored in accordance with the UK Health & Safety Executive guidance (HSG71) on "Chemical Warehousing, the storage of packaged dangerous substances".

There are separate storage areas for waste materials with the following hazardous characteristics – Flammable, Toxic, Corrosive, Dangerous When Wet, Spontaneously Combustible, Flammable Gases, Oxidisers and Organic Peroxides.

Flammable, toxic and corrosive packaged waste material is stored in individually numbered racking locations in covered storage bays. Dangerous when Wet, spontaneously combustible, flammable gas, oxidising and organic peroxide packaged waste material is stored in separate chemstore cabinets.



*Figure 1.2.1 Picture of Dublin Port HazWaste Facility*

Upon acceptance on site all waste packages are visually inspected, weighed and located in an appropriate storage location.

Any drums/packages that are not in a satisfactory condition or any non-UN approved drums/packages containing dangerous goods are quarantined and are dealt with as non-conforming material.

These drums/packages cannot be shipped off site for final disposal/recovery until repackaging is carried out.

The facility has a dedicated Repack Room for repacking waste packages in a controlled environment.



*Figure 1.2.2 Picture of Repack Room*

The site also acts as a transit facility for bulk road tankers and freight containers, which are used to transport waste overseas. There are 18 bay locations, which can store full loads in either a bulk tank or 40 ft container. Full loads transit the transfer station in order to allow the necessary documentation to be processed for onward shipment of the waste to the final disposal/recovery facility.

**Solvent Recovery Facility:**

The Solvent Recovery Facility was fully commissioned in 2006 and the first solvent load was accepted on site for blending in September 2006. The facility infrastructure includes:

- 2 x 75 m<sup>3</sup> holding tanks and 1 x 300 m<sup>3</sup> blending tank. These tanks are located in a reinforced concrete watertight bund.
- A fully bunded tanker loading/unloading area where bulk tanks are sampled for analysis.



*Figure 1.2.3 Picture of Tank Farm*



*Figure 1.2.4 Picture of Tanker*



*Loading/Unloading Bay*

- A laboratory, for conducting the analysis of all incoming waste loads destined for the blending process.



*Figure 1.2.5 Picture of On Site Laboratory*

- A weighbridge for weighing tankers of solvent arriving on site and tankers of blended fuel leaving site.



*Figure 1.2.6 Picture of Weighbridge*

Upon arrival of bulk tanks for blending at the facility the following steps must be taken:

- All tankers are weighed upon entry to the facility.
- A visual inspection of the placards, valves and emergency cord must be performed.
- Upon completion of the document check bulk tanks are directed to the tanker loading/unloading bay for sampling.

Once analysis in the on site laboratory has confirmed that the material is suitable for blending the tanker will be offloaded. Waste solvents will then be mixed proportionally in accordance with their calorific value. After analysis the blended fuel will then be sent off site to licensed facilities for use as a fuel or for disposal, depending on the composition.

The site is licensed to accept a total of 50,000 tonnes of waste material per annum (inclusive of material transiting the facility). Figure 1.2.1 details the waste types and quantities that the site is licensed to accept.

In March 2007 Indaver received approval from the Agency to commence the transfer of solvents from drums to the bulk storage tanks onsite. This follows the same procedure as above.

Waste Categories		Maximum (Tonnes per annum)
Hazardous Waste Total		38,700
Non Hazardous Waste	Household, commercial and non hazardous industrial	10,700
	Healthcare/agricultural (non infectious wastes and meat & bone meal)	500
	Non hazardous sludge's	100
Non Hazardous Waste Total		11,300
<b>Total</b>		<b>50,000</b>

Figure 1.2.7 Table A.2 of Waste Licence W0036-02: Waste Categories & Quantities

*Note 1: Any proposals to accept other compatible waste streams must be agreed in advance by the Agency and the total amount of waste must be within that specified.*

*Note 2: The individual limitation on waste streams may be varied with the agreement of the Agency subject to the overall total limit staying the same.*

*Note 3: The maximum quantity of waste solvents to be blended shall be 20,000 tonnes per annum, unless agreed in advance by the Agency.*

The licensed waste disposal and waste recovery activities that take place at the site, as per the Waste Management Act, 1996, are outlined as follows:

#### **Waste Disposal Activities – Third Schedule**

- Class 11      Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.
- Class 12:      Repackaging prior to submission to any activity referred to in a preceding paragraph of this 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 such waste is produced.

#### **Waste Recovery Activities – Fourth Schedule**

- Class 1      Solvent reclamation or regeneration.
- 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.

### 1.3 Management and Staffing Structure of the Facility

There are currently 24 employees working on site at the Dublin Port facility.

The position of Facility Manager is held by Eric McPartling. Eric has a degree in Applied Chemistry and a Managing Safety Certificate (IOSH) along with over 8 years experience working in hazardous waste transfer stations in Ireland and the UK. Eric has completed the Fás Waste Management Training Programme. His certificate is attached in Appendix 1

Eric heads the facility's operations team, which is responsible for ensuring waste acceptance, storage, handling and blending procedures, are adhered to. Eric's team is responsible for:

- Inspection of waste upon acceptance on site
- Logging all waste entering the site on computerised tracking system
- Checking paperwork
- Placing material in the appropriate storage locations
- Sampling bulk solvent loads
- Off loading bulk solvents to the facility's tank farm
- Blending activities
- Ensuring waste materials are shipped for final disposal/recovery to appropriate waste facilities.

Donal Phillips holds the position of Deputy Facility Manager. Donal joined Indaver Ireland in January 2010. Donal has previously worked in Waste Management with EOLV (End of Life Vehicles) and has over 3 years experience in this.

The organisational structure is outlined in appendix 2.

## 2.0 Environmental Management System

It is the policy of Indaver to conduct its activities in such a manner as to minimise or eliminate any potential adverse effects on the environment

This commitment is expressed in the company's QESH (Quality, Environmental and Safety & Health) Policy and by the installation and accreditation of an Environmental Management System to control and minimise the environmental impact that the activities on site may pose.

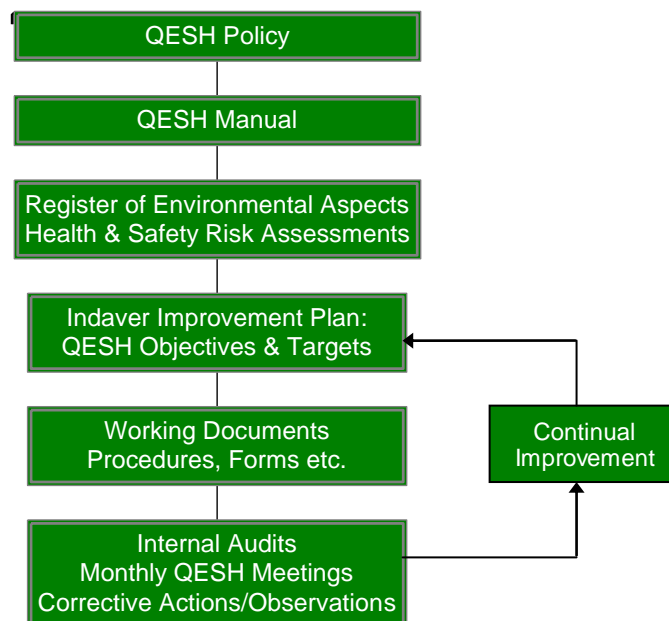
Indaver's Environmental Management System received accreditation to the Environmental Standard ISO 14001 in December 1999. A copy of the certificate of accreditation to ISO 14001 is attached in Appendix 3. The most recent surveillance audit against the Environmental Management System was held in May & June 2010 and our accreditation to the standard was successfully retained.

## 2.1 Structure of Environmental Management System

Indaver have an integrated Quality, Environmental and Safety & Health (QESH) management system. The Quality Management System and the Health & Safety Management System are accredited to ISO 9001 and OHSAS 18001 respectively. Copies of the certificates of accreditation to ISO 9001 and OHSAS 18001 are attached in Appendix 3.

Figure 2.1.1 shows the basic structure of the QESH Management System.

*Figure 2.1.1 Structure of QESH Management System*



### **2.3 Register of Environmental Aspects**

The Register of Environmental Aspects identifies any significant environmental aspects of Indaver's activities. An environmental aspect is an element of Indaver's activities that can interact with the environment.

The following 7 aspects are detailed in Indaver's Register of Environmental Aspects:

1. Waste handling - Repacking of Waste
2. Transport of Waste Materials
3. Waste handling - Off-loading, Storage & Blending of Waste at the Dublin Port HazWaste Facility
4. Waste handling - Loading of Containers and Tankers for Shipment
5. Energy & Resource Usage and Generation of Waste
6. Management of Aqueous Discharges
7. Operation of the Civic Amenity Sites

Each aspect is assigned a Significance Rating. Aspects with a significance rating of >350 are deemed significant. All of these aspects were deemed significant and are controlled via the Indaver Improvement Plan.

The Register of Environmental Aspects has been reviewed and is currently being finalised. It is due to be issued in April 2011.

### **2.4 Indaver Improvement Plan - Schedule of QESH Objectives and Targets**

The Indaver Improvement Plan details the company's objectives and targets for the improvement and maintenance of the quality, environmental and safety & health management systems.

Version 64 of the Indaver Improvement Plan was issued on the 27<sup>th</sup> May 2010. Version 65 will be issued in April 2011.

The Indaver Improvement Plan specifies the following information:

1. Specific objective and associated targets
2. The specific actions outlined for achieving targets
3. Where the action arose from
4. Target date for completion of the action
5. Person responsible for completion of the action
6. Manager of person responsible for completion of the action
7. Department of the person responsible for completion of the action
8. Current status of objective/target

It was decided at our Management Review meeting in January 2011 that we would continue for 2011 with the same core Objectives as were agreed in 2010.

The following are our 9 core Objectives for 2011;

**OBJECTIVE 1: LEGISLATIVE COMPLIANCE INCLUDING WASTE LICENCES AND PERMITS**

Ensure Indaver's compliance with legislative requirements and the various licences and permits is evaluated, documented and actions put in place to improve compliance as required.

**OBJECTIVE 2: CUSTOMER FOCUS**

Develop a customer driven company where all decisions are based on an overriding ambition to serve our customers better, provide our customers with excellent service levels and ensure our employees are customer focused.

**OBJECTIVE 3 OPERATIONAL EFFICIENCY & BUSINESS PERFORMANCE**

Maintain continuous innovation, improvement and efficiency that add value to the operations of our company while ensuring compliance at all times.

**OBJECTIVE 4 EMPLOYEE DEVELOPMENT AND INVOLVEMENT**

Encourage the development of employees to their full potential and to maintain employee satisfaction through the provision of a quality workplace. Ensure employee involvement and participation throughout the company. Provide employees with the skills and training required to function effectively in their positions.

**OBJECTIVE 5 ENERGY AND RESOURCE USE**

Ensure efficient usage of materials and energy resources and promoting a policy that reflects the requirements of the waste hierarchy wherever possible.

**OBJECTIVE 6 HEALTH AND SAFETY**

Ensure, in so far as is reasonably practicable the prevention of injury and ill health of our employees, visitors, contractors and members of the public who may be affected by the company's activities. Minimising the potential for health & safety incidents and risks associated with the company's activities. Ensure open and honest communication and participation in relation to Health and Safety.

**OBJECTIVE 7 QESH SYSTEMS**

Implement and develop QESH management processes, operational procedures and audit capabilities to ensure that effective systems are in place. Be open and honest and ensure effective communication of the QESH culture.

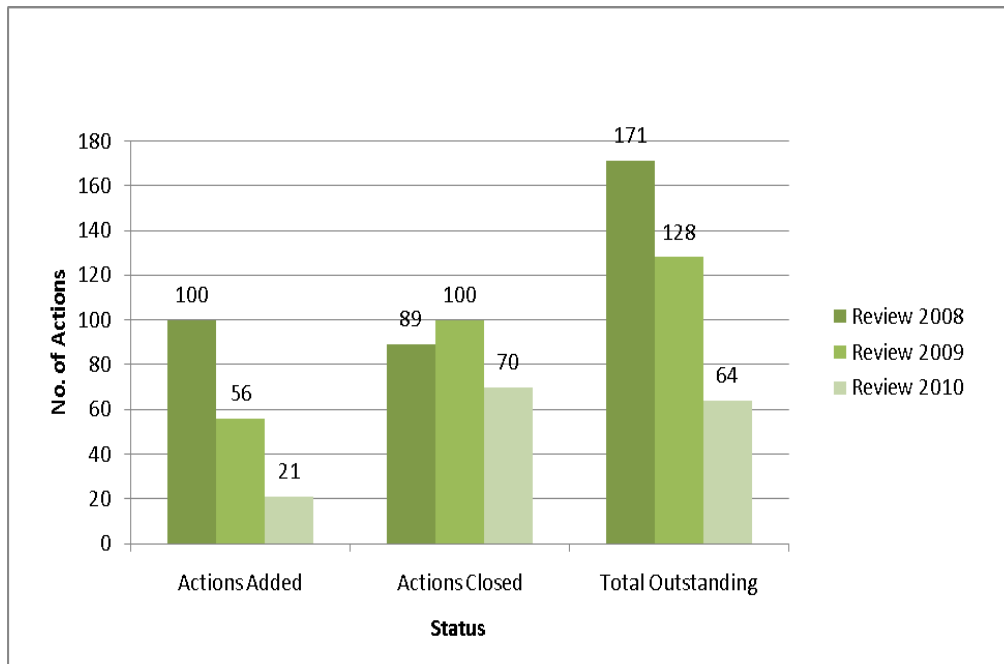
**OBJECTIVE 8 CONTROL AND MANAGEMENT OF SUPPLIERS & CONTRACTORS**

Develop and maintain mutually beneficial relationships ('partnerships') with suppliers. Ensure QESH issues in relation to the use of contractors are addressed and the QESH codes of practise are communicated.

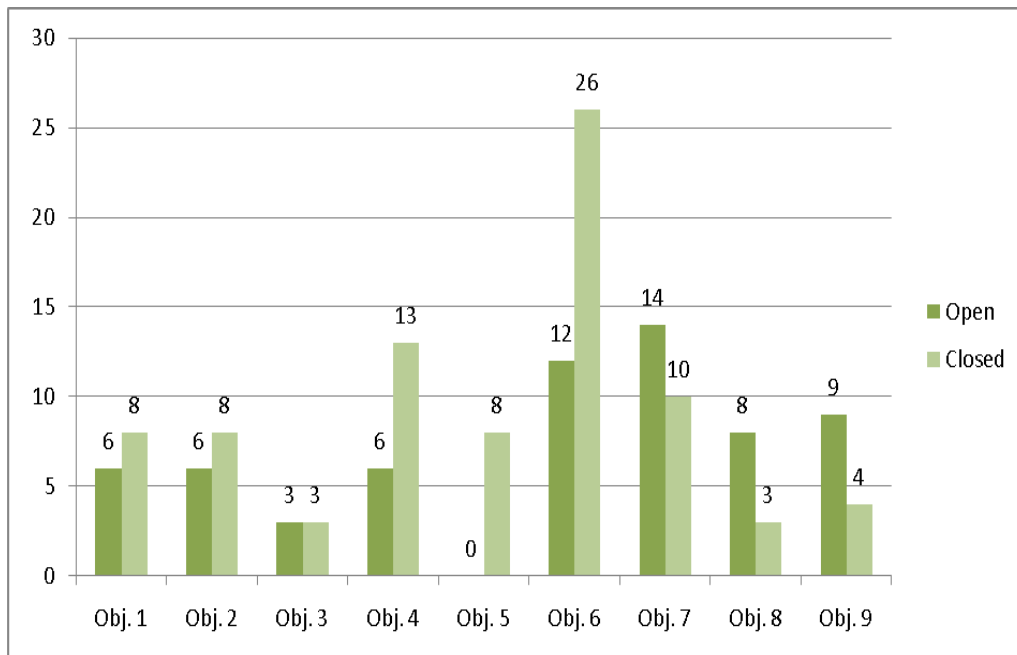
**OBJECTIVE 9 WASTE HANDLING AND TRANSPORT**

Minimise the Environmental, Health & Safety impacts associated with the repacking, transport, off-loading, storage and blending of waste associated with the companies activities.

**Comparison of Actions Added, Closed and Total Open for 2008, 2009, 2010**



## Actions Open and Closed by Objective 2010



In total 70 actions were closed in 2010. Please see appendix 4 for examples of actions closed in 2010 and due for closure in 2011

### 2.5 Operational Procedures

Indaver have approximately 300 Operational Procedures covering all aspects of its activities. The purpose of these procedures is to ensure that Indaver:

- Maintains control over the environmental, quality and safety aspects of its activities.
- Meets the aims laid down in the environmental, quality and safety policies.
- Remains compliant with all relevant operating permits, licences and legislative requirements.

There are approximately 160 operating procedures relating to the operation of the Dublin Port HazWaste Facility. A full index of operational procedures is attached in Appendix 5

### 2.6 Internal Audits

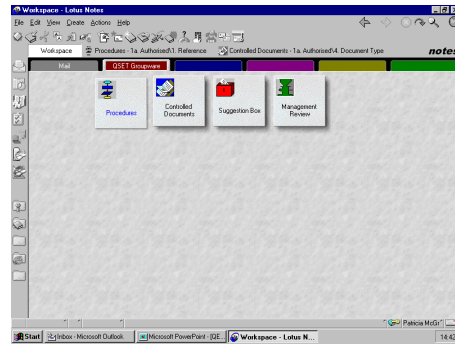
Monitoring of the effectiveness of the management systems is achieved through internal audits against the operational procedures.



Audits are carried out as per a monthly audit schedule. Internal auditors are fully trained and independent of the area being audited. Issues raised as a result of these audits are dealt with through corrective actions and opportunities for improvement.

## 2.7 QESH Software

Indaver has a software package, which provides desktop access for employees to all procedures and controlled documents.



### 3.0 Hazardous Waste Data

#### 3.1 Quantity of Hazardous Waste Accepted on Site

The site is licensed to accept a total of 50,000 metric tonnes of waste material per annum.

Table 3.1.1 details the quantities of waste accepted into storage since the transfer station began operation.

Period	Quantity of waste accepted into storage
Feb 1999 to Dec 1999	5,099 MT
Jan 2000 to Dec 2000	8,476 MT
Jan 2001 to Dec 2001	14,124 MT
Jan 2002 to Dec 2002	15,489 MT
Jan 2003 to Dec 2003	16,768 MT
Jan 2004 to Dec 2004	20,215 MT
Jan 2005 to Dec 2005	19,347 MT
Jan 2006 to Dec 2006	21,627 MT
Jan 2007 to Dec 2007	31,843 MT
Jan 2008 to Dec 2008	27,243 MT
Jan 2009 to Dec 2009	19,150 MT
Jan 2010 to Dec 2010	14,797 MT

*Table 3.1.1 Annual Quantities of Waste Accepted on Site*

The waste quantities accepted into storage between 1<sup>st</sup> January 2010 and the 31<sup>st</sup> December 2000 have been categorised by EWC code (as per Commission Decision of the 16<sup>th</sup> January 2001 2001/118/EC) and full details are given in Appendix 6. (These figures include any waste that has been generated on site from repacking activities.)

#### 3.2 Quantities of Waste Exported for Final Disposal/Recovery

The total quantity of waste exported from the transfer station for final disposal/recovery between the 1<sup>st</sup> January 2010 and the 31<sup>st</sup> December 2010 was 14,230 MT. This waste has been categorised by final disposal/recovery site and EWC Code and full details are given in Appendix 7 as part of the E-PRTR.

#### 3.3 Quantity of Waste Being Held on Site at End of Reporting Period

The total quantity of waste material in storage at the facility, including solvents in out storage tanks, on the 31<sup>st</sup> December 2010 was 223.46 MT and 167MT in storage at the blending plant.

### **3.5 E-PRTR**

As per the PRTR regulations, S.I. No 123 of 2007, require that Indaver report releases of pollutants and off site transfers of waste. Indaver submitted their E-PRTR on 31<sup>st</sup> March 2011 and is attached in Appendix 7

## **4.0 Summary Report on Emissions & Summary of Results and Interpretations of Environmental Monitoring**

### **4.1 Location of Monitoring Points**

11037\CD\020 Rev D is the most current drawing showing the location of all the monitoring points.

A drawing "Proposed Monitoring Points Layout Revised" 11037\CD\020 Rev D showing the location of all monitoring points is attached in Appendix 8.

### **4.2 Monitoring of Emissions to Surface Water Drains**

All surface water run-off on site drains to an underground sump. We received agreement from the EPA in 2008 to begin continuous discharging of this surface water. This began on 31<sup>st</sup> March 2008.

Prior to this date, the surface water collected in the sump was pumped into an above ground surface water storage tank via a carbon filter. The water was then tested prior to discharge against the limits set out in schedule C.1 of the waste licence. All surface water is continuously discharged from this sump and is monitored for TOC, Conductivity and pH. Our trigger limits as agreed are as follow:

pH:	6-9
TOC:	100mg/l
Conductivity:	800 $\mu$ S/cm

The monitoring apparatus is located over-ground in a container with the sample line in a storm water collection sump with an overflow weir, which provides a sampling pool for the equipment. The monitoring apparatus in turn is connected to an automated submersible pump located in the sump. Parameters such as Total Organic Carbon (TOC), conductivity and pH are monitored to identify any contamination, be it organic or otherwise. If any of the trigger limits are reached then the discharge valve is automatically closed and the water is pumped via a carbon unit into the surface water storage tank. The water will then be tested and if it still outside the licence

limits it will be pumped into bulk tankers and send offsite for treatment. The discharge valve is kept locked at all times and only the Facility Manager and Compliance Manager have keys.

There were 4 samples taken in the period being reported on.

The following summarises the results of the surface water run off monitoring conducted in 2010:

- A surface water sample was taken on the 2<sup>nd</sup> March. Results were within the compliance limits for all of the required parameters. This sample covered the Q3 2010 period (Jan-Mar).
- A surface water sample was taken on the 3<sup>rd</sup> June. All results were within the compliance limits for all the required parameters. This sample covered the Q4 2010 period (April-June).
- A surface water sample was taken on the 27<sup>th</sup> July. Results were within the compliance limits for all of the required parameters. This sample covered the Q1 2010 period (July-Sept).
- A surface water sample was taken on the 18<sup>th</sup> November. This sample covered the Q2 2010 period (Oct-Dec). During this period the suspended solids results were elevated. However as communicated to the EPA this was attributed to excavation works being carried out by our neighbours.

A summary of the results of the monitoring for the period is given in Table 4.2.2 and Table 4.2.3.

**SURFACE WATER RUN OFF MONITORING 2010**

Sampling Date	Sampled By:	BOD mg/l	COD mg/l	SS mg/l	Detrg (as MBAS) mg/l	MinOil mg/l	Temp (degrees Celcius) pH	OFG	NH <sub>3</sub> -N mg/l	PO <sub>4</sub> -P mg/l	Benzene, Toluene, Xylene mg/l	List I/II Org mg/l	VOC's & SemiVOC's mg/l	Zn mg/l	Cu mg/l	Pb mg/l	Cr mg/l	Ni mg/l
LIMIT		20	60	30	10	10	6-9 25	-	2	1	0.1	-	-	2	2	2	2	2
2 <sup>nd</sup> March 2010	Euro Env Services	<2	10	3	<0.05	0.125	7.6 10	<1	0.09	<0.006	<0.001	-	0.005	0.424	0.006	0.007	0.004	0.003
3 <sup>rd</sup> June 2010	Euro Env Services	2	12	2	<0.05	0.003	7.7 14.7	<1	0.07	0.029	<0.001	-	<0.0001	0.4497	0.0067	0.0059	0.0011	0.0014
27 <sup>th</sup> July 2010	Euro Env Services	<2	8	15	0.104	0.0025	7.6 25	<1	0.039	0.025	0.00035	-	<0.001	0.2451	0.006	0.0087	0.0017	0.0015
18 <sup>th</sup> Nov 2010	Euro Env Services	<2	38	34	0.248	0.0066	7.7 13.6	<1	0.018	0.019	<0.001	-	<0.001	0.5103	0.0057	0.0141	0.0036	0.0021

**Table 4.2.2 Summary of the surface water run off monitoring results for 2010**

Sampling Date	Tox. Units (Skelet costatum) 72 hr IC50	Tox. Units (Vibrio fischeri) 5 min EC50	Tox. Units (Vibrio fischeri) 15 min EC50
LIMIT	10	10	10
2 <sup>nd</sup> March 2010	1.1	<2.2	<2.2
3 <sup>rd</sup> June 2010	<1	<2.2	<2.2
27 <sup>th</sup> July 2010	<1	<2.2	<2.2
18 <sup>th</sup> Nov 2010	-	<2.2	<2.2

*Table 4.2.3 Results of Toxicity Testing*

### 4.3 Ambient Air Monitoring

The annual air monitoring as per schedule E of waste licence W0036-02 was conducted on the 18<sup>th</sup> November 2010.

Indaver's licence does not stipulate limits for volatile organic carbons or for total suspended particulates.

The results for the volatile organic compounds and the total suspended particulates were found to be below the relevant TA Luft emission standard limit.

Table 4.3.1 details the results of the annual monitoring event:

	Volatile Organic Compounds Results: (mg/m <sup>3</sup> )	Total Particulates Results (mg/m <sup>3</sup> )
Monitoring Point 1 (AS1)	<0.19	0
Monitoring Point 2 (AS2)	<0.19	0

*Table 4.3.1 Air Monitoring Results Dec 2010*

### 4.4 Emissions to Atmosphere Monitoring

As per table D2.5 of waste licence W0036-02 on commencement of solvent blending this must be monitored biannually.

Monitoring was completed on the 22<sup>nd</sup> March 2010 for monitoring point A1 and A2. The results were below the TA Luft standard limits.

Monitoring was completed on 27<sup>th</sup> July 2010 for monitoring points A1 & A2. The results were again below the TA Luft standard limits.

## 4.5 Noise Monitoring

The annual monitoring of background noise levels at the transfer station in accordance with schedule E of Indaver's waste licence W0036-02 was conducted on the 18<sup>th</sup> of November 2010.

Noise levels were monitored at three monitoring locations around the site. Indaver's licence does not stipulate noise level limits. The results of the last monitoring event are detailed in table 4.5.1.

Monitoring Point	L <sub>Aeq</sub> dB(A)	L <sub>A90</sub> dB(A)	L <sub>A10</sub> dB(A)	Comments on Main Noise Source	Noise emanating from Indaver Activities
NMP1	65.5	58.7	67.5	Noise from traffic on adjacent Tolka Quay Road and site activities from other premises.	Audible noise from forklift on site.
NMP3	67.9	59.2	70.3	Noise from traffic on adjacent Tolka Quay Road and site activities from other premises.	Audible noise from forklift on site.
NMP4	71.4	66.6	73.6	Noise from traffic on adjacent Tolka Quay Road and site activities from other premises.	Audible noise from the site, truck arriving, reverse beeping on vehicles and constant low level of noise from site operations.

**Table 4.5.1 Noise Monitoring Results Nov 2010**

*L<sub>Aeq</sub> – Average noise levels over time*

*L<sub>Amax</sub> – Maximum noise level recorded over time*

*L<sub>A10</sub> – Event sound levels, this value is a good statistical indicator for expressing event noise such as passing traffic*

*L<sub>A90</sub> – Post event sound levels, this value is a good indicator of background noise levels*

The night time monitoring results can be viewed in Table 4.5.2

Monitoring Point	L <sub>Aeq</sub> dB(A)	L <sub>A90</sub> dB(A)	L <sub>A10</sub> dB(A)	Comments on Main Noise Source	Noise emanating from Indaver Activities
NMP1	56.3	49.6	55.4	Noise from traffic on adjacent Tolka Quay Road and site activities from other premises.	Low level noise from ventilation system on site..
NMP3	52.7	49.8	54.4	Noise from traffic on adjacent Tolka Quay Road and site activities from other premises.	Low level noise from ventilation system on site..

NMP4	48.6	46.6	50.2	Noise from traffic on adjacent Tolka Quay Road and site activities from other premises.	Very little noise audible from Indaver site only generator
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**Table 4.5.1 Noise Monitoring Results Nov 2010**

*L<sub>Aeq</sub>* – Average noise levels over time

*L<sub>Amax</sub>* – Maximum noise level recorded over time

*L<sub>A10</sub>* – Event sound levels, this value is a good statistical indicator for expressing event noise such as passing traffic

*L<sub>A90</sub>* – Post event sound levels, this value is a good indicator of background noise levels

Frequency Analysis - No tonal component was detected during monitoring.

The facility is located in close proximity to many other industrial facilities and is fronted by the Tolka Quay Road, which is a principal access road for Dublin Port.

The results of the noise survey indicated that the noise climate in the immediate vicinity of the transfer station is dominated over much of the time by traffic, and other units in and around Dublin Port.

The greatest noise source from the site is the occasional movement of the forklifts and from trucks entering the site. This noise level although above EPA daytime noise limits, has minimal impact on the surrounding environment.

In conclusion, noise emissions from the site have a minimal impact on the local environment.

#### 4.6 Groundwater Monitoring

There are no emissions to groundwater from site as the site is fully contained and all storm water run-offs are collected in a central sump. Groundwater monitoring is conducted quarterly at two boreholes in accordance with Table D.2.3 of the licence.

The following summarises the results of the quarterly groundwater monitoring, which took place in 2010, and compares the results to the baseline monitoring carried out in 1998 prior to commencement of operations:

- January to March 2010:  
The results of the groundwater monitoring showed that the following parameters were above the levels recorded in the 1998 baseline survey.
  - Borehole 1 – pH, Iron, Manganese, Aluminium, Ammonia and Chromium
  - Borehole 2 – pH, Iron, Aluminium and Chromium



Due to the self-contained nature of the site in relation to drainage and strict operational procedures, any elevated levels are attributed to the industrial nature of the surrounding area.

□ April to June 2010:

The results of the groundwater monitoring showed that the following parameters were above the levels recorded in the 1998 baseline survey.

- Borehole 1 – pH, Conductivity, Iron, Manganese, Aluminium, Ammonia, Chromium and Lead
- Borehole 2 – pH, Iron, Aluminium and Lead

Again due to the self-contained nature of the site in relation to drainage and strict operational procedures, any elevated levels are attributed to the industrial nature of the surrounding area.

Indaver have no discharges to groundwater and all waste is stored in bunded areas. All rainwater collected on site is stored in a tank prior to compliance testing and release. There were no spills or incidents on site during the period being reported on and hence it is unlikely that Indaver's activities are responsible for these elevated levels.

□ July to September 2010:

The results of the groundwater monitoring showed that the following parameters were above the levels recorded in the 1998 baseline survey.

- Borehole 1 – pH, Iron, Manganese, Ammonia, Arsenic, Cadmium, Chromium, Lead and Nickel
- Borehole 2 – Iron, Aluminium, Chromium and Nickel

As mentioned previously due to the self-contained nature of the site in relation to drainage and strict operational procedures, any elevated levels are attributed to the industrial nature of the surrounding area.

□ October to December 2010:

The results of the groundwater monitoring showed that the following parameters were above the levels recorded in the 1998 baseline survey.

- Borehole 1 – pH, Iron, Manganese, Ammonia, Arsenic, Copper, Aluminium, Cadmium, Chromium, Lead and Zinc
- Borehole 2 – pH, Iron, Manganese, Aluminium, Chromium and Zinc

Due to the self-contained nature of the site in relation to drainage and strict operational procedures, any elevated levels are attributed to the industrial nature of the surrounding area.

Table's 4.6.1 and 4.6.2 gives a summary of the groundwater monitoring results for 2010. Also shown in these tables are the results of the baseline monitoring carried out in 1998 prior to commencement of operations.

**GROUNDWATER ANALYSIS BOREHOLE 1 (GW 1)**

<b>Parameter</b>	<b>Quarter 3 Jan - Mar 2010</b>	<b>Quarter 4 Apr - Jun 2010</b>	<b>Quarter 1 July-Sep 2010</b>	<b>Quarter 2 Oct-Dec 2010</b>	<b>Baseline 24/09/98</b>
pH (pH units)	7.80	7.80	7.70	7.80	<b>7.6</b>
Conductivity (µS/cm)	1363	1502	1239	1142	<b>1420</b>
Iron (mg/l)	3.12	0.2737	18.24	68.29	<b>0.04</b>
Manganese (mg/l)	0.404	19.9	20.64	0.8891	<b>0.4</b>
Copper (mg/l)	0.002	0.0045	0.0194	0.0114	<b>&lt;0.01</b>
Aluminium (µg/l)	1901	135.2	3.432	2980	<b>&lt;50</b>
NH3-N (mg/l)	1.7	2.45	1.71	1.26	<b>0.63</b>
Arsenic (µg/l)	2	0.1	12	54.2	<b>2</b>
Boron (µg/l)	181	89.7	108.1	101.8	<b>290</b>
Cadmium (µg/l)	<0.09	<0.09	1.2	1.1	<b>&lt;0.4</b>
Chromium (mg/l)	0.004	0.0024	0.0092	0.0096	<b>&lt;0.001</b>
Lead (µg/l)	4	5.8	10.9	11.5	<b>&lt;5</b>
Mercury (µg/l)	<0.04	<0.04	<0.04	0.046	<b>&lt;0.05</b>
Nickel (mg/l)	0.007		0.0188	0.0137	<b>&lt;0.01</b>
Selenium (µg/l)	1	<0.47	1	2.3	<b>100</b>
Zinc (mg/l)	0.015	0.0338	0.0401	0.4971	<b>&lt;0.05</b>
Volatile Organic Compounds (µg/l)	<1	<1	<1	<1	-
Semi Volatile Organic Compounds (µg/l)	<0.5	<0.5	<0.5	<0.5	-

*Table 4.6.1 Results of Groundwater Monitoring at Borehole 1 for 2010*

**GROUNDWATER ANALYSIS BOREHOLE 2 (GW2)**

<b>Parameter</b>	<b>Quarter 3 Jan - Mar 2010</b>	<b>Quarter 4 Apr - Jun 2010</b>	<b>Quarter 1 July-Sep 2010</b>	<b>Quarter 2 Oct-Dec 2010</b>	<b>Baseline 24/09/98</b>
pH (pH units)	8.10	7.90	7.60	7.60	<b>7.4</b>
Conductivity (µS/cm)	484	437	369	343	<b>3040</b>
Iron (mg/l)	0.275	2.392	0.7751	0.8941	<b>0.07</b>
Manganese (mg/l)	0.129	0.5366	0.0958	6.48	<b>0.77</b>
Copper (mg/l)	<0.00011	0.0029	0.0012	<0.00011	<b>&lt;0.01</b>
Aluminium (µg/l)	102	483.2	254.5	213.8	<b>&lt;50</b>
NH3-N (mg/l)	0.12	0.16	0.02	0.029	<b>0.46</b>
Arsenic (µg/l)	1	1.6	0.7	0.9	<b>&lt;2</b>
Boron (µg/l)	252	104.9	55.3	60.3	<b>270</b>
Cadmium (µg/l)	<0.09	0.16	<0.09	<0.09	<b>&lt;0.4</b>
Chromium (mg/l)	<0.00214	0.0025	0.00214	0.0026	<b>&lt;0.001</b>
Lead (µg/l)	1	10.9	2.3	4.3	<b>&lt;5</b>
Mercury (µg/l)	<0.04	<0.04	<0.04	<0.04	<b>&lt;0.05</b>
Nickel (mg/l)	0.001		0.0015	0.0023	<b>&lt;0.01</b>
Selenium (µg/l)	<0.47	<0.47	<0.47	<0.47	<b>&lt;100</b>
Zinc (mg/l)	0.004	0.0449	0.0088	0.1698	<b>&lt;0.05</b>
Volatile Organic Compounds (µg/l)	<1	<1	<1	<1	-
Semi Volatile Organic Compounds (µg/l)	<0.5	<0.5	<0.5	<0.5	-

**Table 4.6.2 Results of Groundwater Monitoring at Borehole 2 for 2010**

#### **4.7 Tank, Drum, Pipeline and Bund Testing and Inspection Report**

Integrity testing was conducted in March 2010 in all areas except the underground sump. There has been no issues reported in any of these areas.

#### **4.8 Nuisance Controls**

Condition 12.7 of our waste licence requires that Indaver implement a plan for the eradication of vermin and fly infestations at the facility.

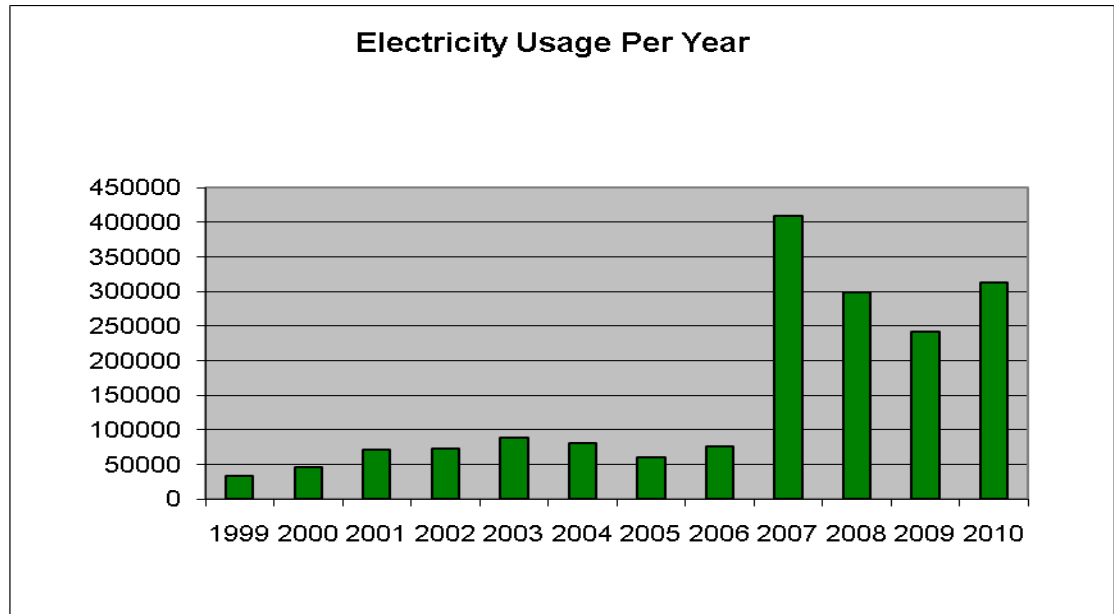
Indaver have contracted the vermin control company Ecolab Pest Prevention to conduct inspections on site for any potential bird or rodent problems.

Additionally Indaver conduct daily checks for signs of vermin, birds, flies, mud or dust as part of the daily site safety checks.

## 5.0 Resource & Energy Consumption

### 5.1 Electricity Usage

Figure 5.1.1 shows the electricity usage for each year of operation of the facility.



*Figure 5.1.1 Graph of Electricity Usage Per Year*

In 2006 the energy usage increased as a consequence of the commissioning of the Solvent Recovery Facility in September 2006. As can be seen during 2007 our energy usage increased dramatically during 2007. This is attributed to the operation of the Solvent Recovery Facility.

These levels fell in 2008 due to decreased activity of the solvent recovery facility. The figures for 2009 are not a true reflection of the full electricity usage as Nov and Dec 2009 are not included Indaver have not been invoiced yet for these months. However if we took an average of the previous 2 years for these months that would bring the total consumption up to 308832 units which would just be above 2008 figures, this could be attributed to increased activity in the Solvent Recovery Facility in 2009. Also all the forklifts onsite now are electric as we no longer have any diesel forklifts in operation.

An energy audit of the Dublin Port Hazardous Waste Facility was conducted in July 2007 as per condition 8.1 of W0036-02. As can be seen

from this report, the main electrical power usage on the site is made up as follows:

- Nitrogen Gas Generator
- Compressed air generation to operate pump systems and valves
- Office operations – laboratory activities and office administration

Figure 5.1.2 shows the electricity usage per employee since commencement of operations at the facility. It can be seen that the energy usage per employee had increased slightly from last year. The number of employees has decreased from 30 in 2008 to 24 in 2010.

Also during 2009 a project was undertaken to reduce the energy consumption from the air compressor to supply to TOC equipment. In order to reduce energy consumption for the supply of air to the Biotector it will now go into 'Pause Mode'. Once in this mode the Biotector will not be 'running'. There will be a sample generated approximately every hour which will be run twice in order to confirm results after which it will revert to 'Pause Mode'. When the Biotector level reaches discharge level in the interceptor the Biotector will automatically run a sample and when the results are within the discharge limits the surface water will be released. When the level is below this the Biotector will again revert to 'Paused Mode'. This should reduce the energy consumption of the facility and should be visible in the 2010 records.

However as you can see the energy consumption increased slightly in 2010. This can be attributed to the increase in activity in the operation of the solvent recovery facility.

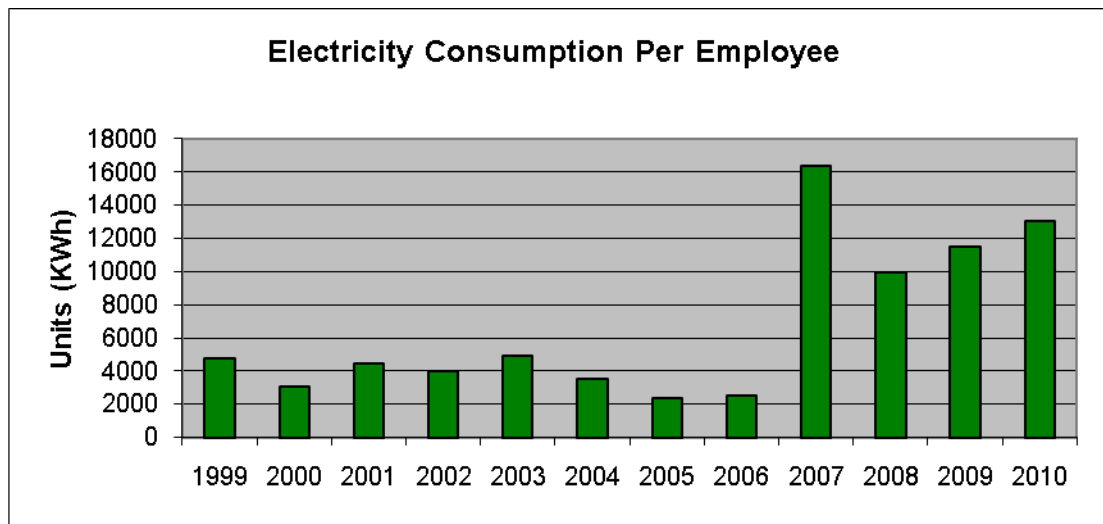


Figure 5.1.2 Graph of Electricity Usage per Employee

## 5.2 Diesel Usage

Figure 5.2.1 clearly illustrates the trend in diesel consumption since commencement of operations at the facility.

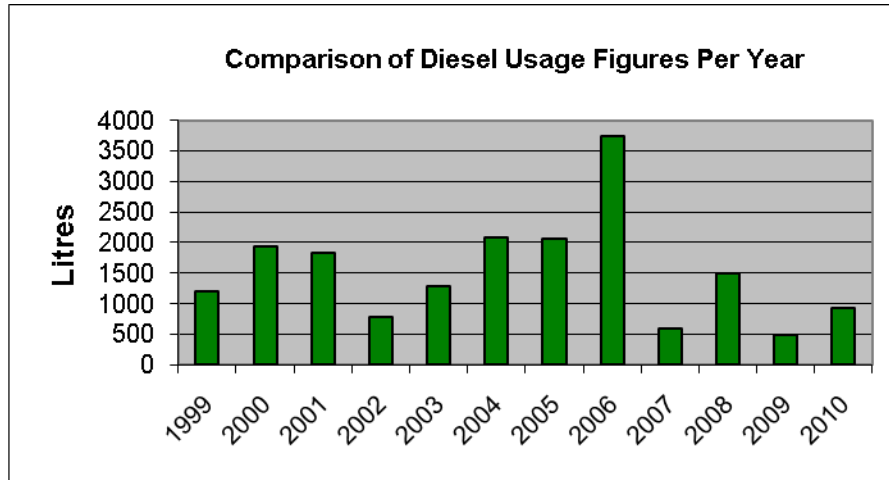


Figure 5.2.1 Comparison of Diesel Usage Figures by Year

Up to October 2006 there were two forklifts in operation on site. Both forklifts were initially diesel powered, however in September 2001 one of these forklifts were replaced with a battery-powered forklift. This reduced the amount of diesel used on site in 2002.

On site activity increased steadily between 2002 and 2004 resulting in an increase in the use of both forklifts on site and hence a steady increase in diesel consumption. Diesel usage then levelled off and the diesel consumption in 2005 was equivalent to the diesel consumption in 2004.

Increased diesel consumption in 2006 can be explained by a number of factors:

1. Diesel usage in 2006 was expected to decrease dramatically due to the planned purchase of a second electric forklift to replace the diesel forklift. However delays in the delivery of the forklift prevented this.

Additionally in October an additional diesel forklift was introduced to site to cope with the increasing waste quantities. Hence from October 06 to December 06 we had three forklifts in operation on site, two diesels and one electric.

In February 2007 one of the diesel forklifts was replaced with an electric forklift.



2. During 2006 the construction of the solvent recovery facility was completed. This facility has additional diesel usage requirements.
3. The nitrogen generator for the nitrogen blanketing system and the fire pumps used in the fire suppression system are both diesel powered. These systems accounted for approximately 1,200L of the diesel consumption figures in 2006.

In April 2007 the remaining diesel forklift was replaced with an electric one.

Indaver currently have 3 forklifts all electric.

In 2010 there was 931L of diesel used onsite. This can be attributed to the increase in activity in our Solvent Recovery Facility.

### 5.3 Water Usage

Water is only used on site for general office purposes and for the testing of the fire system including the hydrants, safety showers and fire suppression system – this is essential for health and safety and we do not envisage reducing this.

### 5.4 Waste Generation

Table 5.4.1 details the types and quantities of waste generated on site in 2010

Indaver maintain an extensive recycling campaign for material generated on site including paper, cardboard, batteries, glass, aluminium, plastic, fluorescent tubes and waste electrical & electronic equipment.

Hazardous waste is generated on site through repacking activities, maintenance of equipment, spill clean ups etc. All hazardous waste generated on site is drummed and sent for disposal to appropriate waste facilities.

Note: Please see chapter 3.4

Waste Stream	Waste Facility	Disposal/ Recovery	Weight
Contaminated PPE, wipes, absorbents, waste samples, empty damaged drums, exhausted carbon unit, lab waste and household hazardous waste	AVG, ATM, Enva Shannon, KMK, Nehlson, Rilta & Indaver NV	D	35.644 MT
Dry Recyclables	Thornton's	R	4.116 MT

Waste Stream	Waste Facility	Disposal/ Recovery	Weight
(Cardboard, Plastics etc)	Recycling		
Residual Waste	Thornton's Recycling	D	2.954 MT
Waste Pallets	Thornton's Recycling	R	3.22 MT

*Table 5.4.1 Waste Generated on Site in 2010*

## **6.0 Site Development Work**

### **6.1 Development Works undertaken during reporting Period**

There was no development works carried out during the reporting period.

### **6.2 Proposed Future Site Development Work**

There are no development works planned for 2011.

## **7.0 Environmental Incidents and Complaints**

### **7.1 Environmental Incidents**

All Environmental Incidents are dealt with as per the Environmental Incident Investigation and Reporting Procedure Operations 6.4.

There were no environmental incidents during the period being reported on.

### **7.2 Environmental Complaints**

All Environmental Complaints are dealt with as per the Environmental Complaints Procedure Operations 6.2.

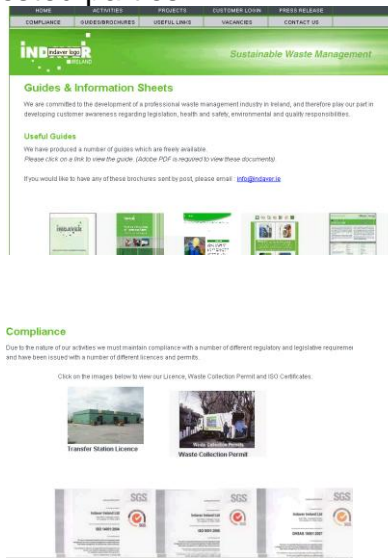
There were no Environmental Complaints during the period being reported on.

## 8.0 Communication/Public Information

All communications with interested parties are dealt with as per our Internal & External Communications Procedure Operations 6.1.

All environmental information is made available to interested parties upon request and Indaver facilitates all requests by customers to conduct audits of the Dublin Port facility. The facility was audited 4 times by various customers in 2010.

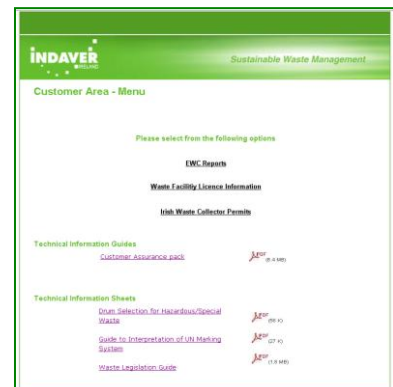
Indaver's website, [www.indaver.ie](http://www.indaver.ie), is a valuable source of information for customers and interested parties.



The “**Compliance**” Page provides access to downloads of the following:

- ❑ All of Indaver's various waste licences, waste permits and waste collections permits.
- ❑ Indaver's ISO 9001, ISO 14001 and OHSAS 18001 certificates of accreditation
- ❑ Indaver's Quality, Environmental and Health & Safety Policy
- ❑ Certificate of Registration of Brokers and Dealers

The “**Customer Login**” area is a password-protected area of our website accessible only to Indaver's customers. This area provides customers with access to downloads of guides and information sheets, EWC Reports for their waste movements and to a wide variety of information in relation to approved waste facilities and hauliers.



Once in this section you are presented with the following:

➤ Access to the following areas:

1. EWC Reports
2. Waste Facility Licence Information
3. Irish Waste Collectors Permits

### 1. EWC Reports

This option gives customers the ability to run EWC reports. These reports give up to date information on all waste collected from a customer's site and its current status, weights, EWC codes etc.

### 2. Waste Facility Licence Information

This option brings customers into a page, which displays a map of Europe. To view information on a particular facility simply click on the country in which the facility is located and then on the name of the facility. This will bring you to the corresponding facility page.



Each page provides information on the location of the facility and the types of waste sent to the facility etc. The facility's operating Permits/licences are available to download and where available ISO certificates etc.

### 3. Irish Waste Collector Permits



This option brings customers into a page, which displays a coloured map of Ireland. Clicking on one of the 10 coloured regions displays a web page for that region. Here the waste collection permits for all the hauliers we use in that particular region (including Indaver) can be downloaded

## **9.0 Residuals Management Plan, Environmental Liabilities Risk Assessment and Financial Provision**

### **9.1 Residuals Management Plan**

Condition 4.2.1 of waste licence W0036-02 requires Indaver to submit a fully detailed and costed plan for the decommissioning and aftercare or closure of the site. Indaver's Residuals Management Plan (RMP) was last submitted to the Agency on the 9<sup>th</sup> April 2008 and is attached in appendix 10.

The preparation of the RMP was conducted on behalf of Indaver by Byrne Ó Cléirigh Engineering Consultants and was developed in accordance with the *Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision*, of 2006.

The report found that there are no known liabilities on site. Samples of soil and groundwater taken during the site investigation for preliminary environmental studies carried out for the Environmental Impact Statement and Waste Licence application, and subsequent groundwater samples taken in accordance with the waste licence W0036-01, indicated that there is no contamination on the site.

Further soil samples taken during construction of the blending facility in November 2005 confirmed again that there is no contamination on the site.

The report concluded that, as there are no existing long-term issues associated with the site, a restoration and aftercare management plan is not required.

In the event of closure all materials and equipment will be sold or returned to suppliers where possible. Where materials and equipment cannot be sold or returned to suppliers they will be sent for recovery or disposal to appropriately licensed waste management contractors.

The estimated cost associated with labour, management, disposal of wastes, testing and verification is €426,640. This RMP has been reviewed but not updated since April 2008 as there has been no change to Indaver's core activities on the site. Indaver's RMP was submitted to the Agency on the 9<sup>th</sup> April 2008.

### **9.2 Environmental Liabilities Risk Assessment:**

Condition 13.2.2 of waste licence W0036-02 requires Indaver to submit a comprehensive and fully costed Environmental Liabilities Risk Assessment (ELRA).

Indaver's ELRA was submitted to the Agency on the 24<sup>th</sup> August and is attached in appendix 9. No significant changes have occurred on the site since this was issued and so no changes are deemed necessary to this document.

The preparation of the ELRA was conducted on behalf of Indaver by Byrne Ó Cléirigh Engineering Consultants and was developed in accordance with the *Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision*, of 2006.

The report found that the most likely scenario cost for environmental liability was calculated at €19,500. As a conservative measure, and to ensure that adequate provisions are in place to cover the environmental liability associated with the highest severity incidents (i.e. a release of a toxic substance to the marine environment or the generation of 1,400 m<sup>3</sup> of contaminated firewater on-site), financial provisions to cover the upper range of remediation cost estimates associated with these events, i.e. €175,000, are considered appropriate by Indaver.

### **9.3 Statement of Measures**

Condition 13.2.2 of waste licence W0036-02 requires Indaver to submit an annual statement as to the measures taken or adopted at the site in relation to the prevention of environmental damage.

The statement of measures is outlined in Appendix 3 of the Environmental Liabilities Risk Assessment that was submitted to the Agency on the 24th August 2006 and is attached in Appendix 9.

### **9.4 Financial Provision**

A co-ordinated financial provision to the value of €601,640 is required to cover clean closure and environmental liabilities.

Indaver's financial provisions are outlined section 9 of the Residuals Management Plan and are attached in Appendix 10.





## Appendix 1: Fas Waste Management Training Certificate

# Level 6 Specific Purpose Certificate Teastas Cuspóra Shainiúil Leibhéal 6

## Waste Management

Awarded to  
Bronnta ar

**Eric Mc Partling**

13/08/2010

*David O'Rourke*

Chair/Cathaoirleach FETAC

*Stam Uile Hynes*

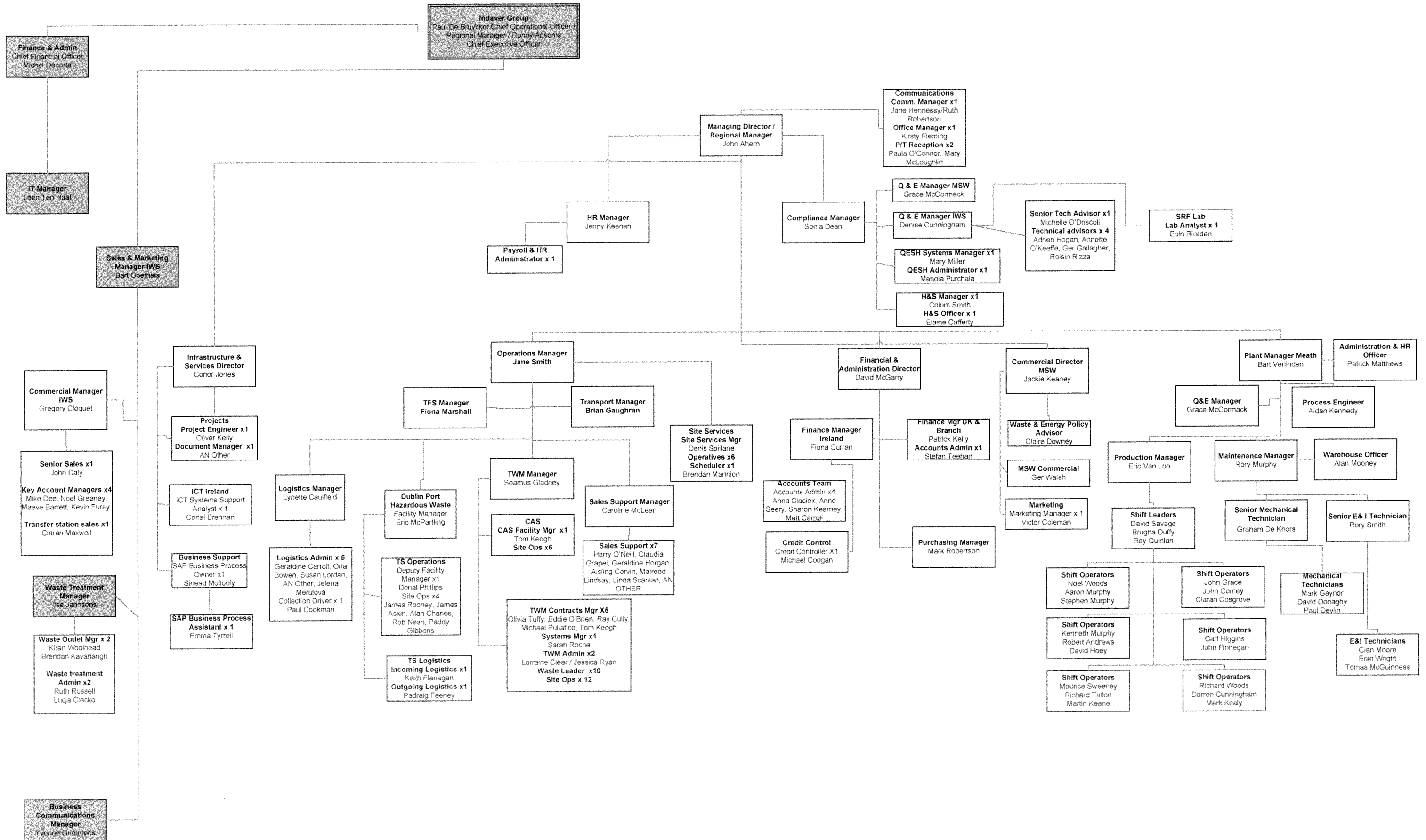
Chief Executive/Príomhfheidhmeannach FETAC





## Appendix 2: Organisational Structure

# Organisational Structure



## Appendix 3: Certificates of Accreditation

**ISO 14001: Environmental Management System**  
**ISO 9001: Quality Management System**  
**OHSAS 18001: Occupational Health & Safety Assessment Series**

Certificate IE00/51240.00

SGS

The management system of

## Indaver Ireland Ltd

Head Office: 4 Haddington Terrace,  
Dun Laoghaire, Co. Dublin, Ireland

has been assessed and certified as meeting the requirements of

## ISO 14001:2004



For the following activities

**Provision of specialist hazardous and non hazardous waste management services including management of waste shipments, total waste management, on site services, solvent recovery.**

This certificate is valid from 05 August 2009 until 05 August 2012 and remains valid subject to satisfactory surveillance audits.

Re certification audit due before 05 August 2012

Issue 12. Certified since 13 January 2000

This is a multi-site certification.  
Additional site details are listed on subsequent pages.

Authorised by

A handwritten signature in black ink, appearing to be 'R. J. O.', is written over a light grey background.

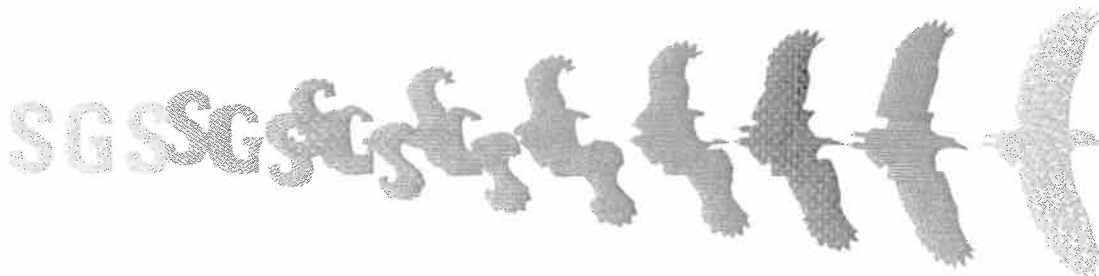
SGS United Kingdom Ltd Systems & Services Certification  
Rossmore Business Park Ellesmere Port Cheshire CH65 3EN UK  
t +44 (0)151 350-6666 f +44 (0)151 350-6600 www.sgs.com



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SGS EMS 04 0308 M2

Page 1 of 2



Certificate IE00/51240.00, continued

SGS

**Indaver Ireland Ltd**

**ISO 14001:2004**



Issue 12

Additional facilities

Dublin Port Hazardous Waste Facility, Tolka Quay Road, Dublin Port,  
Dublin 1, Ireland

Cork Office, Unit 11, South Ring Business Park, Kinsale Road,  
Cork, Ireland

Newcastle West Civic Amenity Site, Station Road, Newcastle West,  
County Limerick, Ireland

Kilmallock Civic Amenity Site, Shannon Development Industrial Estate,  
Kilmallock, County Limerick, Ireland

Mungret Civic Amenity Site, Bunlicky, Mungret, Co. Limerick, Ireland



005

Certificate IE94/3218.00

SGS

The management system of

# Indaver Ireland Ltd

Head Office: 4 Haddington Terrace,  
Dun Laoghaire, Co. Dublin, Ireland



has been assessed and certified as meeting the requirements of

## ISO 9001:2008

For the following activities

**Provision of specialist hazardous and non hazardous waste management services including management of waste shipments, total waste management, on site services, solvent recovery.**

Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2008 requirements may be obtained by consulting the organisation

This certificate is valid from 05 August 2009 until 05 August 2012 and remains valid subject to satisfactory surveillance audits.  
Re certification audit due before 05 August 2012  
Issue 15. Certified since 05 May 1994

This is a multi-site certification.  
Additional site details are listed on subsequent pages.

Authorised by

SGS United Kingdom Ltd Systems & Services Certification  
Rossmore Business Park, Ellesmere Port, Cheshire, CH65 3EN, UK  
t +44 (0)151 350-6666 f +44 (0)151 350-6600 www.sgs.com



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Certificate IE94/3218.00, continued



**Indaver Ireland Ltd**

**ISO 9001:2008**



Issue 15

Additional facilities

Dublin Port Hazardous Waste Facility, Tolka Quay Road, Dublin Port,  
Dublin 1, Ireland

Cork Office, Unit 11, South Ring Business Park, Kinsale Road,  
Cork, Ireland

Newcastle West Civic Amenity Site, Station Road, Newcastle West,  
County Limerick, Ireland

Kilmallock Civic Amenity Site, Shannon Development Industrial Estate,  
Kilmallock, County Limerick, Ireland

Mungret Civic Amenity Site, Bunlicky, Mungret, Co. Limerick, Ireland



Certificate IE02/57028.00

SGS

The management system of

# Indaver Ireland Ltd

Head Office: 4 Haddington Terrace,  
Dun Laoghaire, Co. Dublin, Ireland



has been assessed and certified as meeting the requirements of

## OHSAS 18001:2007

For the following activities

**Provision of specialist hazardous and non hazardous waste management services including management of waste shipments, total waste management, on site services, solvent recovery.**

This certificate is valid from 05 August 2009 until 05 August 2012 and remains valid subject to satisfactory surveillance audits.  
Re certification audit due before 05 August 2012  
Issue 11. Certified since 11 October 2002

This is a multi-site certification.  
Additional site details are listed on subsequent pages.

Authorised by

SGS United Kingdom Ltd Systems & Services Certification  
Rossmore Business Park Ellesmere Port Cheshire CH65 3EN UK  
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Page 1 of 2



Certificate IE02/57028.00, continued



**Indaver Ireland Ltd**

**OHSAS 18001:2007**



Issue 11

Additional facilities

Dublin Port Hazardous Waste Facility, Tolka Quay Road, Dublin Port,  
Dublin 1, Ireland

Cork Office, Unit 11, South Ring Business Park, Kinsale Road,  
Cork, Ireland

Newcastle West Civic Amenity Site, Station Road, Newcastle West,  
County Limerick, Ireland

Kilmallock Civic Amenity Site, Shannon Development Industrial Estate,  
Kilmallock, County Limerick, Ireland

Mungret Civic Amenity Site, Bunlicky, Mungret, Co. Limerick, Ireland



Health and Safety  
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## Appendix 4: Environmental Objectives & Targets



## Objections closed out in 2010

Obj. Ref.	Target	Action	Resp.	Date closed
1	Ensure compliance with the conditions the DPHWF Waste Licence W0036-02	Condition 2.1.2 Facility manager and deputy to attend course agreed by Agency within 12 months	TS Operations	06/07/2010
1	Ensure compliance with the conditions the DPHWF Waste Licence W0036-02	Condition 10.2 Risk assessment to be conducted to determine fire fighting and fire water retention facilities needed. Fire Authority to be consulted.	Compliance	09/09/2010
1	Ensure Actions Related to the SHW at Work (General App) Regs 2007, Part 7 Safety Signs and First-Aid, Chapter 2 – First-Aid and Amendment Regulations 2007 are Closed Out	To ensure first aid cover at each site at all reasonable times set up a spreadsheet for first aiders to log planned absences, holidays etc. Where days occur when cover is not provided an email should be issued with a nominated person to be responsible for the injured person and details of the local medical centre	Compliance	02/06/2010
1	Ensuring Compliance with the new Waste Framework directive	Assess when and if we need to update the database in IMDG on Tracker for H numbers as there is a new one H13. Or if this will not be done in Tracker to ensure that the new H numbers are included fully in SAP	Compliance	13.01.2011
1	Ensure adequate communication in relation to legislation updates are made	Improve communications on legislation updates internally and ensure means are in place to provide updates	Regional Management	30/11/2010
2	Improve systems of handling customer enquiries/communication	Improve how customer calls are received and handled. Develop efficient telephone rules (how calls are routed internally, use of direct dials and mobiles etc.)	Regional Management	05/11/2010
2	Carry out a review of customer questionnaires	Review and draw up options for new look PCQs (cover page, prize draw, description of services provided, new questions, etc) and launch	Compliance/Sales/Regional Management	13/01/2011
3	Ensure control following unplanned electrical shutdowns	A new procedure on the steps to be taken in the event of an unplanned electrical shutdown must be written incorporating the list of equipment that was drawn up	Regional Management/TS Operations	30/03/2011
3	Ensure adequate controls are in place and are tested	Develop list of controls on tracker used by technical that can be used as a checklist following changes to tracker to confirm controls are still working properly	Compliance	02/06/2010

4	Review & Improve Internal Communication Systems	Design, decide on content and launch new look Internal Regional Newsletter	Regional Management/ Compliance	22/09/2010
5	Review in house energy & resource usage	To review lighting in TS yard - how long are lights staying on in the evening	TS Operations	30/11/2010
5	Review in house energy & resource usage	The on/off operation of the compressor (air and nitrogen) needs to be investigated	TS Operations	30/11/2010
6	Ensure all Risk Assessments in place and all on site activities are taken into account	Review handling of fluorescents on site to ensure adequate controls are in place	Compliance/T S Operations	28/01/2011
6	Safe Systems of Work for the TS Operations	Procedure to be written for work permits to be issued at the Hazardous Waste Facility Dublin Port. Ops 16.7	Compliance	22/04/2010
6	Reduce the hazards associated with working in the repack room & SRF	Occupational exposure monitoring to be conducted on repacking activities (both in the TS and on site), blending activities, laboratory activities and general operation of the transfer station and laboratory	Compliance	30/11/2010
6	Reduce the hazards associated with working in the repack room & SRF	A procedure needs to be written outlining the requirements for Biological Monitoring carried out for operatives, i.e. Details of medical requirements	Regional Management/ Compliance	30/11/2010
6		Start inspection/monitoring regime for EX-equipment based on recognised standard (ET209) in 2010	Compliance/T S Operations	28/10/2010
7	Aim for QESH Systems Improvements	Investigate options for more user friendly software system for OFI's and CAR's to enable better notification, reminders and close out	Regional Management/ Compliance	30/03/2011
7	Aim for QESH Systems Improvements	Carry out a review of potential document management system MOSS and assess gaps	Regional Management/ Compliance	18/10/2010
7	Aim for QESH Systems Improvements	Carry out a review of current document management system QESH Software, ensure system working to it's full potential and that all employees, as required, have access	IT & Infrastructure	14/03/2011
8	Ensure control over and evaluation of Vendors	Draw up a balance scorecard to complete with core hauliers to score service provided	Transport	03/03/2011
9	Ensure adequate preventative maintenance and servicing of equipment	Schedule and complete work to deal with the problems experienced with levels in the yard. As part of this, review the yard surface beneath Bays 1 to 3, and arrange for appropriate remediation works such	TS Operations	28/10/2010

		as a concrete plinth / yard surfacing to provide an even yard surface.		
9	Ensure strong level of chemical awareness for all employees involved with chemicals	A new in-house training package on chemical awareness has been developed and must be rolled out to all personnel involved in waste handling.	Sales IWS	02/06/2010

### Examples of Actions for closure in 2011

Obj. Ref.	Target	Action	Due date	Dept. Resp.
1	Ensure compliance with the conditions the DPHWF Waste Licence W0036-02	Condition 9.7 Monitoring and Sampling points are relabelled as needed	31/05/2011	Compliance
1	Monitoring of Continuous Discharge	Formalise checks on the continuous discharge system in the DPHWF to ensure it is working effectively	31/05/2011	Compliance
1	Assess transfer station water usage	Condition 8.3 water usage must be monitored once Dublin Port start metering	31/05/2011	Compliance
2	Improve communication systems	Develop a standard audit pack to give to customers when auditing	31/12/2011	Compliance
4	ensure adequate training systems in place	System must be put in place for assessing and tracking staff competencies	30/06/2011	Regional Management
6	Emergency Response Preparedness	Carry out a review of the internal emergency plan	31/05/2011	Compliance
6	Emergency Response Preparedness	Need to amend tracker to recommend checking certain chemicals as to whether they will affect our emergency plans if accepted into the TS. If required training to be completed with tech team	31/05/2011	Compliance
6	Ensure adequate traffic management on site	Review traffic management at the site and put in place a traffic management plan	31/07/2011	Compliance/T S Operations
6	Ensure equipment is safe to use and required maintenance is scheduled	Review current system of maintenance for the Transfer Station and ensure improvement actions are all closed out as per the Maintenance Action Plan	30/04/2011	TS Operations

6	Provide a Quality Workplace to employees. Provide adequate welfare facilities and ensure their health & safety while carrying out their work and improve safety culture	Launch a behavioural safety programme which included focus on injury related incidents and commonly occurring incidents to identify measures to reduce recurrence, e.g. Chemical Spills/Exposure – Securing drums on pallets, Chemical Awareness Training Manual handling – Identification of additional mechanical handling equipment (drum grabs, trolleys) to reduce manual effort required Forklift incidents – Awareness campaign targeting driver behaviour, Traffic Management Plan in TS	30/04/2011	Compliance
7	Promote and improve consultation and participation in relation to QESH issues	Update QESH website using new template and ensure current information is available including energy usage, waste recycling tips, etc	30/06/2011	Compliance
7	Ensure adequate training and awareness in relation to QESH issues	Organise a QESH training day for all members of the LDP	31/12/2011	Compliance
7	Ensure adequate training and awareness in relation to QESH issues	Carry out QESH Awareness Presentations	30/06/2011	Compliance
7	Ensure Register of Environmental Aspects is reviewed	Set up a meeting with a number of relevant personnel for a review of the IWS environmental aspects register and update and reissue the register	31/05/2011	Compliance
8	Ensure subcontractor working to a high standard	Draw up Service Level Agreement to put in place with waste facilities	31/07/2011	Waste Treatment
8	Ensure subcontractor working to a high standard	Develop system for linking approval of waste facilities to the waste types they are permitted to accept	30/04/2011	Regional Management/ Compliance
8	Ensure subcontractor working to a high standard	Technical to carry out training with hauliers who are used frequently	30/06/2011	Compliance



## Appendix 5: Procedures Index



## Controlled Document: Procedures Index

Reference	Status	Version	Owner
Op_index	Authorised	19	Mary Miller

Type      Index      Sub-Type

### Administration of System

<b>Operations 10.3</b>	Identification & Evaluation of Environmental Aspects
<b>Operations 10.4</b>	Setting and Monitoring of QESH Objectives and Targets
<b>Operations 10.5</b>	Quality, Environmental, Safety and Health Records
<b>Operations 10.7</b>	Processing Preventive & Corrective Actions
<b>Operations 10.8</b>	Internal External and Customer Audits
<b>Operations 10.11</b>	Customer Surveys by Means of Post Collection Questionnaires & Balance Scorecards
<b>Operations 10.12</b>	Identification Review & Evaluation of Legal Requirements
<b>Operations 10.13</b>	Archiving
<b>Operations 10.14</b>	QESH Meetings & Management Reviews

### Approval Amendment & Control

<b>Operations 1.1</b>	Amendment, Issue and Control of QESH System Documentation
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### Accounts

<b>Operations 19.1</b>	Purchase Procedure Indaver Ireland Limited
<b>Operations 19.2</b>	Purchase Procedure Indaver Ireland Branch
<b>Operations 19.3</b>	Purchase Procedure Indaver UK
<b>Operations 19.4</b>	Credit Collection Policy
<b>Operations 19.6</b>	Bank Reconciliation
<b>Operations 19.7</b>	Intercompany Reconciliations
<b>Operations 19.9</b>	Foreign Currency Transactions and Balances

### Belview Port

<b>Operations 24.1</b>	Acceptance & Storage of Compressor Wheel Waste at Unit 5 Belview Port
<b>Operations 24.2</b>	Transfer of Compressor Wheel Waste (EWC 101008) from Belview Port Site Unit

5 to Ship

### Boston Scientific TWM

<b>Operations 29.1</b>	Boston Scientific Galway TWM - Transfer to Tankers of Aqueous Waste
<b>Operations 29.2</b>	Boston Scientific Galway TWM - Emergency Response Procedure
<b>Operations 29.4</b>	Boston Scientific Galway TWM - Collection of Non Hazardous Waste
<b>Operations 29.5</b>	Boston Scientific Galway TWM - Collection of HSM Cardboard Baler
<b>Operations 29.6</b>	Boston Scientific Galway TWM - Forklift Operation Procedure
<b>Operations 29.7</b>	Boston Scientific Galway TWM - Compactor Operation Procedure
<b>Operations 29.8</b>	Boston Scientific Galway TWM - Drum Compactor Operation

### Civic Amenity Site

<b>Operations 17.1</b>	Civic Amenity Site - Waste Acceptance, Storage, Loading & Collection
<b>Operations 17.2</b>	Civic Amenity Site - Site Maintenance, Safety & Security
<b>Operations 17.3</b>	Emergency Response Procedure for the Civic Amenity Sites
<b>Operations 17.5</b>	Repak Invoicing for the Civic Amenity Sites

### Classification & Identification of Waste

<b>Operations 4.2</b>	Classification & Identification of Waste
<b>Operations 4.8</b>	Safety Data Sheets

### Commercial Support

<b>Operations 3.12</b>	Entering and Updating Costs in the Fixed Disposal Rates Screen in Tracker
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### Communications

<b>Operations 6.1</b>	Internal & External Communications
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### Customer Support

<b>Operations 3.1</b>	Customer Enquiry Processing and Quotation
<b>Operations 3.21</b>	Customer Complaints & Comments

### Dublin Port Hazardous Waste Facility

<b>Operations 16.1</b>	Blending Pre-Acceptance Checks
<b>Operations 16.2</b>	Sampling Loading and Unloading at the Blending Plant
<b>Operations 16.3</b>	Stream Acceptance and Blending
<b>Operations 16.8</b>	Operation of the Nitrogen Blanketing System
<b>Operations 4.1</b>	Acceptance & Storage of waste at the Transfer Station
<b>Operations 4.3</b>	Monitoring of Storm Water Emissions to Surface Water Sewer
<b>Operations 4.4</b>	Testing and Removal of Water from Sumps
<b>Operations 4.19</b>	Relocation of Material within Storage Bays
<b>Operations 4.22</b>	Forklift Charging Procedure
<b>Operations 4.23</b>	Storm Water Monitoring System
<b>Operations 4.24</b>	Stock Count Procedure for the Dublin Port Hazardous Waste Facility

## Emergency Response

<b>Operations 8.2</b>	Spill Clean Up at the Transfer Station
<b>Operations 8.3</b>	General Fire & Evacuation Procedure
<b>Operations 8.4</b>	Internal/External Flooding Procedure
<b>Operations 8.7</b>	General Emergency Response & Spill Clean Up
<b>Operations 8.8</b>	Indaver ADR Collection Vehicle's - Emergency Response Procedure and Drivers Responsibilities
<b>Operations 8.9</b>	Procedure upon Receipt of an Emergency Response Call

## Environmental

<b>Operations 6.2</b>	Environmental Complaints
<b>Operations 6.3</b>	Environmental Non Compliance
<b>Operations 6.4</b>	Environmental Incident Investigation & Reporting
<b>Operations 6.5</b>	Internal Waste Management
<b>Operations 6.6</b>	Monitoring and Recording of Environmental Information
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<b>Operations 15.1</b>	SAP for the Creation of Maintenance
<b>Operations 15.2</b>	Maintenance of Equipment
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## GSK Cork TWM

<b>Operations 33.1</b>	GSK Cork TWM - C & D Construction Waste
<b>Operations 33.2</b>	GSK Cork TWM - Catalyst Recovery
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<b>Operations 33.10</b>	GSK Cork TWM - Non Hazardous Waste
<b>Operations 33.11</b>	GSK Cork TWM - On Site Transfer of Drums & IBC's
<b>Operations 33.12</b>	GSK Cork TWM - Site Services
<b>Operations 33.13</b>	GSK Cork TWM - Baling Procedure
<b>Operations 33.14</b>	GSK Cork TWM - Waste Tanker Management
<b>Operations 33.15</b>	GSK Cork TWM - WWTP Sludge
<b>Operations 33.16</b>	GSK Cork TWM - Labelling Workflow

## Health & Safety

<b>Operations 13.10</b>	Control of Hot Work
<b>Operations 13.11</b>	Control of Confined Space Entry
<b>Operations 13.1</b>	Health & Safety Incident Investigation & Reporting
<b>Operations 13.2</b>	Completion of Time Sheets

<b>Operations 13.4</b>	Hazard Identification & Risk Assessment
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<b>Operations 13.6</b>	HazID Safety Study
<b>Operations 13.7</b>	Management of Change Procedure
<b>Operations 13.8</b>	Management of Seveso - Monitoring, Auditing and Review of Major Accident Prevention Policy (MAPP) and the Safety Management System
<b>Operations 13.9</b>	The HAZOP Safety Study
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### Honeywell TWM

<b>Operations 28.1</b>	Honeywell TWM - Treatment of Aluminium Swarf Waste Briquetter
<b>Operations 28.2</b>	Honeywell TWM - Container Security and Administration
<b>Operations 28.3</b>	Honeywell TWM - Indaver's Emergency Response Plan
<b>Operations 28.4</b>	Honeywell TWM - Baler Operation
<b>Operations 28.5</b>	Honeywell TWM - Treatment of Gypsum Waste-Dry
<b>Operations 28.6</b>	Honeywell TWM - Treatment of Gypsum Waste-Wet
<b>Operations 28.7</b>	Honeywell TWM - Treatment of Turbine Wheel Waste
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<b>Operations 28.21</b>	Honeywell TWM - Chemical Handling
<b>Operations 28.22</b>	Honeywell TWM - On-Site Loading of Compressor Wheel Waste Into an Open top Container & Transfer to Belview Port
<b>Operations 28.23</b>	Honeywell TWM - Man Down Alarm (MDA) Procedure
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<b>Operations 18.2</b>	Employee Performance Management
<b>Operations 18.3</b>	Employee Leaving Procedure
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<b>Operations 9.5</b>	Operation of the Out of Hours Telephone System
<b>Operations 9.7</b>	Change Control Procedure for Indavers Bespoke Software Applications
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<b>Operations 20.12</b>	Handling and Storage of Stock Reagents
<b>Operations 20.19</b>	Equipment Calibrations and Maintenance
<b>Operations 20.21</b>	Laboratory Quality Control System
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<b>Operations 21.12</b>	Determination of methanol in waste
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<b>Operations 21.1</b>	Determination of Metals and Halogens and Sulphur Using XRF
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<b>Operations 22.3</b>	Operation of the Hettich Universal 320R Centrifuge
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<b>Operations 2.1</b>	Moving a Waste Load under Transfrontier Shipment Form (TFS) direct from a Customer's Site to a Waste Facility
<b>Operations 2.2</b>	Moving a Waste Load under C1 from a Customer's site transiting the Transfer Station to a Waste Facility on TFS
<b>Operations 2.3</b>	Moving a Waste load under Transfrontier Shipment Form (TFS) from Storage in the Transfer Station to a Waste Facility
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<b>Operations 2.8</b>	Moving a Waste Load to Indaver's Transfer Station
<b>Operations 2.9</b>	Moving a Waste Load to a Waste Facility within Ireland
<b>Operations 2.10</b>	Moving Waste from Storage in the Transfer Station to a Waste Facility within Ireland
<b>Operations 2.13</b>	Obtaining Approval from Norit for a New Spent Carbon Stream and Placing an Order for Carbon
<b>Operations 2.14</b>	Movement of Waste to Kinsale Road Landfill and then on TFS to the Continent
<b>Operations 2.15</b>	Moving Meat & Bone Meal by Vet Cert off a Customer Site to a Disposal Facility
<b>Operations 2.16</b>	Moving Green List Waste for Recovery on CMR Note
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**Merck Sharpe and Dohme TWM**

<b>Operations 30.1</b>	MSD TWM - Tanker Management
<b>Operations 30.2</b>	MSD TWM - Acetonitrile Toll Management
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**Pfizer Dun Laoghaire TWM**

<b>Operations 27.1</b>	Pfizer Dun Laoghaire TWM - Collection and Disposal of Mixed Vials
<b>Operations 27.2</b>	Pfizer Dun Laoghaire TWM - Collection and Packing of Solid Pharmaceutical Waste On Site
<b>Operations 27.3</b>	Pfizer Dun Laoghaire TWM - Collection and Disposal of Non Hazardous Waste
<b>Operations 27.4</b>	Pfizer Dun Laoghaire TWM - Collecting and Disposal of Uncontaminated Glass Vials
<b>Operations 27.5</b>	Pfizer Dun Laoghaire TWM - Collection and Disposal of Waste Batteries
<b>Operations 27.6</b>	Pfizer Dun Laoghaire TWM - Collection and Disposal of Waste Electronic Electrical Equipment (WEEE)
<b>Operations 27.7</b>	Pfizer Dun Laoghaire TWM - Collection and Recycling of Cardboard
<b>Operations 27.8</b>	Pfizer Dun Laoghaire TWM - Collection and Disposal of Waste Fluorescent Tubes
<b>Operations 27.9</b>	Pfizer Dun Laoghaire TWM - Collection and Disposal of Waste Cooking Oils
<b>Operations 27.10</b>	Pfizer Dun Laoghaire TWM - Collection and Disposal of Waste Machinery Oils
<b>Operations 27.11</b>	Pfizer Dun Laoghaire TWM - Collection and Packaging of Toners/Ink Cartridges for Disposal
<b>Operations 27.12</b>	Pfizer Dun Laoghaire TWM - Collecting and Disposing of Triple Rinsed Winchester in Pfizer
<b>Operations 27.13</b>	Pfizer Dun Laoghaire TWM - Collection and Packing of Biohazardous Waste/Cin Bins

<b>Operations 27.14</b>	Pfizer Dun Laoghaire TWM - Collection Listing and Packing of Laboratory Smalls On Site
<b>Operations 27.15</b>	Pfizer Dun Laoghaire TWM - Loading of Waste Shipments for Movement Off Site
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<b>Operations 27.17</b>	Pfizer Dun Laoghaire TWM - Collection of Empty Contaminated Drums
<b>Operations 27.18</b>	Pfizer Dun Laoghaire TWM - Collecting and Decanting of Azithromycin Ketalar Vorinconazole IGF-IR Pegvisomant and Ketanest S Liquid Waste in Pfizer Dublin

### Pfizer Grangecastle TWM

<b>Operations 26.1</b>	Pfizer Grangecastle TWM - Collection and Triple Rinsing of Empty Contaminated Drums
<b>Operations 26.2</b>	Pfizer Grangecastle TWM - Collection and Packing of Red Bagged Waste and Sharps Bins On Site
<b>Operations 26.3</b>	Pfizer Grangecastle TWM - Collecting Listing and Packing of Lab Smalls On Site
<b>Operations 26.4</b>	Pfizer Grangecastle TWM - Collecting Listing Decanting of Liquid Waste and Packing of Jerricans On Site
<b>Operations 26.5</b>	Pfizer Grangecastle TWM - Autoclaving of Biohazardous waste and the Collection and Packing of Inactivated Biohazardous Yellow Bagged Waste / Cin Bins
<b>Operations 26.6</b>	Pfizer Grangecastle TWM - Collection and Packing of Biohazardous Yellow Bagged Waste / Cin Bins (Autoclaved) On Site
<b>Operations 26.7</b>	Pfizer Grangecastle TWM - Collecting and Storing of Genetically Modified Microorganisms Biohazardous Waste On Site
<b>Operations 26.8</b>	Pfizer Grangecastle TWM - Collection of Empty Contaminated Drums and IBCs On Site
<b>Operations 26.9</b>	Pfizer Grangecastle TWM - Collection Waste Vials Containing Plevnar MNTX Tygacil and Media On Site
<b>Operations 26.10</b>	Pfizer Grangecastle TWM - Collection of Waste Cooking Oils from On Site Canteens
<b>Operations 26.11</b>	Pfizer Grangecastle TWM - Collection of Waste Hydraulic Lubricant Compressor and Engine Oils On Site
<b>Operations 26.12</b>	Pfizer Grangecastle TWM - Collection and Disposal of Waste Electronic Electrical Equipment (WEEE)
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<b>Operations 26.15</b>	Pfizer Grangecastle TWM - Collection and Disposal of Toner and Ink Cartridges
<b>Operations 26.16</b>	Pfizer Grangecastle TWM - Loading of Containers for Waste Shipments On Site
<b>Operations 26.17</b>	Pfizer Grangecastle TWM - Codes of Conduct and Housekeeping On Site
<b>Operations 26.18</b>	Pfizer Grangecastle TWM - Incident/Accident Reporting & Emergency Response Procedure On Site
<b>Operations 26.19</b>	Pfizer Grangecastle TWM - Safe Operation of the Drum Press for Compacting Hazardous Waste in the East Drum Store

### Sales & Invoicing

<b>Operations 3.14</b>	GSK Change Control Procedure
<b>Operations 3.2</b>	Completion of New Customer Account Application Forms and New Supplier Account Opening Forms



<b>Operations 3.4</b>	Preparing Jobs for Invoicing
<b>Operations 3.5</b>	Invoice Approval
<b>Operations 3.9</b>	Certificates of Disposal/Recovery
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### Schering Plough Brinny TWM

<b>Operations 35.1</b>	Schering Plough Brinny - Batteries/WEEE/Tube Collections
<b>Operations 35.2</b>	Schering Plough Brinny - Hazardous Packaged Waste
<b>Operations 35.3</b>	Schering Plough Brinny - Laboratory Smalls Management
<b>Operations 35.4</b>	Schering Plough Brinny - Laboratory Waste Management
<b>Operations 35.5</b>	Schering Plough Brinny - Medical Waste Collections
<b>Operations 35.6</b>	Schering Plough Brinny - Non Hazardous Waste Management
<b>Operations 35.7</b>	Schering Plough Brinny - Sludge Management
<b>Operations 35.8</b>	Schering Plough Brinny - Invoicing Procedure

### TFS

<b>Operations 3.6</b>	Raising a TFS & a Financial Guarantee
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### Training & Staff Competence

<b>Operations 10.6</b>	Training & Staff Competence
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### Transport Issues

<b>Operations 14.1</b>	Vehicle Maintenance & Servicing
<b>Operations 14.2</b>	Ensuring Compliance with Driver Hours
<b>Operations 14.3</b>	Requesting Transport Pricing from Approved Hauliers

### TWM Administration

<b>Operations 25.1</b>	Setting Up a TWM Contract and the Provision of a Waste Operations Leader (WOL)
<b>Operations 25.2</b>	TWM Non Hazardous Recycling Certs

### Vendor Control

<b>Operations 11.1</b>	Haulier Approving and Monitoring
<b>Operations 11.2</b>	Approving and Monitoring of Waste Facilities
<b>Operations 11.3</b>	Approval & Monitoring of General Contractors
<b>Operations 11.8</b>	Control of Approved Facilities for Customers

### Waste Handling

<b>Operations 4.6</b>	Taking and Moving a waste Sample for Analysis
<b>Operations 5.1</b>	Requesting Completing and Issuing Instructions to Work
<b>Operations 5.2</b>	Interpretation of UN Marking System
<b>Operations 5.3</b>	Inspection of Packages for Carrying Waste

<b>Operations 5.4</b>	Loading containers for Shipment
<b>Operations 5.6</b>	Earthing
<b>Operations 5.8</b>	Assignment and Use of Personal Protective Equipment
<b>Operations 5.10</b>	Repackaging of Waste
<b>Operations 5.12</b>	Labelling of Packages
<b>Operations 5.13</b>	On Site Placarding of Bulk and Packaged Waste Loads
<b>Operations 5.19</b>	Laboratory Smalls
<b>Operations 5.21</b>	DGSA Incident Investigation & Reporting

### Change History

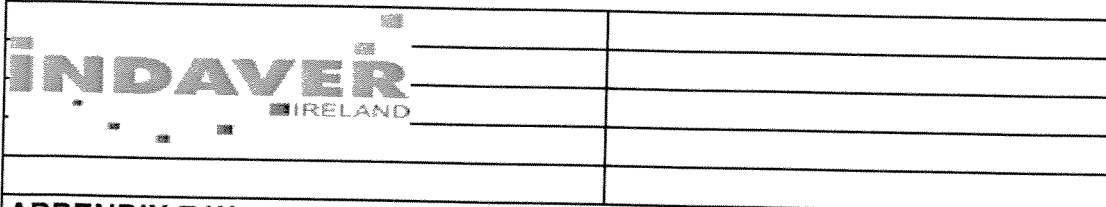
Suggested Next Review Date : 31/08/2010

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- End of Document -

## Appendix 6: Hazardous Waste Data

**Waste quantities accepted into storage between the 1<sup>st</sup> Jan 09 and the 31<sup>st</sup> Dec 2010 categorised by EWC Code**



**APPENDIX 7 Waste Accepted into Storage 1st Jan 2010 - 31st Dec 2010 by EWC C**

<b>EWC Code</b>	<b>Quantity</b>
020501	0.169
020601	1.414
020704	172.891
020705	10.79
061303	0.063
070599	0.18
070699	4.074
080199	0.044
080203	1.94
080308	15.483
080499	13.125
150107	5.036
160604	0.037
170101	0.261
190899	11.98
200125	0.525
200132	0.186
200140	0.38
020108*	0.16
030205*	8.311
060101*	9.459
060102*	27.345
060103*	0.149
060104*	4.755
060105*	13.246
060106*	111.383
060203*	0.297
060204*	17.205
060205*	61.641
060311*	1.35
060313*	0.004
060404*	0.326
060405*	0.11
060802*	1.812
061302*	6.539
070101*	0.341
070103*	1.472
070104*	68.318
070304*	0.015
070413*	0.05
070501*	1257.56
070503*	1941.641
070504*	5172.851

070508*	0.945
070509*	0.76
070510*	4.02
070511*	174.071
070513*	1068.338
070601*	54.466
070603*	1.984
070604*	7.043
070703*	0.145
070704*	26.676
070710*	55.81
070711*	27.453
080111*	89.068
080115*	0.635
080117*	8.31
080119*	0.12
080121*	6.835
080312*	16.627
080317*	2.226
080409*	687.529
080413*	24.883
080415*	22.02
081111*	0.269
090104*	0.093
110105*	0.033
110106*	25.831
110108*	8.855
110111*	113.566
110198*	2.346
120109*	1.073
120112*	4.535
120114*	2.442
120301*	0.798
130110*	12.221
130113*	17.852
130204*	0.023
130205*	1.755
130206*	0.123
130208*	4.146
130301*	2.786
130307*	0.512
130308*	0.442
130309*	0.39
130310*	20.763
130701*	5.502
130703*	3.462
130899*	7.911
140602*	119.995
140603*	609.627
150110*	277.786

150202*	242.879
160209*	11.149
160210*	2.39
160213*	0.006
160303*	68.764
160305*	626.57
160504*	29.556
160506*	56.772
160507*	57.492
160508*	331.179
160601*	1.601
160604*	0.043
160802*	1.479
160805*	0.058
160807*	5.757
160901*	0.026
160903*	1.304
160904*	2.507
161001*	14.338
161105*	1.021
170503*	0.335
170903*	2.903
180103*	1.052
180106*	2.361
190115*	0.222
190205*	13.677
190813*	0.336
200114*	0.896
200115*	0.164
200119*	1.355
200121*	0.448
200126*	1.996
200127*	278.487
200129*	1.188
200131*	0.101
200133*	0.193
200135*	0.127
<b>Grand Total</b>	<b>14230.751</b>



## Appendix 7: E-PRTR





Environmental Protection Agency

| PRTR# : W0036 | Facility Name : Tolka Quay Road | Filename : W0036-02 E-PRTR 2010.xls | Return Year : 2010 |

31/03/2011 15:35

Guidance to completing the PRTR workbook

# AER Returns Workbook

Version 1.1.11

<b>REFERENCE YEAR</b>	2010
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**1. FACILITY IDENTIFICATION**

Parent Company Name	Indaver Ireland Limited
Facility Name	Tolka Quay Road
PRTR Identification Number	W0036
Licence Number	W0036-02

Waste or IPPC Classes of Activity

No.	class name
3.13	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.
3.11	Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.
3.12	Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.
4.1	Solvent reclamation or regeneration.
4.13	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.
Address 1	Dublin Port
Address 2	Dublin 1
Address 3	
Address 4	
Country	Ireland
Coordinates of Location	-6.20299 53.3521
River Basin District	IEEA
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	Denise Cunningham
AER Returns Contact Email Address	denise.cunningham@indaver.ie
AER Returns Contact Position	Quality & Environmental Manager
AER Returns Contact Telephone Number	021 4837106
AER Returns Contact Mobile Phone Number	087 7999237
AER Returns Contact Fax Number	021 4704250
Production Volume	0.0
Production Volume Units	
Number of Installations	2
Number of Operating Hours in Year	3240
Number of Employees	157
User Feedback/Comments	While it was useful to have a link to the 2009 data, it would also be great if the waste details 1 and waste details 2 were also available so all we would have to do is check that the address and licence number haven't changed rather than add in individually again. Also if we could copy and paste into the cells in the transfer of waste section that would be great as it is very time consuming having to click numerous times on each cell to get the information we need.
Web Address	www.indaver.ie

**2. PRTR CLASS ACTIVITIES**

Activity Number	Activity Name
5(a)	Installations for the recovery or disposal of hazardous waste
50.1	General

**3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)**

Is it applicable?	No
Have you been granted an exemption?	No
if applicable which activity class applies (as per Schedule 2 of the regulations)?	
Is the reduction scheme compliance route being used?	



Transfer Destination		European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste materials unsuitable for consumption or 9.02 processing	Waste Treatment Operation	Method Used		Location of Treatment	Licence/Permit No. of Next Recipient/Disposer	Licence/Permit No. of Next Recipient/Disposer	Name and Address of Final Destination (HAZARDOUS WASTE ONLY)
Within the Country	To Other Countries						M/C/E	Method Used				
Within the Country		02 07 04	No	9.02		D13	M	Weighted	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
Within the Country		07 05 01	Yes	4,127	aqueous washing liquids and mother liquors	D13	M	Weighted	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
Within the Country		07 05 03	Yes	232,978	organic halogenated solvents, washing liquids and mother liquors	D13	M	Weighted	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
Within the Country		07 05 04	Yes	233,118	other organic solvents, washing liquids and mother liquors	D13	M	Weighted	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
Within the Country		08 03 08	No	3,214	aqueous liquid waste containing ink	D13	M	Weighted	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
Within the Country		13 03 10	Yes	1,811	other insulating and heat transmission oils	D13	M	Weighted	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
Within the Country		13 08 99	Yes	0,104	wastes not otherwise specified	D13	M	Weighted	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
Within the Country		14 06 02	Yes	19,4	other halogenated solvents and solvent mixtures	D13	M	Weighted	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
Within the Country		14 06 03	Yes	48,2	other solvents and solvent mixtures	D13	M	Weighted	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
Within the Country		16 05 07	Yes	0,96	discarded inorganic chemicals consisting of 0.96 or containing dangerous substances	D13	M	Weighted	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
To Other Countries		02 07 04	No	168,223	materials unsuitable for consumption or processing	D10	M	Weighted	Abroad	AVG, IB2234AVG-GENB-2	22113, Hamburg, Germany	Borsigstrasse 2 D, 22113, Hamburg, Germany
To Other Countries		07 05 99	No	0,18	wastes not otherwise specified	D10	M	Weighted	Abroad	AVG, IB2234AVG-GENB-2	22113, Hamburg, Germany	Borsigstrasse 2 D, 22113, Hamburg, Germany
To Other Countries		07 06 99	No	2,016	wastes not otherwise specified	D10	M	Weighted	Abroad	AVG, IB2234AVG-GENB-2	22113, Hamburg, Germany	Borsigstrasse 2 D, 22113, Hamburg, Germany
To Other Countries		20 01 25	No	0,525	sludge oil and fat	D10	M	Weighted	Abroad	AVG, IB2234AVG-GENB-2	22113, Hamburg, Germany	Borsigstrasse 2 D, 22113, Hamburg, Germany
To Other Countries		02 01 08	Yes	0,082	synchemical waste containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
To Other Countries		03 02 05	Yes	10,845	other wood preservatives containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
To Other Countries		06 01 01	Yes	4,96	sulphuric acid and sulphurous acid	D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
To Other Countries		06 01 02	Yes	26,741	hydrochloric acid	D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
To Other Countries		06 01 04	Yes	3,113	phosphoric acid and phosphorous acid	D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
To Other Countries		06 01 05	Yes	9,836	nitric acid and nitrous acid	D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
To Other Countries		05 01 06	Yes	54,536	other acids	D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
To Other Countries		06 02 03	Yes	0,048	ammonium hydroxide	D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
To Other Countries		06 02 04	Yes	10,673	sodium and potassium hydroxide	D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
To Other Countries		06 02 05	Yes	29,125	other bases	D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
To Other Countries		02 07 05	No	10,79	sludges from on-site effluent treatment	D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	
To Other Countries		05 01 06	Yes	0,15	wastes containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	

To Other Countries	06 04 05	Yes	0.343 wastes containing other heavy metals	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	06 08 02	Yes	1.76 waste containing dangerous silicones	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	06 13 02	Yes	5.335 spent activated carbon (except 06 07 02)	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	07 01 01	Yes	0.341 aqueous washing liquids and mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	07 01 03	Yes	0.249 organic halogenated solvents, washing liquids and mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	07 01 04	Yes	2.112 other organic solvents, washing liquids and mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	07 03 04	Yes	0.015 other organic solvents, washing liquids and mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	02 05 01	No	0.169 materials unsuitable for consumption or processing	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	07 05 01	Yes	923.058 aqueous washing liquids and mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	07 05 03	Yes	1438.146 organic halogenated solvents, washing liquids and mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	07 05 04	Yes	568.424 other organic solvents, washing liquids and mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	07 05 10	Yes	3.988 other filter cakes and spent absorbents	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	07 05 13	Yes	542.948 solid wastes containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	07 06 01	Yes	35.109 aqueous washing liquids and mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	07 06 03	Yes	0.034 organic halogenated solvents, washing liquids and mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	07 06 04	Yes	2.112 other organic solvents, washing liquids and mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	07 07 04	Yes	25.402 other organic solvents, washing liquids and mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	08 01 11	Yes	11.734 waste paint and varnish containing organic solvents or other dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	08 03 12	Yes	5.184 waste ink containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	08 03 17	Yes	2.156 waste printing, lower containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	08 04 09	Yes	16.676 waste adhesives and sealants containing organic solvents or other dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	11 01 08	Yes	8.855 phosphatising sludges	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	11 01 11	Yes	93.034 aqueous rinsing liquids containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	11 01 98	Yes	3.769 other wastes containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	13 01 10	Yes	11.954 mineral-based non-chlorinated hydraulic oils	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	13 01 13	Yes	14.173 other hydraulic oils	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	13 02 05	Yes	0.693 mineral-based non-chlorinated engines, gear and lubricating oils	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	13 02 06	Yes	0.079 synthetic engine, gear and lubricating oils	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	13 02 08	Yes	4.25 other engine, gear and lubricating oils	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany
To Other Countries	13 03 07	Yes	0.03 mineral-based non-chlorinated insulating and heat transmission oils	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road Dublin Port ,Dublin 1,...,Ireland	AVG_IB2234/AVG-GENB-2,Borsigstrasse 2.D-22113,Hamburg,...Germany

To Other Countries	13 03 08	Yes	synthetic insulating and heat transmission	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	13 03 10	Yes	0.257 oils	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	13 07 01	Yes	16.632 other insulating and heat transmission oils	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	13 07 03	Yes	4.796 fuel oil and diesel	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	13 08 99	Yes	3.42 other fuels (including mixtures)	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	14 06 02	Yes	7.811 wastes not otherwise specified	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	14 06 03	Yes	55.378 mixtures	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	15 01 10	Yes	48.672 other solvents and solvent mixtures	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	15 02 02	Yes	packaging containing residues of or contaminated by dangerous substances (including of absorbers, filter materials (including of filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances)	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	16 03 03	Yes	143.586 inorganic wastes containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	16 03 05	Yes	43.234 organic wastes containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	16 05 04	Yes	176.665 gases in pressure containers (including laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals)	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	16 05 06	Yes	38.341 discarded inorganic chemicals consisting of or containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	16 05 07	Yes	38.895 discarded organic chemicals consisting of or containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	16 05 08	Yes	131.107 oxidising substances, not otherwise specified	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	16 09 03	Yes	1.502 aqueous liquid wastes containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	16 09 04	Yes	2.478 flammable and refractories from non-metalurgical processes containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	16 10 01	Yes	2.898 soil and stones containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	16 11 05	Yes	1.021 chemicals consisting of or containing	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	17 05 03	Yes	1.907 sludges from physicochemical treatment containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	18 01 06	Yes	2.477 liquid combustible wastes containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	19 02 05	Yes	13.677 acid and fat other than those mentioned in 20 01 25	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	19 02 08	Yes	19.28 pesticides	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	20 01 14	Yes	0.799 paint, inks, adhesives and resins containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	20 01 19	Yes	1.381 oil and fat other than those mentioned in 20 01 25	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	20 01 26	Yes	1.995 01 25	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	20 01 27	Yes	3.58 detergents containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	20 01 29	Yes	1.187 hazardous wastes not otherwise specified	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany
To Other Countries	07 06 99	No	0.394 hazardous wastes not otherwise specified	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG.IB2234/AVG-GENB-2.Borsigstrasse 2.D-22113,Hamburg, ,Germany	Borsigstrasse 2.D-22113,Hamburg, ,Germany

To Other Countries	02 01 08	Yes	agrochemical waste containing dangerous 0.112 substances	D10	M	Weighted	Abroad	Innaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,..,Ireland	NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium Innaver NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium Innaver NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium
To Other Countries	03 02 05	Yes	other wood preservatives containing 4.337 dangerous substances	D10	M	Weighted	Abroad	Innaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,..,Ireland	NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium Innaver NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium
To Other Countries	15 01 07	No	1.831 glass packaging	D10	M	Weighted	Abroad	Innaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,..,Ireland	NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium Innaver NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium
To Other Countries	06 01 01	Yes	4.634 sulphuric acid and sulphurous acid	D10	M	Weighted	Abroad	Innaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,..,Ireland	NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium Innaver NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium
To Other Countries	06 01 05	Yes	0.664 nitric acid and nitrous acid	D10	M	Weighted	Abroad	Innaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,..,Ireland	NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium Innaver NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium
To Other Countries	06 01 06	Yes	56.42 other acids	D10	M	Weighted	Abroad	Innaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,..,Ireland	NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium Innaver NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium
To Other Countries	07 05 01	Yes	217.255 aqueous washing liquids and mother liquors	D10	M	Weighted	Abroad	Innaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,..,Ireland	NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium Innaver NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium
To Other Countries	07 05 03	Yes	organic halogenated solvents, washing 84.969 liquids and mother liquors	D10	M	Weighted	Abroad	Innaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,..,Ireland	NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium Innaver NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium
To Other Countries	07 05 04	Yes	other organic solvents, washing liquids and 304.431 mother liquors	D10	M	Weighted	Abroad	Innaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,..,Ireland	NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium Innaver NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium
To Other Countries	07 06 03	Yes	organic halogenated solvents, washing 1.96 liquids and mother liquors	D10	M	Weighted	Abroad	Innaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,..,Ireland	NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium Innaver NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium
To Other Countries	07 05 11	Yes	sludges from on-site effluent treatment 160.551 containing dangerous substances	D10	M	Weighted	Abroad	Innaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,..,Ireland	NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium Innaver NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium
To Other Countries	07 05 13	Yes	solid wastes containing dangerous 358.16 substances	D10	M	Weighted	Abroad	Innaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,..,Ireland	NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium Innaver NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium
To Other Countries	07 06 01	Yes	16.799 aqueous washing liquids and mother liquors	D10	M	Weighted	Abroad	Innaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,..,Ireland	NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium Innaver NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium
To Other Countries	11 01 06	Yes	16.857 acids not otherwise specified	D10	M	Weighted	Abroad	Innaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,..,Ireland	NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium Innaver NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium
To Other Countries	13 03 07	Yes	0.166 mineral-based non-chlorinated insulating and heat transmission oils	D10	M	Weighted	Abroad	Innaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,..,Ireland	NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium Innaver NV.MLAV1/9800000485/MV/ bd,Industriele Alvalverwering,Poldervlietw eg.B-2030 Antwerpen 3,..,Belgium



To Other Countries	16 10 01	Yes	aqueous liquid wastes containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV,MLAV1/9800000485/MV/ Industriële Afvalverwerking, eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	18 01 03	Yes	wastes whose collection and disposal is subject to special requirements in order to prevent infection	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV,MLAV1/9800000485/MV/ Industriële Afvalverwerking, eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	07 05 01	Yes	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV,MLAV1/9800000485/MV/ Industriële Afvalverwerking, eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	07 05 13	Yes	71.9 substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV,MLAV1/9800000485/MV/ Industriële Afvalverwerking, eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	08 04 09	Yes	139 437 substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV,MLAV1/9800000485/MV/ Industriële Afvalverwerking, eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	15 01 10	Yes	packaging containing residues of or contaminated by dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV,MLAV1/9800000485/MV/ Industriële Afvalverwerking, eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	06 13 03	No	0.063 carbon black	R3	M	Weighted	Auroad	Neihlsen GmbH & Co. KG.430 U	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Kommunekemi a/s,34-48-44-14.Lindholmvej 3,DK-5800 Nyborg, ,Denmark
To Other Countries	08 04 99	No	13.216 wastes not otherwise specified	D9	M	Weighted	Abroad	Neihlsen GmbH & Co. KG.430 U	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Kommunekemi a/s,34-48-44-14.Lindholmvej 3,DK-5800 Nyborg, ,Denmark
To Other Countries	08 01 15	Yes	aqueous sludges containing paint or varnish containing organic solvents or other dangerous substances	R3	M	Weighted	Abroad	Neihlsen GmbH & Co. KG.430 U	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Kommunekemi a/s,34-48-44-14.Lindholmvej 3,DK-5800 Nyborg, ,Denmark
To Other Countries	08 01 11	Yes	33.757 solvents or other dangerous substances	R3	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Kommunekemi a/s,34-48-44-14.Lindholmvej 3,DK-5800 Nyborg, ,Denmark
To Other Countries	08 01 17	Yes	5.994 dangerous substances	R3	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Kommunekemi a/s,34-48-44-14.Lindholmvej 3,DK-5800 Nyborg, ,Denmark
To Other Countries	08 01 21	Yes	6.835 waste paint or varnish remover	R3	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Kommunekemi a/s,34-48-44-14.Lindholmvej 3,DK-5800 Nyborg, ,Denmark
To Other Countries	08 03 12	Yes	5.118 waste ink containing dangerous substances	R3	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Kommunekemi a/s,34-48-44-14.Lindholmvej 3,DK-5800 Nyborg, ,Denmark
To Other Countries	08 04 09	Yes	465.734 adhesives and sealants containing organic solvents or other dangerous substances	R3	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Kommunekemi a/s,34-48-44-14.Lindholmvej 3,DK-5800 Nyborg, ,Denmark
To Other Countries	15 01 10	Yes	42.273 contaminated by dangerous substances	R3	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Kommunekemi a/s,34-48-44-14.Lindholmvej 3,DK-5800 Nyborg, ,Denmark
To Other Countries	15 02 02	Yes	61.414 dangerous substances	D9	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Kommunekemi a/s,34-48-44-14.Lindholmvej 3,DK-5800 Nyborg, ,Denmark
To Other Countries	15 02 02	Yes	0.003 dangerous substances	R3	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Kommunekemi a/s,34-48-44-14.Lindholmvej 3,DK-5800 Nyborg, ,Denmark
To Other Countries	16 08 07	Yes	1.465 spent catalysts contaminated with dangerous substances	R3	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Kommunekemi a/s,34-48-44-14.Lindholmvej 3,DK-5800 Nyborg, ,Denmark
To Other Countries	20 01 27	Yes	230.755 paint, inks, adhesives and resins containing dangerous substances	R3	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Kommunekemi a/s,34-48-44-14.Lindholmvej 3,DK-5800 Nyborg, ,Denmark
To Other Countries	07 01 04	Yes	3.68 other organic solvents, washing liquids and mother liquors	R12	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Kommunekemi a/s,34-48-44-14.Lindholmvej 3,DK-5800 Nyborg, ,Denmark
To Other Countries	07 05 04	Yes	6.502 other organic solvents, washing liquids and mother liquors	R1	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Kommunekemi a/s,34-48-44-14.Lindholmvej 3,DK-5800 Nyborg, ,Denmark

To Other Countries	07 07 10	Yes	42,435 other filter cakes and spent sorbents	R1	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	ATM 1538449 PO Box 30,Ni-4780 AA 4780 AA Moerdijk, Vlasweg Moerdijk,Netherlands 12,4782PW Moerdijk,Netherlands
To Other Countries	08 01 11	Yes	waste paint and varnish containing organic solvents or other dangerous substances	R4	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	ATM 1538449 PO Box 30,Ni-4780 AA 4780 AA Moerdijk, Vlasweg Moerdijk,Netherlands 12,4782PW Moerdijk,Netherlands
To Other Countries	08 03 12	Yes	5,965 waste ink containing dangerous substances	R4	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	ATM 1538449 PO Box 30,Ni-4780 AA 4780 AA Moerdijk, Vlasweg Moerdijk,Netherlands 12,4782PW Moerdijk,Netherlands
To Other Countries	08 04 09	Yes	57,463 waste adhesives and sealants containing organic solvents or other dangerous substances	R12	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	ATM 1538449 PO Box 30,Ni-4780 AA 4780 AA Moerdijk, Vlasweg Moerdijk,Netherlands 12,4782PW Moerdijk,Netherlands
To Other Countries	14 06 02	Yes	33,036 other halogenated solvents and solvent	D14	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	ATM 1538449 PO Box 30,Ni-4780 AA 4780 AA Moerdijk, Vlasweg Moerdijk,Netherlands 12,4782PW Moerdijk,Netherlands
To Other Countries	14 06 03	Yes	4,014 other solvents and solvent mixtures	R12	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	ATM 1538449 PO Box 30,Ni-4780 AA 4780 AA Moerdijk, Vlasweg Moerdijk,Netherlands 12,4782PW Moerdijk,Netherlands
To Other Countries	15 01 10	Yes	21,255 packaging containing residues of or contaminated by dangerous substances	R12	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	ATM 1538449 PO Box 30,Ni-4780 AA 4780 AA Moerdijk, Vlasweg Moerdijk,Netherlands 12,4782PW Moerdijk,Netherlands
To Other Countries	15 02 02	Yes	35,192 absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	R1	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	ATM 1538449 PO Box 30,Ni-4780 AA 4780 AA Moerdijk, Vlasweg Moerdijk,Netherlands 12,4782PW Moerdijk,Netherlands
To Other Countries	16 05 08	Yes	149,805 discarded organic chemicals consisting of or containing dangerous substances	R12	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	ATM 1538449 PO Box 30,Ni-4780 AA 4780 AA Moerdijk, Vlasweg Moerdijk,Netherlands 12,4782PW Moerdijk,Netherlands
To Other Countries	20 01 27	Yes	34,312 paint, inks, adhesives and resins containing dangerous substances	R12	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	ATM 1538449 PO Box 30,Ni-4780 AA 4780 AA Moerdijk, Vlasweg Moerdijk,Netherlands 12,4782PW Moerdijk,Netherlands
To Other Countries	07 05 03	Yes	1,531 organic halogenated solvents, washing liquids and mother liquors	D14	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	KG 430 U.Louis-Kragges-Strasse 10,28237 Bremen, ,Germany Nehlsen GmbH & Co.
To Other Countries	07 05 04	Yes	10,519 other organic solvents, washing liquids and mother liquors	R12	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	KG 430 U.Louis-Kragges-Strasse 10,28237 Bremen, ,Germany Nehlsen GmbH & Co.
To Other Countries	07 07 04	Yes	0,864 other organic solvents, washing liquids and mother liquors	R12	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	KG 430 U.Louis-Kragges-Strasse 10,28237 Bremen, ,Germany Nehlsen GmbH & Co.
To Other Countries	07 07 11	Yes	12,545 sludges from on-site effluent treatment containing dangerous substances	R12	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	KG 430 U.Louis-Kragges-Strasse 10,28237 Bremen, ,Germany Nehlsen GmbH & Co.
To Other Countries	08 01 11	Yes	0,344 waste paint and varnish containing organic solvents or other dangerous substances	R12	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	KG 430 U.Louis-Kragges-Strasse 10,28237 Bremen, ,Germany Nehlsen GmbH & Co.
To Other Countries	08 04 13	Yes	3,171 aqueous sludges containing adhesives or sealants containing organic solvents or other dangerous substances	R12	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	KG 430 U.Louis-Kragges-Strasse 10,28237 Bremen, ,Germany Nehlsen GmbH & Co.
To Other Countries	12 01 09	Yes	0,231 machining emulsions and solutions free of halogens	R12	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	KG 430 U.Louis-Kragges-Strasse 10,28237 Bremen, ,Germany Nehlsen GmbH & Co.
To Other Countries	13 03 10	Yes	2,426 other insulating and heat transmission oils	R12	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	KG 430 U.Louis-Kragges-Strasse 10,28237 Bremen, ,Germany Nehlsen GmbH & Co.
To Other Countries	16 03 05	Yes	59,141 organic wastes containing dangerous substances	R12	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	KG 430 U.Louis-Kragges-Strasse 10,28237 Bremen, ,Germany Nehlsen GmbH & Co.
To Other Countries	16 05 08	Yes	0,552 discarded organic chemicals consisting of or containing dangerous substances	D14	M	Weighted	Abroad	Irishaver Ireland Limited,W0036-02	Toika Quay Road,Dublin Port ,Dublin 1, ,Ireland	KG 430 U.Louis-Kragges-Strasse 10,28237 Bremen, ,Germany Nehlsen GmbH & Co.

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To Other Countries	20 01 27	Yes	paint, inks, adhesives and resins containing 11 837 dangerous substances	R4	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Neilsen GmbH & Co. KG,430 U.Louis-Kragges-Strasse 10,28237 Bremen,....Germany	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	08 01 99	No	0.044 wastes not otherwise specified	R3	M	Weighted	Abroad	Neilsen GmbH & Co. KG,430 U	Bremen,....Germany Louis-Kragges-Strasse 10,28237 Bremen,....Germany	Neilsen GmbH & Co. KG,430 U.Louis-Kragges-Strasse 10,28237 Bremen,....Germany	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	08 03 08	No	15 483 aqueous liquid waste containing ink	R3	M	Weighted	Abroad	Neilsen GmbH & Co. KG,430 U	Bremen,....Germany	Neilsen GmbH & Co. KG,430 U.Louis-Kragges-Strasse 10,28237 Bremen,....Germany	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	06 08 02	Yes	0.004 waste containing dangerous silicones	R3	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	07 01 04	Yes	0.242 other organic solvents, washing liquids and 0.242 mother liquors	R3	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	07 05 13	Yes	1.557 solid wastes containing dangerous substances	D9	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	13 03 10	Yes	1.061 other insulating and heat transmission oils	R3	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	13 08 99	Yes	0.096 wastes not otherwise specified	D9	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	14 06 03	Yes	1.043 other solvents and solvent mixtures	R3	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	16 05 07	Yes	discarded inorganic chemicals consisting of 0.269 or containing dangerous substances	R3	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	16 05 08	Yes	discarded organic chemicals consisting of or 0.644 containing dangerous substances	R3	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	07 05 03	Yes	organic halogenated solvents, washing 91.5 liquids and mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	07 05 04	Yes	other organic solvents, washing liquids and 428.24 mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	14 06 02	Yes	other halogenated solvents and solvent 21.44 mixtures	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	14 06 03	Yes	92.6 other solvents and solvent mixtures	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	16 03 03	Yes	inorganic wastes containing dangerous 3.057 substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	19 02 08	Yes	liquid combustible wastes containing 20.82 dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	08 03 12	Yes	0.405 waste ink containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	08 03 17	Yes	waste printing toner containing dangerous 0.117 substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	08 04 09	Yes	waste adhesives and sealants containing organic solvents or other dangerous 0.078 substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	08 04 15	Yes	aqueous liquid waste containing adhesives or sealants containing organic solvents or 22.02 other dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany
To Other Countries	11 01 11	Yes	aqueous rising liquids containing 29.3 dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1,,Ireland	Indaver Ireland Limited,W0036-02	Louis-Kragges-Strasse 10,28237 Bremen,....Germany



To Other Countries	13.07.01	Yes	0.7 fuel oil and diesel		D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Toika Quay Road, Dublin Port, Dublin 1, Ireland	Indaver NV, MLAV1/9600000485/MV/ bd, Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium	Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium
To Other Countries	13.08.99	Yes	0.215 wastes not otherwise specified		D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Toika Quay Road, Dublin Port, Dublin 1, Ireland	Indaver NV, MLAV1/9600000485/MV/ bd, Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium	Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium
To Other Countries	14.06.03	Yes	27.379 other solvents and solvent mixtures		D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Toika Quay Road, Dublin Port, Dublin 1, Ireland	Indaver NV, MLAV1/9600000485/MV/ bd, Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium	Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium
To Other Countries	16.02.13	Yes	discarded equipment containing hazardous components (18) other than those 0.006 mentioned in 16.02.09 to 16.02.12		D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Toika Quay Road, Dublin Port, Dublin 1, Ireland	Indaver NV, MLAV1/9600000485/MV/ bd, Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium	Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium
To Other Countries	16.09.03	Yes	0.007 peroxides, for example hydrogen peroxide		D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Toika Quay Road, Dublin Port, Dublin 1, Ireland	Indaver NV, MLAV1/9600000485/MV/ bd, Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium	Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium
To Other Countries	16.09.04	Yes	0.014 oxidising substances, not otherwise specified		D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Toika Quay Road, Dublin Port, Dublin 1, Ireland	Indaver NV, MLAV1/9600000485/MV/ bd, Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium	Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium
To Other Countries	17.09.03	Yes	other construction and demolition wastes (including mixed wastes) containing 2.903 dangerous substances		D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Toika Quay Road, Dublin Port, Dublin 1, Ireland	Indaver NV, MLAV1/9600000485/MV/ bd, Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium	Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium
To Other Countries	20.01.14	Yes	0.031 acids		D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Toika Quay Road, Dublin Port, Dublin 1, Ireland	Indaver NV, MLAV1/9600000485/MV/ bd, Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium	Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium
To Other Countries	20.01.15	Yes	0.103 alkalines		D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Toika Quay Road, Dublin Port, Dublin 1, Ireland	Indaver NV, MLAV1/9600000485/MV/ bd, Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium	Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium
To Other Countries	20.01.19	Yes	0.092 pesticides		D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Toika Quay Road, Dublin Port, Dublin 1, Ireland	Indaver NV, MLAV1/9600000485/MV/ bd, Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium	Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium
To Other Countries	06.01.02	Yes	0.904 hydrochloric acid		D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Toika Quay Road, Dublin Port, Dublin 1, Ireland	Indaver NV, MLAV1/9600000485/MV/ bd, Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium	Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium
To Other Countries	06.01.04	Yes	0.848 phosphoric acid and phosphorous acid		D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Toika Quay Road, Dublin Port, Dublin 1, Ireland	Indaver NV, MLAV1/9600000485/MV/ bd, Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium	Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium
To Other Countries	06.02.03	Yes	0.213 ammonium hydroxide		D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Toika Quay Road, Dublin Port, Dublin 1, Ireland	Indaver NV, MLAV1/9600000485/MV/ bd, Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium	Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium
To Other Countries	06.02.04	Yes	5.939 sodium and potassium hydroxide		D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Toika Quay Road, Dublin Port, Dublin 1, Ireland	Indaver NV, MLAV1/9600000485/MV/ bd, Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium	Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium
To Other Countries	06.02.05	Yes	21.409 other bases		D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Toika Quay Road, Dublin Port, Dublin 1, Ireland	Indaver NV, MLAV1/9600000485/MV/ bd, Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium	Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, Belgium

To Other Countries	06 04 04	Yes	0 003 wastes containing mercury	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Indaver NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	06 13 02	Yes	1.443 spent activated carbon (except 06 07 02)	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	07 01 03	Yes	organic halogenated solvents, washing liquids and mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	07 01 04	Yes	0.553 other organic solvents, washing liquids and mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	07 06 04	Yes	6.084 other organic solvents, washing liquids and mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	07 07 04	Yes	0.227 other organic solvents, washing liquids and mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	08 01 11	Yes	0.191 waste paint and varnish containing organic solvents or other dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	08 01 17	Yes	1.339 wastes from paint or varnish removal containing organic solvents or other dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	13 01 11	Yes	1.286 mineral-based, chlorinated hydraulic oils	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	13 02 04	Yes	0.023 readily biodegradable insulating and heat transmission oils	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	13 03 09	Yes	0.681 spent catalysts containing dangerous transition metals (17) or dangerous transition metal compounds	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	16 08 02	Yes	0.031 spent catalysts containing phosphoric acid	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	16 08 05	Yes	0.058 permanganates, for example potassium permanganate	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	16 09 01	Yes	0.044 chromates, for example potassium chromate, potassium or sodium dichromate wastes whose collection and disposal is subject to special requirements in order to prevent infection	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	16 09 02	Yes	0.044 chromates, for example potassium chromate, potassium or sodium dichromate wastes whose collection and disposal is subject to special requirements in order to prevent infection	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	18 01 03	Yes	0.058 chemicals consisting of or containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	18 02 05	Yes	0.047 boiler dust containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	19 01 15	Yes	0.222 sludges containing dangerous substances from other treatment of industrial waste	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	19 08 13	Yes	0.336 water	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	20 01 15	Yes	0.065 alkalines	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	12 01 12	Yes	1 029 spent waxes and fats	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium
To Other Countries	12 03 01	Yes	0.798 aqueous washing liquids	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	NV MLAV19800000485/MV/ bd,Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium Indaver	Industriele Aktiënverwerking,Poldervliet eg.B-2030 Antwerpen 3, ,Belgium

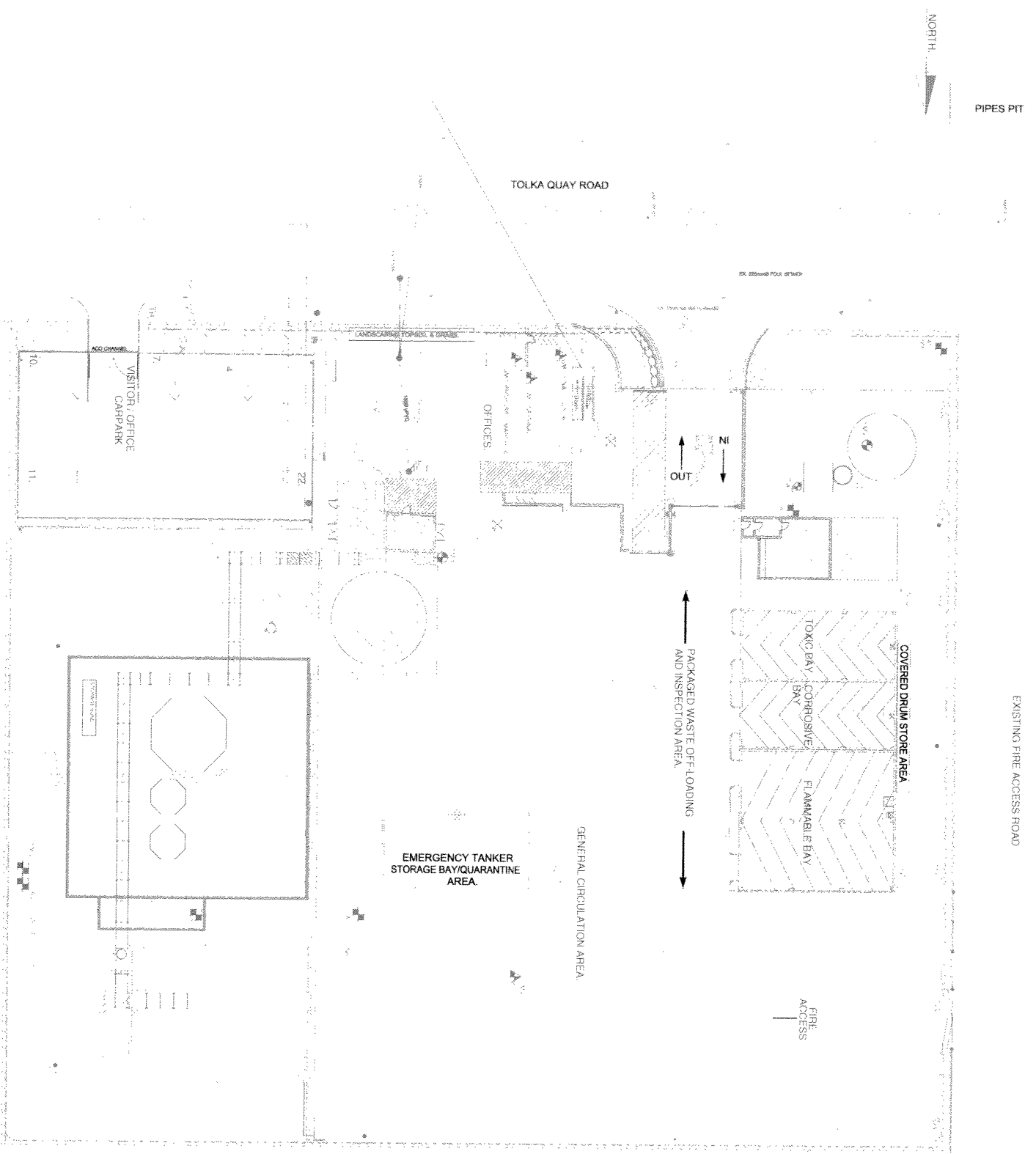
To Other Countries	20 01 21	Yes	fluorescent tubes and other mercury-0.003 containing waste	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG-IB2234/AVG-GENB-2,Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	20 01 31	Yes	0.101 cytotoxic and cytostatic medicines	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG-IB2234/AVG-GENB-2,Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	15 01 07	No	3.205 glass packaging	D10	M	Weighted	Abroad	AVG-IB2234/AVG-GENB-2	Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	17 01 01	No	0.261 concrete medicines other than those mentioned in 20.042 01.31	D10	M	Weighted	Abroad	AVG-IB2234/AVG-GENB-2	Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	20 01 32	No	0.242 01.31	D10	M	Weighted	Abroad	AVG-IB2234/AVG-GENB-2	Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	20 01 40	No	0.296 metals	D10	M	Weighted	Abroad	AVG-IB2234/AVG-GENB-2	Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	06 01 03	Yes	0.149 hydrochloric acid	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG-IB2234/AVG-GENB-2,Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	06 01 99	No	0.012 wastes not otherwise specified	D10	M	Weighted	Abroad	AVG-IB2234/AVG-GENB-2	Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	06 03 11	Yes	2.075 solid salts and solutions containing cyanides	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG-IB2234/AVG-GENB-2,Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	06 06 02	Yes	0.003 wastes containing dangerous sulphides	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG-IB2234/AVG-GENB-2,Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	07 07 03	Yes	0.145 organic halogenated solvents, washing liquids and mother liquors	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG-IB2234/AVG-GENB-2,Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	07 07 10	Yes	13.375 other filter cakes and spent sorbents	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG-IB2234/AVG-GENB-2,Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	07 07 11	Yes	14.908 sludges from on-site effluent treatment containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG-IB2234/AVG-GENB-2,Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	08 01 19	Yes	0.129 varnish containing organic solvents or other dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG-IB2234/AVG-GENB-2,Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	08 04 13	Yes	24.351 aqueous sludges containing adhesives or sealants containing organic solvents or other dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG-IB2234/AVG-GENB-2,Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	09 01 04	Yes	0.093 fixed solutions	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG-IB2234/AVG-GENB-2,Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	11 01 05	Yes	0.033 pickling acids	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG-IB2234/AVG-GENB-2,Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	11 01 06	Yes	10.802 acids not otherwise specified	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG-IB2234/AVG-GENB-2,Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	12 01 09	Yes	1.073 machining emulsions and solutions free of halogens	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG-IB2234/AVG-GENB-2,Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	07 05 09	Yes	0.76 halogenated filter cakes and spent adsorbents	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG-IB2234/AVG-GENB-2,Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	07 05 11	Yes	13.52 sludges from on-site effluent treatment containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	AVG-IB2234/AVG-GENB-2,Borsigrasse 2,D-22113,Hamburg, ,Germany	Borsigrasse 2,D-22113,Hamburg, ,Germany
To Other Countries	07 01 04	Yes	29.085 other organic solvents, washing liquids and mother liquors	R2	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	BIP Organics,B55223,Brooks Lane ,Middlewich,Cheshire,CW10 0UG,United Kingdom	Brooks Lane ,Middlewich,Cheshire,CW10 0UG,United Kingdom
To Other Countries	07 05 03	Yes	261.027 organic halogenated solvents, washing liquids and mother liquors	R2	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	BIP Organics,B55223,Brooks Lane ,Middlewich,Cheshire,CW10 0UG,United Kingdom	Brooks Lane ,Middlewich,Cheshire,CW10 0UG,United Kingdom
To Other Countries	07 05 04	Yes	312.451 other organic solvents, washing liquids and mother liquors	R2	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	BIP Organics,B55223,Brooks Lane ,Middlewich,Cheshire,CW10 0UG,United Kingdom	Brooks Lane ,Middlewich,Cheshire,CW10 0UG,United Kingdom
To Other Countries	19 12 10	No	25.29 combustible waste (refuse derived fuel)	R1	M	Weighted	Abroad	Cementa AB M26737-05	Skogstagan 6,PO Box 102,SE-620 30 Site, ,Sweden		
To Other Countries	15 01 10	Yes	0.003 packaging containing residues of or contaminated by dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Chemogas NV Brabant Leuven ,DIPW/C/05F06/039 Gmbrher gen, , ,Belgium	Gmbrbergen, , ,Belgium
To Other Countries	16 05 04	Yes	9.528 gases in pressure containers (including balloons) containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port ,Dublin 1, ,Ireland	Chemogas NV Brabant Leuven ,DIPW/C/05F06/039 Gmbrher gen, , ,Belgium	Gmbrbergen, , ,Belgium
Within the Country	18 01 03	Yes	wastes whose collection and disposal is subject to special requirements in order to prevent infection	D15	M	Weighted	Offsite in Ireland	Ecosare Systems Ltd,W0054-02	Unit 1A,Allied Industrial Park,Kylemore Rd,Dublin 10,Ireland	Ecosare Systems Ltd,W0054-02,Unit 1A,Allied Industrial Park,Kylemore Rd,Dublin 10,Ireland	Unit 1A,Allied Industrial Park,Kylemore Rd,Dublin 10,Ireland

Within the Country	13.03.10	Yes	10.38 other insulating and heat transmission oils	R13	M	Weighted	Offsite in Ireland	Erva (Portlaoise), W0184-01	Clonmanan Industrial Estate, Portlaoise, Co. Laois, Ireland	Erva (Portlaoise), W0184-01	Clonmanan Industrial Estate, Portlaoise, Co. Laois, Ireland
Within the Country	13.01.13	Yes	0.056 other hydraulic oils	R13	M	Weighted	Offsite in Ireland	Erva (Shannon), W0041-01	Smithstown Industrial Estate, Shannon, Co. Clare, Ireland	Erva (Shannon), W0041-01	Smithstown Industrial Estate, Shannon, Co. Clare, Ireland
Within the Country	13.02.05	Yes	mineral-based non-chlorinated engine, gear, 1.024 and lubricating oils	R13	M	Weighted	Offsite in Ireland	Erva (Shannon), W0041-01	Smithstown Industrial Estate, Shannon, Co. Clare, Ireland	Erva (Shannon), W0041-01	Smithstown Industrial Estate, Shannon, Co. Clare, Ireland
Within the Country	13.02.08	Yes	0.191 other engine, gear and lubricating oils	R13	M	Weighted	Offsite in Ireland	Erva (Shannon), W0041-01	Smithstown Industrial Estate, Shannon, Co. Clare, Ireland	Erva (Shannon), W0041-01	Smithstown Industrial Estate, Shannon, Co. Clare, Ireland
Within the Country	16.03.05	Yes	organic wastes containing dangerous 40.042 substances	D15	M	Weighted	Offsite in Ireland	Erva (Shannon), W0041-01	Smithstown Industrial Estate, Shannon, Co. Clare, Ireland	Erva (Shannon), W0041-01	Smithstown Industrial Estate, Shannon, Co. Clare, Ireland
Within the Country	16.05.06	Yes	laboratory chemicals, consisting of or containing dangerous substances, including 0.283 mixtures of laboratory chemicals	D15	M	Weighted	Offsite in Ireland	Erva (Shannon), W0041-01	Smithstown Industrial Estate, Shannon, Co. Clare, Ireland	Erva (Shannon), W0041-01	Smithstown Industrial Estate, Shannon, Co. Clare, Ireland
Within the Country	16.06.04	No	0.054 alkaline batteries (except 16.06.03)	R13	M	Weighted	Offsite in Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland
Within the Country	19.12.03	No	0.15 non-ferrous metal	R13	M	Weighted	Offsite in Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland
Within the Country	20.01.34	No	batteries and accumulators other than those 0.01 mentioned in 20.01.33	R13	M	Weighted	Offsite in Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland
<b>Within the Country</b>	<b>20.01.40</b>	<b>No</b>	0.082 metals	R13	M	Weighted	Offsite in Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland
Within the Country	06.04.04	Yes	0.071 wastes containing mercury	R13	M	Weighted	Offsite in Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland
Within the Country	16.06.01	Yes	1.601 lead batteries	R13	M	Weighted	Offsite in Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland
Within the Country	16.06.04	No	0.073 alkaline batteries (except 16.06.03)	R13	M	Weighted	Offsite in Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland
Within the Country	20.01.15	Yes	0.017 alkalis	R13	M	Weighted	Offsite in Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland
Within the Country	20.01.21	Yes	fluorescent tubes and other mercury- 0.315 containing waste	R13	M	Weighted	Offsite in Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland
Within the Country	20.01.33	Yes	batteries and accumulators included in 16.06.01, 16.06.02 or 16.06.03 and unsorted batteries and accumulators containing these 0.133 batteries	R13	M	Weighted	Offsite in Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland	KMK Metals Recycling, W0113-03	Capppincur Ind Est, Daringean Rd, Tullamore, Co. Offaly, Ireland
To Other Countries	16.08.02	Yes	spent catalysis containing dangerous transition metals (17) or dangerous 1.448 transition metal compounds	R4	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland
To Other Countries	07.05.13	Yes	solid wastes containing dangerous 86.109 substances	D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland
To Other Countries	15.02.02	Yes	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by 4.311 dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland

Within the Country	19 08 99	No	11.98 wastes not otherwise specified	D15	M	Weighted	Offsite in Ireland	Rita, W0192-03	Block 402 Greenogue Business Park, Rathcoole Co Dublin, Ireland	Rita, W0192-03 Block 402 Greenogue Business Park, Rathcoole Co Dublin, Ireland
Within the Country	07 05 13	Yes	solid wastes containing dangerous substances	R13	M	Weighted	Offsite in Ireland	Rita, W0192-03	Block 402 Greenogue Business Park, Rathcoole Co Dublin, Ireland	Block 402 Greenogue Business Park, Rathcoole Co Dublin, Ireland
Within the Country	08 03 12	Yes	0.087 waste ink containing dangerous substances	D15	M	Weighted	Offsite in Ireland	Rita, W0192-03	Block 402 Greenogue Business Park, Rathcoole Co Dublin, Ireland	Block 402 Greenogue Business Park, Rathcoole Co Dublin, Ireland
Within the Country	15 01 10	Yes	packaging containing residues of or contaminated by dangerous substances	R13	M	Weighted	Offsite in Ireland	Rita, W0192-03	Block 402 Greenogue Business Park, Rathcoole Co Dublin, Ireland	Block 402 Greenogue Business Park, Rathcoole Co Dublin, Ireland
Within the Country	16 05 07	Yes	discarded inorganic chemicals consisting of 0.004 or containing dangerous substances	R13	M	Weighted	Offsite in Ireland	Rita, W0192-03	Block 402 Greenogue Business Park, Rathcoole Co Dublin, Ireland	Block 402 Greenogue Business Park, Rathcoole Co Dublin, Ireland
Within the Country	16 07 09	Yes	wastes containing other dangerous substances	D15	M	Weighted	Offsite in Ireland	Rita, W0192-03	Block 402 Greenogue Business Park, Rathcoole Co Dublin, Ireland	Block 402 Greenogue Business Park, Rathcoole Co Dublin, Ireland
Within the Country	16 10 01	Yes	aqueous liquid wastes containing dangerous substances	D15	M	Weighted	Offsite in Ireland	Rita, W0192-03	Block 402 Greenogue Business Park, Rathcoole Co Dublin, Ireland	Block 402 Greenogue Business Park, Rathcoole Co Dublin, Ireland
To Other Countries	13 03 01	Yes	insulating or heat transmission oils containing PCBs	R4	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	Westvaartdijk 97 B-1850 Grimbergen, Belgium
To Other Countries	15 02 02	Yes	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths protective clothing contaminated by 0.03 dangerous substances	R4	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	Westvaartdijk 97 B-1850 Grimbergen, Belgium
To Other Countries	16 02 09	Yes	transformers and capacitors containing 5.77 PCBs	R4	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	Westvaartdijk 97 B-1850 Grimbergen, Belgium
To Other Countries	16 02 10	Yes	discarded equipment containing or contaminated by PCBs other than those 2.192, mentioned in 16.02.09	R4	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	Westvaartdijk 97 B-1850 Grimbergen, Belgium
To Other Countries	07 01 04	Yes	other organic solvents, washing liquids and 46.86 mother liquors	R2	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	Middleton Road, Morecambe, Lancs, LA3 3JW, United Kingdom
To Other Countries	07 05 03	Yes	organic halogenated solvents, washing 1.52 liquids and mother liquors	R2	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	Middleton Road, Morecambe, Lancs, LA3 3JW, United Kingdom
To Other Countries	07 05 04	Yes	other organic solvents, washing liquids and 754.454 mother liquors	R2	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	Middleton Road, Morecambe, Lancs, LA3 3JW, United Kingdom
To Other Countries	07 05 04	Yes	other organic solvents, washing liquids and 1000.557 mother liquors	F3	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	Middleton Road, Morecambe, Lancs, LA3 3JW, United Kingdom
To Other Countries	14 06 03	Yes	7.729 other solvents and solvent mixtures	R2	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	Middleton Road, Morecambe, Lancs, LA3 3JW, United Kingdom
To Other Countries	14 06 03	Yes	8.46 other solvents and solvent mixtures	R3	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	Middleton Road, Morecambe, Lancs, LA3 3JW, United Kingdom
To Other Countries	07 05 03	Yes	organic halogenated solvents, washing 61.54 liquids and mother liquors	R2	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	Rye Harbour, Sussex, TN31 7TE, United Kingdom
To Other Countries	07 05 04	Yes	other organic solvents, washing liquids and 1767.38 mother liquors	R2	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	Rye Harbour, Sussex, TN31 7TE, United Kingdom
To Other Countries	07 05 04	Yes	other organic solvents, washing liquids and 50.04 mother liquors	R2	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	Hendon Dock, Sunderland, Co. Durham, SR1 2ES, United Kingdom
To Other Countries	14 06 03	Yes	423.84 other solvents and solvent mixtures	R2	M	Weighted	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1, Ireland	Hendon Dock, Sunderland, Co. Durham, SR1 2ES, United Kingdom

To Other Countries	16 05 08	Yes	discarded organic chemicals consisting of or 0.08 containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Toika Quay Road Dublin Port ,Dublin 1,,Ireland	Tredt S.A. 7041936,31-33 Rue de Mogador,75009 Paris,,...France	
To Other Countries	07 05 13	Yes	solid wastes containing dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Toika Quay Road Dublin Port ,Dublin 1,,Ireland	TRV Thermische Ruckstandsverwertung,55,88 51,8,1-73/94 Köln,Rodenkirchener strasse,D-50389 Wesseling, ...Germany	
To Other Countries	15 02 02	Yes	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	D10	M	Weighted	Abroad	Indaver Ireland Limited,W0036-02	Toika Quay Road Dublin Port ,Dublin 1,,Ireland	TRV Thermische Ruckstandsverwertung,55,88 51,8,1-73/94 Köln,Rodenkirchener strasse,D-50389 Wesseling, ...Germany	
Within the Country	19 09 04	No	0.815 spent activated carbon	R7	M	Weighted	Offsite in Ireland	Indaver Ireland Limited,W0036-02 Wadbeck Composting Facility Ltd.,WP 02/08	Toika Quay Road Dublin Port ,Dublin 1,,Ireland	Rodenkirchener strasse,D-50389 Wesseling, ...Germany	
<p><b>Link to previous years waste data</b></p> <p><b>Link to previous years waste summary data &amp; percentage change</b></p>											

**Appendix 8: Drawing**



PROPOSED SITE PLAN, SCALE 1:200

NO.	DESCRIPTION	DATE	BY	CHECKED
1	ISSUED FOR PERMITTING	11/03/2020	MM	MM
2	ISSUED FOR CONSTRUCTION	11/03/2020	MM	MM
3	ISSUED FOR AS-BUILT	11/03/2020	MM	MM
4	ISSUED FOR FINAL	11/03/2020	MM	MM



INDAVER IRELAND LIMITED

TRANSFER STATION EXPANSION 2006  
 FUEL BLENDING FACILITY  
 PROPOSED MONITORING POINTS  
 LAYOUT REVISED



DRG. NO. 11037/CD/020  
 D





## Appendix 9: Environmental Liabilities Risk Assessment (ELRA)





**Environmental Liabilities Risk Assessment**

**for**

**Indaver Ireland Ltd**

**Tolka Quay Road Site, Dublin Port**

**Final Report**

Document No: 323-X012  
FBS: 07.01.15  
Date: August 2006

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This report has been prepared by Byrne Ó Cléirigh Limited with all reasonable skill, care and diligence within the terms of the Contract with the Client, incorporating our Terms and Conditions and taking account of the resources devoted to it by agreement with the Client.

We disclaim any responsibility to the Client and others in respect of any matters outside the scope of the above.

This report is confidential to the Client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies upon the report at their own risk.

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APPENDIX 1: ORDNANCE SURVEY MAP OF INDAVER IRELAND SITE.

APPENDIX 2: SITE PLAN.

APPENDIX 3: RISK REDUCTION AND MITIGATION MEASURES.

## Executive Summary

In July 2005 Indaver Ireland Limited (Indaver), Tolka Quay Road, Dublin 2 was granted a Waste Management Licence (WML) by the Environmental Protection Agency (registration number 36-2) in respect of their operations.

Condition 13.2 of the licence deals with financial provisions for Environmental Liabilities and Indaver is required to commission and submit an Environmental Liabilities Risk Assessment (ELRA). Byrne Ó Cléirigh (BÓC) were commissioned to carry out the ELRA.

The issue of liabilities from past activities was addressed in the RMP, submitted to the agency in January 2006, which concluded that there are no known liabilities on the site. The ELRA therefore deals solely with potential liabilities arising from present activities.

The method applied in carrying out the assessment is a risk based approach, in accordance with the methodology for ELRAs outlined in the EPA's Draft Guidance Note, comprising: the identification of hazards, risk assessment and classification, identification of mitigation and management actions, quantification of potential liabilities and an assessment of the requirement for financial provisions.

As many of the hazards identified entailed a spillage of a toxic material on site or a fire with the potential for the release of contaminated firewater, the containment and surface drainage provisions on site are of central importance to the ELRA.

### *Summary of Drainage and Containment Systems*

The tanks in the solvent blending facility are double skinned and are provided with a bund with a capacity in excess of that of all the tanks. Each bay of the drum store is provided with a fully contained sump with a capacity of approximately 100 litres. Discharge from all bunded areas and sumps is discretionary.

At present all stormwater is pumped into the stormwater retention tank. It is sampled and tested to ensure that there is no contamination prior to discharge to Dublin City Council's stormwater sewer on Tolka Quay Road.

The drainage system for the redeveloped Waste Transfer Station is one of continuous monitoring and discharge via an automated submersible pump located in the main stormwater collection sump. The discharge will be continuously monitored for parameters such as Total Organic Carbon (TOC), conductivity and pH to identify any contamination. The monitoring apparatus is connected to the discharge pump and will switch off the pump in the event of any parameters exceeding pre-determined trigger levels and the storm water is diverted to the existing storage tank for testing and subsequent off-site treatment or disposal if required.

The submersible pump can also be de-activated remotely from the Control Room in the Administration Building by the activation of an emergency stop on the process.

### *Firewater Retention*

The capacity of the firewater tank is 600 m<sup>3</sup>. This tank is directly connected to the Dublin Port fire mains and due to the rapid refill rate from this main, the system is capable of providing 1,200 m<sup>3</sup> of firewater over a two hour period.

In the event of a fire occurring it will be necessary to contain the firewater until it is determined whether it is contaminated. There are three main elements to the firewater retention system:

- Tank Farm bund with a capacity of 800 m<sup>3</sup>.
- Contaminated water retention tank (the current storm water retention tank) with a capacity of 177 m<sup>3</sup>.
- The yard will act as an effective containment area of approximately 400 m<sup>3</sup>.

In total, there are approximately 1,400 m<sup>3</sup> of firewater storage capacity onsite. This quantity is significantly greater than the 600 m<sup>3</sup> firewater storage capacity at the site. A 1 in 20 year storm rainfall was accounted for in the design calculations; however the site will hold stormwater in excess of this amount.

There is an interlock which automatically shuts down the submersible stormwater pump in the event of the fire alarm being activated or the firewater pumps being started to ensure that no firewater is discharged from the site.

### *Hazard Identification and Risk Assessment*

In view of the firewater containment provisions the potential for the release of contaminated firewater to Dublin City Council's stormwater system is not considered a credible scenario.

The main hazards identified and their associated environmental risks are as follows:

#### Emissions to air from either a fire on-site or a spillage of a volatile toxic material.

The environmental risk posed by all such scenarios is considered low due to the low ecological value of the immediate environment and the short term nature of any impacts.

#### Accumulation of contaminated firewater on-site

Up to 1,400 m<sup>3</sup> of contaminated firewater could be contained on-site. Assuming removal and disposal costs of. €75 - 125 per m<sup>3</sup>, the removal of contaminated firewater could cost up to the region of €105,000 - 175,000.

#### Discharge of toxic substances to the marine environment

In the event of a spill and failure of the in-line monitor and failure of the site's operating procedures, up to 27 m<sup>3</sup> of toxic material could be discharged to the marine environment via Dublin City Council's stormwater drainage system. Due to the relatively small scale of such a release the material would be dispersed over a relatively short time frame and there would be no long term environmental liabilities

associated with such a release. Costs of between €50,000 and €150,000 are estimated for restocking with fish and a small amount of habitat rehabilitation should this be necessary.

As a result of previous hazard identification and risk assessment processes carried out at the Indaver site in compliance with SI 74 of 2006 (European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulations), comprehensive risk prevention and mitigation measures are already in place. This is evidenced by the fact that there were no high level priority risks or medium level risks identified in the course of the ELRA. All risks fell into the low/minor category.

#### *Financial Provisions*

The most likely scenario cost for environmental liability was calculated according to the method prescribed in the Draft Guidance Note at €19,500. As a conservative measure, and to ensure that adequate provisions are in place to cover the environmental liability associated with the highest severity incidents (i.e. a release of a toxic substance to the marine environment or the generation of 1,400 m<sup>3</sup> of contaminated firewater on-site), financial provisions to cover the upper range of remediation cost estimates associated with these events, i.e. €175,000, are considered appropriate by Indaver.

At present, Indaver have not made financial provisions to cover environmental liabilities. Indaver are in the process of investigating their options in this regard and will submit a proposed package of financial provisions to the Agency for agreement.

\* \* \* \* \*

## 1 INTRODUCTION

### 1.1 Requirement for an Environmental Liabilities Risk Assessment

In 2005 Indaver Ireland, Tolka Quay Road, Dublin 2 was granted a Waste Management Licence by the Environmental Protection Agency (registration number 36-2) in respect of their operations.

Condition number 13.2 of the WML requires that Indaver Ireland shall:

*“... arrange for the completion, by an independent and appropriately qualified consultant, of a comprehensive and fully costed Environmental Liabilities Risk Assessment...”*

Accordingly, Byrne Ó Cléirigh (BÓC) were commissioned by Indaver Ireland to carry out this Environmental Liabilities Risk Assessment (ELRA).

### 1.2 Statement of Capability and Independence of Byrne Ó Cléirigh

BÓC are an independent firm of engineering and management consultants specialising in the Energy, Environmental and Risk Management areas since 1981. We have carried out numerous environmental and risk assessment projects including due diligence, environmental impact assessment, site investigation and remediation, risk assessment including quantitative risk assessment, and licensing and permitting. The company is wholly owned by the senior professional staff and has no commercial or financial links with any other body.

BÓC have completed a number of projects and studies for Indaver Ireland at their Dublin Port site including carrying out the hazard identification and risk assessment for submission to the Health and Safety Authority as part of the Safety Report for the site, in compliance with SI 74 of 2006: *European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulations, 2000*.

## 2 SITE OPERATIONS

Indaver exports hazardous waste from Ireland to Britain and other European countries for recovery, disposal or treatment. One of the operations on the site, and the original operation for which it was licensed under WML 36-1, is the custom-built Hazardous Waste Transfer Station in Dublin Port (opened in 1999), for the export of these materials.

In general terms, the Waste Transfer Station provides temporary storage for incoming hazardous and non-hazardous waste, prior to onwards shipping. In October 2005 Indaver began the construction of a Solvent Recovery Facility to blend waste solvents for re-use as a fuel in the cement industry. The licensed throughput of the Waste Transfer Station has been extended to 50,000 tonnes per annum from 22,710 tonnes under the waste licence review granted by the EPA (Ref 36-2).



The facility, on completion of the ongoing construction works, will comprise the following main elements:

- 2 storey office building and car parking;
- Waste Solvent Blending Module
  - Tanker loading / unloading area
  - Tank farm
- Laboratory;
- Marshalling yard and parking area for trucks / bulk tankers / container storage;
- Segregated (and covered) packaged waste (e.g., 200 l drums, IBCs) storage area (Drum Store);
- Firewater storage tank;
- Pump house;
- Electrical switchroom;
- Quarantine / repackaging room;
- Storm water retention tank;
- Emergency tanker bay.

The layout of the site, and plant and equipment, is shown in the site plan in Appendix 2.

Wastes are stored on site in drums and in tanks in the solvent recovery plant. The drum store is segregated into a toxic bay, a corrosive bay and a flammable bay and has a total storage capacity of 260 pallets, or just over 200 m<sup>3</sup>. The solvent recovery plant includes one 300 m<sup>3</sup> tank and two 75 m<sup>3</sup> tanks.

There is a maximum of 10 bays in the parking area for bulk tankers/container trucks in transit through the transfer station. Based on an average load of 20 m<sup>3</sup> per tanker/truck, the maximum quantity stored in this area would be approximately 200m<sup>3</sup>. The total, maximum, inventory of waste at the site is therefore 850m<sup>3</sup>.

### **3 SITE CHARACTERISTICS**

#### **3.1 Site Description**

The Indaver site is situated on the Tolka Quay Road in the North-East of Dublin Port (the Dublin Port Oil Zone). The site occupies an area of approximately 0.8 hectares and is bounded by a fire access road to the West and by Tolka Quay Road to the South.

The site is located in an industrial area and is surrounded by tank farms and container storage sites. To the North and East of the site there is an LPG storage and distribution facility operated by Calor Teoranta. To the West of the site there is a fire access road, beyond which there is a site occupied by the Dublin Port Company. Immediately to the West of that site there is a tank farm for petroleum storage operated by Tedcastles Oil Products.

Due South of the site, across Tolka Quay Road, there is a single tank installation formally used by Asahi Chemicals for storing chemical raw materials for use in their textiles processing plant at Ballina. This facility is not in use currently. Irish Shell operates a tank farm to the South-West of the site.

The site is shown on the Ordnance Survey map in Appendix 1.

### **3.2 Environmental Sensitivity and Receptors**

Being a developed urban environment there is unlikely to be any significant flora or fauna or any protected species in the vicinity of the site. This was confirmed by an ecological survey carried out at the site in 2002 as part of the EIS for the construction of the blending plant and the extension of the waste transfer station.

The Dublin Port area was reclaimed from estuarine/tidal deposits. This was part of enlargement schemes undertaken by the Dublin Port Company from the 1920s onwards. As such, the subsurface soils on the site consist of pumped fill comprising sandy gravel underlain by silt, sand and gravel.

The site is not within a designated area but is within 1 km of designated areas including the South Dublin Bay Special Area of Conservation (SAC) and the North Dublin Bay SAC.

A study carried out by K.T. Cullen & Co. Ltd in 1998, states that the shallow water table on the site is approximately 3 m below ground level, while results of previous studies in the Docklands area have shown that shallow groundwater can vary between 1-3 m. The ground water level is tidally influenced. The Geological Survey of Ireland has not yet completed the groundwater classification scheme for the Dublin area and no classifications are therefore available. However, given the tidal influence on the groundwater levels and the connection of the groundwater regime to the sea the aquifer is considered to be poor and of low vulnerability.

## **4 CONTAINMENT ON SITE**

### **4.1 Overview**

The following containment arrangements are in place at the site to prevent the loss of containment of hazardous substances, including substances that could be dangerous to the environment:

- All solvent pipelines run over paved areas. These are visually checked as part of a daily site inspection.
- All of solvent tanks are double skinned and have over-fill protection in the form of level switches / interlocks.
- All containers storing materials that are hazardous to the environment are stored over paved areas.
- Drains are painted for high visibility and in accordance with conditions set out in Indaver's Waste Licence.

## **4.2 Bunding**

The Tank Farm is contained in a fully bunded area of approximately 585 m<sup>2</sup> area (800 m<sup>3</sup> retention capacity). Each bay in the Drum Store is kerbed and graded away from the entrance towards a dedicated isolated underground sump at the back of each bay. The Tanker Loading/Unloading Area is bunded and drains to a small sump.

All bunded areas are self-contained. Liquid removal is by discretionary discharge. In addition to the Tank Farm bund, there are associated sumps in the two pump bunds and the Tanker Loading / Unloading Area, which allow any leaks to be removed from the bulk storage area thereby reducing the fire risk. The bund and sumps drain to the stormwater system by an inline pump.

Stormwater arising from the Tank Farm bund and Tanker Loading / Unloading Area is tested for contamination (i.e. pH, visual and odour). If the tests prove negative, the material is discharged to the main drainage system. In the event of contamination, this material is sent offsite for disposal.

## **4.3 Stormwater System**

### **4.3.1 Current Arrangement**

At present all stormwater is pumped into the stormwater retention tank. It is sampled and tested to ensure that there is no contamination prior to discharge to Dublin City Council's stormwater sewer on Tolka Quay Road.

### **4.3.2 Arrangement after Redevelopment**

The drainage system for the redeveloped Waste Transfer Station is one of continuous monitoring and discharge. The principal components are outlined briefly below.

All stormwater arising onsite (with the exception of that arising from the visitor car park and the roof of the Administration Building), is continuously monitored. The monitoring apparatus is located overground in a container with the sample line in a stormwater collection sump with an overflow weir, which provides a sampling pool for the equipment. The monitoring apparatus in turn is connected to an automated submersible pump located in the sump. Parameters such as Total Organic Carbon

(TOC), conductivity and pH are monitored to identify any contamination, be it organic or otherwise.

The submersible pump can also be de-activated remotely from the Control Room in the Administration Building by the activation of an emergency stop on the process. A Class 1 oil/petrol interceptor is provided to minimise oils, fats and greases (OFG) levels at the outlet

If any contamination is detected, the monitoring apparatus closes the valve and the stormwater is diverted to the existing storage tank for testing and subsequent off-site treatment or disposal if required.

The storage tank, previously used as the stormwater retention tank has a capacity of 177 m<sup>3</sup>, which would allow for approximately 10.5 hours rainfall for a 24 hour storm with a 1 in 20 year return. Should the drainage system be diverted for longer than this period the system would back up and the storm water would be contained in the Yard Area, as in the case of the firewater retention system (see below). The yard slab acts as a containment area, with an approximate capacity of 400 m<sup>3</sup>.

Dublin City Council (Drainage Division and Central Laboratories) and the EPA have been consulted regarding the design of the continuous monitoring and discharge system.

#### **4.4 Firewater Retention**

The capacity of the firewater tank is 600 m<sup>3</sup>. This tank is directly connected to the Dublin Port fire mains and due to the rapid refill rate from this main, the system is capable of providing 1,200 m<sup>3</sup> of firewater over a two hour period. In the event of a fire occurring, it will be necessary to contain the firewater until it is determined whether it is contaminated. There are three main elements to the firewater retention system, viz:

- Tank Farm bund with a capacity of 800 m<sup>3</sup>. The bund wall at the eastern side of the Tank Farm is 150 mm higher than the rest of the bund wall so that any liquid material overflowing the bund would spill into the Yard Area, which is contained (see below). The tanks within the bund are all of double walled construction.
- Contaminated water retention tank (the current storm water retention tank) with a capacity of 177 m<sup>3</sup>;
- The yard will act as an effective containment area of approximately 400 m<sup>3</sup>.

In total there is approximately 1,400 m<sup>3</sup> of firewater storage capacity onsite. This is significantly greater than the 600 m<sup>3</sup> firewater storage capacity at the site. A 1 in 20 year storm rainfall was accounted for in the design calculations; however the site will hold stormwater in excess of this amount. The design stormwater pump discharge rate from the site is 30 l/min. Firewater can be pumped between the different retention areas. If the firewater is contaminated it will be sent offsite for treatment or disposal.

There is an interlock which automatically shuts down the surface water pump in the event of the fire alarm being activated or the firewater pumps being started to ensure that no firewater is discharged from the site. In addition, the automatic monitoring system on the stormwater discharge automatically shuts down the stormwater pump in the event of levels of contaminants being detected ie TOC, pH conductivity exceeding set trigger levels.

#### **4.5 Other Spill Protection Systems**

In addition to the bund and drainage systems described above, the following protection systems are in place at Indaver to protect persons from the potential consequences of losses of containment of dangerous substances:

- Several mobile, air operated, double diaphragm pumps which can be connected to the compressed air ring main on site and utilised for emergency response in various parts of the site.
- Spill kits containing absorbent socks, booms, spill mats, absorbent granules, brushes, non sparking shovels, drum putty, spill trays, salvage drums, drain blockers and neutralising agents.
- Materials hazards warning signs;
- Eye washes;
- Emergency showers;
- Internal PA System to inform members of staff as to the course of action in the event of an emergency.

The spill kits and mobile pumps are stored in an area protected from the potential consequences of a Major Accident in a designated area behind the Quarantine/Repackaging Room to the South of the Drum Store and can be accessed directly from the Yard Area. There are spill kits located in the Quarantine/Repackaging Room, in front of the Drum Store area and at the Tanker Loading/Unloading Bay.

#### **4.6 Containment of Pool Fires**

The site incorporates several design features to prevent any losses of containment involving flammable materials from being carried with firewater and spreading to other parts of the site. These include:

- The Tanker Loading/Unloading Bay is graded away from the entrance and drains to a dedicated sump;
- The Tank Farm is surrounded by a dedicated bund;
- The General Circulation (Yard) Area is graded and drained to a sump and is connected to a storage tank;
- The Quarantine/Repackaging Room is graded and drained to a dedicated sump;
- Each bay in the Drum Store is kerbed and graded away from the entrance towards a dedicated isolated underground sump at the back of each bay.

## 5 INITIAL SCREENING AND OPERATIONAL RISK ASSESSMENT

The Draft Guidance Document prescribes an initial screening based on complexity, environmental sensitivity and pollution record to determine the detail and complexity required in an ELRA.

The complexity of an operation is assessed based on the activity carried out and the corresponding classification in Appendix A of the Draft Guidance Document.

The environmental sensitivity is determined according to a methodology prescribed in Section 2.3 of the Draft Guidance Document. The pollution record is also determined based on a methodology prescribed in the Draft Guidance Document and is a function of the number of non-compliances and the extent of any residual contamination (above background levels).

### 5.1 Complexity

The facility is licensed under a number of different categories. The categories with the highest complexity according to the classification in Appendix A of the Draft Guidance Document are:

#### Disposal

Class 13. (Third Schedule of the Waste Management Acts 1996 to 2003):

*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, and*

#### Recovery

Class 13. (Fourth Schedule of the Waste Management Acts 1996 to 2003)

*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.*

In Appendix A of the Draft Guidance Document, the complexity of these activities is rated according to the nature of the waste (ie hazardous or non hazardous) and the total annual throughput. As the annual throughput is over 10,000 tonnes per annum of hazardous material, the complexity rating is G5.

### 5.2 Environmental Sensitivity

Tables 2.3 and 2.4 of the Guidance Document provide a methodology for classifying the environmental sensitivity according to 'environmental attribute scores'. Table 1 contains the environmental attribute scores for the Dublin Port site. The total score is 6, which corresponds to an environmental sensitivity classification of 1 according to Table 2.4 of the Draft Guidance Document.

**Table 1: Environmental attribute scores for the Indaver site**

Category	Environmental Attribute Score
Human Occupation <sup>1</sup>	3
Groundwater Protection <sup>2</sup>	0
Sensitivity of Receiving Waters <sup>3</sup>	2
Air Quality <sup>4</sup>	0
Protected Ecological Sites <sup>5</sup>	1
Sensitive Agricultural Receptors	0
<b>Total</b>	<b>6</b>

Notes on Table 1:

- 1) The closest occupied building is the Dublin Port Company office to the west of the site. This is c. 60m from the site.
- 2) As the site is in an area where the groundwater regime is connected to the sea an environmental attribute score of 0 for groundwater is considered appropriate.
- 3) The Liffey estuary (Liffey Estuary - from Islandbridge weir to Poolbeg Lighthouse, including the River Tolka basin and South Bull Lagoon) is designated as a sensitive area in the Urban East Water Treatment Regulations of 2001.
- 4) The surrounding area is flat and is considered to be simple terrain as per the categories defined in the Draft Guidance Document.
- 5) The site is not within a designated area but is within 1 km of designated areas including the South Dublin Bay SAC and the North Dublin Bay SAC.

### 5.3 Pollution Record

The third factor to be considered in the initial screening is the pollution record. There is no record of pollution at the site and while there have been four non-compliance notices since 1999, none of these have been related to non-compliance with emission limits. The pollution record category is therefore 1.

### 5.4 Risk Category

The total score is the product of the individual scores: for complexity (5), environmental sensitivity (1) and pollution record (1); so the total score for the Dublin Port site is 5 (ie 5 x 1 x 1). This is within the band of 5-9 for medium risk sites and the site would, on the basis of the screening methodology, therefore be considered as a medium risk site.

However, the site is an upper tier Seveso site and Section 2.1 of the Draft Guidance Document stipulates that Seveso facilities should automatically be classified in the High Risk Category.

## 6 SCOPE AND METHOD OF ASSESSMENT

The Waste Management Licence requires that the ELRA should address environmental liabilities from past and present operations. We have taken a risk based approach in accordance with the methodology for ELRA's outlined in the Draft Guidance Note which comprises the following steps:

- Hazard Identification, including a 'Risk Management Workshop',
- Risk assessment and classification ,
- Identification of Mitigation and Management Actions
- Quantification of potential liabilities
- Assessment of requirement for financial provisions

In developing the Residuals Management Plan for the site, which was submitted to the Agency in January 2006, it was established that there are no liabilities from past operations on the site. This ELRA therefore addresses only liabilities from present operations or unknown liabilities as they are defined in the Draft Guidance Document.

The likelihood and consequence of an event occurring is qualitatively assessed and categorised according to the classifications in the Draft Guidance Note for Residuals Management Plans and Environmental Liabilities Risk Assessments, reproduced in Tables 2 and 3.

The overall risk is then calculated as the product of the Occurrence rating and the Severity Rating.

**Table 2: Risk Classification - Occurrence**

Rating	Category	Description
1	Very Low	Very low chance (0-5%) of hazard occurring in 30 year period
2	Low	Low chance (5-10%) of hazard occurring in 30 year period
3	Low to Medium	Medium chance (10-20%) of hazard occurring in 30 year period
4	Medium to High	High chance (20-50%) of hazard occurring in 30 year period
5	High	Greater than 50% chance of hazard occurring in 30 year period



**Table 3: Risk Classification - Severity**

Rating	Category	Description
1	Trivial	No damage or negligible change to the environment.
2	Minor	Minor impact/localised or nuisance
3	Moderate	Moderate damage to environment
4	Major	Severe damage to local environment
5	Massive	Massive damage to a large area, irreversible in medium term

## 7 HAZARD IDENTIFICATION

### 7.1 General

Environmental liabilities may arise from anticipated events such as known and quantifiable releases to the environment which occur as part of the routine operation of the plant. However, as part of the Waste Management Licensing process, routine emissions have been analysed and quantified and have been the subject of detailed assessments. This process ensures that no significant environmental impact will occur from releases due to normal operations.

Therefore, for the Indaver site, the only means by which environmental liabilities may arise are from unanticipated events, either instantaneously or over a period of time.

### 7.2 Hazard Identification and Risk Assessment

Byrne Ó Cléirigh have previously carried out a risk assessment as part of producing the Safety Report for submission to the Health and Safety Authority (HSA) in accordance with Indaver's obligations under SI 74 of 2006. The risk assessment for the safety report is concerned with both health and safety impacts and environmental impacts, but the emphasis on health and safety impacts is somewhat greater than that on environmental impacts.

In the Risk Assessment a total of 148 Major Accident Scenarios were identified, assessed and classified. Of these 148 Major Accident Scenarios, a detailed description of eight scenarios which are representative of the worst case of a particular type of incident (e.g. drum rupture, tanker spill, fire etc) was provided.

Given the emphasis on environmental impacts in this risk assessment, and through grouping some of the major accident scenarios into one (eg spill due to puncture, corrosion, leakage, minor spill, spillage of drum contents) these 148 Major Accident Scenarios have been consolidated into 18 hazards for the purpose of this risk assessment. These are summarised in Table 4. The two scenarios with the highest risk scores are discussed in detail in Section 7.3.

**Table 4: Risk Assessment – Hazards and Risks**

Risk ID	Process/ Area	Hazard	Environmental Effect	Severity Rating	Basis of Severity Rating	Occurrence Rating	Basis of Occurrence rating	Risk Score
1	Drum Store	Warehouse fire. Spill of flammable material from a drum. Ignition and engulfment of warehouse.	Combustion products to atmosphere. Firewater. PCB release to atmosphere.	3	Firewater containment on site. Low ecological value in the vicinity of the site.	1	Spill containment procedures. Contents of drums do not spill frequently. Fire fighting procedures likely to contain a fire. Zoned area. No ignition sources.	3
2	Drum Store	Spill of toxic material. Puncture of drum. Corrosion.	Release of toxic material to ground/surface water.	1	Each storage bay has a fully contained sump with 200 l capacity.	2	Handling procedures.	2
3	Drum Store	Spill of toxic material. Puncture of drum. Corrosion.	Evolution of toxic vapours to atmosphere.	1	Low ecological value in the vicinity of the site.	2	Handling procedures.	2
4	Fire-proof storage cabinets	Fire involving a release of a flammable substance	Combustion products to atmosphere. Firewater.	1	Fire will be contained. Relatively small quantities of firewater. Low ecological value in the vicinity of the site.	2	Handling procedures. Potential for puncture of container containing spontaneously combustible material.	2
5	Fire-proof storage cabinets	Release of gas	Toxic vapours to atmosphere.	1	Low ecological value in the vicinity of the site.	2	Potential for small release through pin-hole leak. Operations procedures	2
6	Solvent blending	Loss of tank contents into bunded area and ignition. Pool fire. Engulfment of tanks. <ul style="list-style-type: none"> <li>• Overfilling of tank</li> <li>• Rupture of transfer line</li> <li>• Discharge during sampling/draining</li> </ul>	Combustion products to atmosphere. Firewater.	3	Fully contained bund. Firewater containment on site. Short term air quality impact. Low ecological value in the vicinity of the site.	1	Tanks are double contained. Operations procedures.	3

**Table 4: Risk Assessment – Hazards and Risks (cont)**

Risk ID	Area / Process	Hazard	Environmental Effect	Severity Rating	Basis of Severity Rating	Occurrence Rating	Basis of Occurrence rating	Risk Score
7	Solvent blending. Loading of tanks from tanker, transfer between tanks.	Explosion within a tank <ul style="list-style-type: none"> <li>• Overfilling, ignition and flashback into tank.</li> <li>• Static and flashback into tank</li> </ul> Pool fire	Combustion products to atmosphere. Firewater.	3	Fully contained bund. Firewater containment on site. Short term air quality impact. Low ecological value in the vicinity of the site.	1	Tanks are double contained. Nitrogen blanketing. Operations procedures.	3
8	Solvent blending. Loading of tanks from tanker, transfer between tanks.	Toxic liquid release <ul style="list-style-type: none"> <li>• Overfilling of tank</li> <li>• Rupture of transfer line</li> <li>• Discharge during sampling/draining</li> </ul>	Evolution of toxic vapours to atmosphere.	1	Solvent area is fully bunded. Low ecological value in the vicinity of the site.	2	Number of potential scenarios and potential for human error. Overfill protection. Tanks are double contained. Operations procedures.	2
9	Solvent blending. Waste blending	Mixing of incompatible wastes leading to explosion and pool fire.	Toxic vapours to atmosphere. Combustion products to atmosphere. Firewater.	3	Fully contained bund. Firewater containment on site. Short term air quality impact. Low ecological value in the vicinity of the site.	1	Procedures to prevent mixing of incompatible wastes, including compatibility testing.  Limited number of incompatible wastes.	3
10	Solvent blending.	Off-site explosion at adjacent LPG site. Loss of containment in all tanks. Pool fire.	Combustion products to atmosphere. Firewater.	3	Fully contained bund. Firewater containment on site. Short term air quality impact. Low ecological value in the vicinity of the site.	1	Explosion at LPG site affecting Indaver site unlikely.	3

**Table 4: Risk Assessment – Hazards and Risks (cont)**

Risk ID	Area / Process	Hazard	Environmental Effect	Severity Rating	Basis of Severity Rating	Occurrence Rating	Basis of Occurrence rating	Risk Score
11	Solvent blending. Tanker loading / unloading	Full bore rupture of flexible hose or transfer line. Release of flammable substance (2,500 l of solvent into kerbed area in 5 mins) and ignition source. Pool fire and engulfment of tanker.	Combustion products to atmosphere. Firewater.	2	The tanker loading/unloading area is provided with a sump to contain spills. In the event of the engulfment of an entire tanker, it is likely that firewater would overflow into the site's general drainage system where it would be contained.	1	Unloading and spill containment procedures. Rated area, removal of ignition sources.	2
12	Solvent blending. Tanker loading / unloading	Full bore rupture of flexible hose or transfer line. Release of toxic substance (2,500 l into kerbed area in 5 mins)	Evolution of toxic vapours to atmosphere.	2	All spills will be fully contained in the loading/unloading area sump or the general drainage system. Low ecological value in the vicinity of the site.	2	Loading/unloading and containment procedures in place.	4
13	Solvent blending. Tanker loading / unloading	Explosion of flammable vapours in road tanker during filling due to static discharge.	Combustion products to atmosphere. Firewater.	2	Firewater containment on site. Short term air quality impact. Low ecological value in the vicinity of the site.	1	Earthing provisions.	2
14	Repackaging room	Escalation of pool fire to engulf repackaging room. <ul style="list-style-type: none"> <li>• Puncture of container</li> <li>• Corrosion</li> <li>• Pump leak</li> <li>• Rupture of flexible hose</li> </ul> Ignition source	Combustion products to atmosphere. Firewater. PCB release to atmosphere.	3	Firewater containment on site. Low ecological value in the vicinity of the site.	1	Rated area. Ignition source required.  Fire would be likely to be contained. Engulfment of room unlikely.	3

**Table 4: Risk Assessment – Hazards and Risks (cont)**

Risk ID	Area / Process	Hazard	Environmental Effect	Severity Rating	Basis of Severity Rating	Occurrence Rating	Basis of Occurrence rating	Risk Score
15	Repackaging room	Toxic material release. <ul style="list-style-type: none"> <li>• Puncture of container</li> <li>• Corrosion</li> <li>• Pump leak</li> <li>• Rupture of flexible hose</li> </ul>	Toxic vapours to atmosphere.  Toxic release to surface water system.	1	Surface water containment on site. Low ecological value in the vicinity of the site.	3	Handling procedures and equipment.  Remaining potential for leaks through damaged drums.	3
16	General circulation	Pool fire from loss of containment from road tanker due to impact, and ignition source.	Combustion products to atmosphere. Firewater.	2	Fire water containment on site. Low ecological value in the vicinity of the site.	1	Operations procedures. Site speed limit. Designated parking bays.	2
17	General circulation	Loss of containment from road tanker and failure of site's surface water retention system. <ul style="list-style-type: none"> <li>• Collision or</li> <li>• Valve failure</li> </ul> <i>and</i> <ul style="list-style-type: none"> <li>• Failure of automatic surface water monitoring</li> </ul> <i>and</i> <ul style="list-style-type: none"> <li>• Failure of personnel to use E-Stop.</li> </ul>	Release of toxic substance to surface water drains and thence to Dublin Bay.  Worst case is release of 27,000 litres of hexane.	4	This would lead to a short term impact on the marine environment.  Hexane is not toxic to humans but is dangerous to the environment.	1	There has never been a significant loss of containment.  There are many layers of failure required if this event is to happen.	4
18	General circulation	Fire in temporary storage Leak of flammable liquid and ignition source.	Combustion products to atmosphere. Firewater.	2	Surface water containment on site. Low ecological value in the vicinity of the site.	1	Rated area. Ignition source required. Fire would be likely to be contained. Engulfment of container unlikely.	2

### 7.3 Discussion of Higher Risk Scenarios

*Risk ID 12: Solvent blending – road tanker loading/unloading*

*Rupture of flexible hose or transfer line*

Risk Score 4

There are a number of scenarios whereby materials could be discharged from a ruptured flexible hose or transfer pipeline at the Road Tanker Loading / Unloading Bay. The potential initiating events include:

- Road tanker pullaway during loading or unloading
- Mechanical failure of flexible hose
- External impact on flexible hose or transfer pipeline

In each of the above scenarios, the maximum credible quantity of material that could be lost is 2,500 l over a 5 minute period. This is based on a five minute response time to isolate the discharge, which is a conservative assumption because loading and unloading are manned activities. Any material lost to ground in this area would be contained as the Tanker Loading/Unloading Bay is graded and drains to a sump, from which material can be discharged into the main on-site surface water drainage network.

The transfer of waste solvents to and from road tankers during loading/unloading operations is controlled locally by the Blending Plant Operator upon instruction from the Solvent Recovery & Technical Advisor only after all necessary connections and checks have been made. There is a procedure in place for loading and unloading tankers, and all trucks are inspected visually prior to loading/unloading. There is a snap shut coupling (dry link coupler) on the unloading system, and all pipelines and hoses are periodically tested. The likelihood of occurrence is considered as Low – low chance (5-10%) of hazard occurring in 30 year period.

The Indaver Emergency Response Team (ERT) has the appropriate training and equipment to minimise the impact(s) to man and the environment of the evolution of toxic gases from any credible losses of containment of toxic liquids at the site. However, in the unlikely event of a release of a toxic liquid material at the Tanker Loading/Unloading Bay that is not immediately contained, there could be limited damage to selected species of flora in the immediate vicinity of the incident. There is a low risk of damage to local fauna. Therefore the severity of a release is considered as Minor (2) – Minor impact/localised or nuisance.

*Risk ID 17: General Circulation**Loss of containment from road tanker & failure of surface water retention facility**Risk Score 4*

There are a number of scenarios where wastes could be spilled in the general circulation area; where flammable wastes could ignite following a spill; or where toxic wastes could enter the site's stormwater drains following a spill.

The scenario with the potential for the greatest quantity of waste to be released is a loss of containment from a road tanker. In the event of a collision between a road tanker and another vehicle or structure on site, or a failure of valves on a tanker while in storage on site, or a missile impact from another accident on site, the potential for the release of a tanker load (27,000 litres) of waste exists.

Should the systems to prevent the release of contaminated stormwater fail, the potential for the release of toxic substances (e.g. hexane) to Dublin City Council's stormwater drains, and hence to Dublin Bay, exists. This would require failure/loss of calibration of the continuous monitor on the stormwater discharge and the failure of the site's spill response procedures and failure to activate the E-Stop on the stormwater pump. As there has never been a significant loss of containment at the site and due to the extensive measures to prevent a loss of containment and the measures in place to contain any spillage in site, the likelihood of occurrence is considered as Very Low (1) – very low chance (0-5%) of hazard occurring in a 30 year period.

The release of 27,000 litres of a toxic substance into Dublin Bay would create significant short term damage to the marine environment immediately surrounding the point of discharge of Dublin City Council's stormwater sewer. The most toxic material that could be released from a tanker is Hexane, which has a LC<sub>50</sub> of 4 mg/l or 4 ppm. A discharge of Hexane would therefore have to be diluted 250,000 times before being diluted sufficiently to be rendered harmless. Depending on the tidal movement at the time of an accidental release and the rate of dispersion of the toxic release it is possible that a number of marine organisms would be exposed to lethal concentrations of toxic substances. This could lead to a significant short term impact. However, none of the substances delivered by tanker pose a persistent threat to the environment and any environmental damage caused by a spill would occur in the short term only. The severity of a release is considered as Major (4) – Severe damage to local environment.

#### **7.4 Risk Register & Risk Matrix**

In the previous sections (7.2 and 7.3) the hazards have been identified and the risks have been assessed. Table 5 now contains the risk register, in which the risks are summarised and ranked by risk score. The risk associated with each hazard is also shown in the risk matrix in Figure 1.

**Table 5: Risk register**

Risk ID	Description	Severity Rating	Occurrence Rating	Risk score
12	Full bore rupture of flexible hose or transfer line from tanker loading/unloading area.	2	2	4
17	Loss of containment of toxic material from road tanker and failure of site's surface water retention system.	4	1	4
1	Escalation of pool fire to engulf drum store room	3	1	3
6	Pool fire in solvent blending tank bund.	3	1	3
7	Explosion within a tank in the solvent blending facility.	3	1	3
9	Mixing of incompatible wastes leading to explosion and pool fire.	3	1	3
10	Off-site explosion at adjacent LPG site. Loss of containment in all tanks. Pool fire	3	1	3
14	Escalation of pool fire to engulf repackaging room	3	1	3
15	Toxic material release from drum in repackaging room.	1	3	3
2	Spill of toxic material due to corrosion or puncture of a drum in the drum store.	1	2	2
3	Spill of toxic material and release of toxic vapours due to corrosion or puncture of a drum in the drum store.	1	2	2
4	Fire involving a release of a flammable substance from fire proof cabinets.	1	2	2
5	Release of gas from containers in the fire-proof storage cabinet.	1	2	2
8	Release of toxic material from tanks in solvent blending facility.	1	2	2
11	Full bore rupture of flexible hose or transfer line. Release of flammable substance (2,500 l of solvent into kerbed area in 5 mins) and ignition source. Pool fire and engulfment of tanker.	2	1	2
13	Explosion of flammable vapours in road tanker during filling due to static discharge.	2	1	2
16	Pool fire due to loss of containment of a flammable liquid from road tanker due to impact and ignition source.	2	1	2
18	Fire in general circulation area due to a leak of flammable liquid and ignition source.	2	1	2



**Figure 1: Risk Matrix**

Occurrence	5					
	4					
	3	15				
	2	2,3,4,5,8	12			
	1		11,13,16, 18	1,6,7,9,10, 14	17	
		1	2	3	4	5
		Severity				

### 7.5 Risk Prevention / Mitigation

Throughout the design, construction and operation of the facility risk prevention and mitigation measures have been incorporated into every facet of the site's operations through the use and implementation of equipment, systems and procedures to minimise risk.

A major design safety review was carried out during the initial design of the plant and further detailed hazard identification and risk assessment exercises were carried out as part of preparing the pre-construction safety report and the safety report for submission to the HSA under SI 74 of 2006 (European Communities (Control Of Major Accident Hazards Involving Dangerous Substances) Regulations).

As a result of these previous hazard identification and risk assessment processes, comprehensive risk prevention and mitigation measures are already in place as is evidenced by the fact that there are no high level priority risks or medium level risks at the site.

Of all the risk scenarios considered, there are only two with a risk score of 4 – and none with a higher score – as follows:

- Full bore rupture of flexible hose or transfer line from tanker loading/unloading area.
- Loss of containment of toxic material from road tanker and failure of site's surface water retention system.

The risk mitigation measures implemented to reduce the likelihood of these events occurring, and their consequences in the event of their occurrence, are outlined in the following sections. Appendix 3 contains a comprehensive numbered master list of all risk reduction and mitigation measures that were identified during the hazard identification and risk assessment exercise undertaken in compliance with SI 74 of 2006.

### **7.5.1 Full Bore Rupture of Flexible Hose or Transfer Line from Tanker Loading/unloading Area**

The following measures are in place to prevent the occurrence of this Major Accident:

- Tanker loading / unloading is a manned activity;
- Transfer operations to / from road tankers is controlled locally only after all necessary connections and checks have been made;
- All road tankers labelled with Indaver labels Procedure for loading and unloading tankers;
- Operator training;
- All trucks are inspected visually prior to loading / unloading;;
- Snap shut coupling (dry link coupler) on the unloading system;
- All pipelines and hoses are periodically tested;
- Transfer lines purged if construction activity in the area;
- Engine shutoff during tanker loading / unloading;

The following measures are in place to mitigate the impacts of this Major Accident:

- Tanker Loading / Unloading Bay is graded and drains to sum;
- Sump can be discharged into the main on-site surface water drainage network;
- Spill kits (including absorbent materials);
- Spill response procedure;
- Emergency response and spill response drills
- Trained ERT & equipment to protect ERT members from toxic gases;
- Fixed foam / water deluge system;

### **7.5.2 Loss of Containment of Toxic Material from Road Tanker**

The following measures are in place to prevent the occurrence of this Major Accident:

- Visual inspection of tanker valves upon acceptance on site
- Provision of parking bays for tankers
- Outdoor lighting
- Security gate
- 5 km/h speed limit on site

- All trucks carrying waste must present paperwork prior to gaining entry to site
- Visitor pass system
- Forklift driver training / certification
- Tankers to ADR / IMDG Shipping Standards
- Operator training
- Safety briefing of contractors

The following measures are in place to mitigate the impacts of this Major Accident:

- General circulation area graded and drained to sump & connected to storage tank
- Yard area drains to an isolated sump and is graded so that it acts as a ~400 m<sup>3</sup> bunded area
- All drums / containers / tanks labelled with Indaver labels
- Spill kits (including absorbent chemicals)
- Spill response procedure
- Emergency response and spill response drills / SOPs
- Annual training in emergency / spill response
- Annual training in use of breathing apparatus
- Sump may be pumped to the contaminated water retention tank of capacity 177 m<sup>3</sup>
- Drains are lined with a chemical resistant liner

## 8 RISK MANAGEMENT PROGRAMME

In designing the facility, Indaver implemented a hierarchy of control measures to minimise the risk to man and the environment associated with the major accident hazards at the site. The hierarchy consisted of:

- Measures to eliminate the hazard at source (inherent safety), e.g. waste compatibility testing;
- Risk reduction measures to prevent certain initiating events occurring, e.g. secondary containment on the Blending Plant tanks;
- Risk reduction measures to prevent initiating events leading to Major Accident Scenarios, e.g. deluge systems on Blending Plant tanks;
- Consequence mitigation measures to reduce or eliminate the impacts of Major Accident Scenarios, e.g. fire protection systems at the Blending Plant.

Indaver already have a comprehensive risk management programme in place. Notwithstanding this, management and staff continuously monitor hazards and identify means of managing risks. The ultimate responsibility for risk management and mitigation on site rests with the QESH Manager.

The risk assessment, risk mitigation measures, and financial provisions will be reviewed on annual basis to reflect changes in the environmental risks. The review process will reassess the hazard identification and risk assessment process and update the risk register to reflect any new risks, obsolete risks or risks that have changed. The review process will also reassess the adequacy of financial provisions.

## 9 QUANTIFICATION OF UNKNOWN ENVIRONMENTAL LIABILITIES

In general published information<sup>1,2</sup> on environmental liabilities and remediation costs tends to focus on major incidents such as major oils spills (e.g. Exxon Valdez) or spillages of millions of m<sup>3</sup> of toxic substances (e.g. Aznalcóllar Mine).

The USEPA<sup>3</sup> have, however, assessed the costs of remediating marine environments including fish restocking and habitat rehabilitation. The estimated cost for habitat rehabilitation is US\$(1999)50,000 per hectare and the cost of restocking is estimated at US\$(1999)36,000 per 25,000 fish. Due to the relatively small nature of any spill, at a maximum 27,000 litres, the low ecological value of the immediate surrounding area and the fact that the likelihood of a release of persistent contaminants is negligible, it is considered unlikely that any habitat rehabilitation would be required.

(Rehabilitation of habitat can be required where persistent contaminants are released or where releases over a long period of time have led to habitat degradation). A range of remediation costs of between €50,000<sup>4</sup> and €150,000 is considered a reasonable estimate of environmental liabilities associated with a spill of a toxic substance via the stormwater drainage system. The lower range would cover restocking with c. 30,000 fish while the upper range would allow for the rehabilitation of up to two hectares of habitat as well as restocking with fish.

Up to 1,400 m<sup>3</sup> of contaminated firewater could be contained on-site. Assuming removal and disposal costs of between €75 and €125 per m<sup>3</sup>, the removal of contaminated firewater could cost between €105,000 and €175,000.

In order to identify an indicative level of environmental liability associated with the environmental risks, as per the provisions of Section 4.4.7, Section 5 and Appendix C of the Draft Guidance Document, a cost model has been used to generate the expected cumulative cost of the risks. The modelling has been undertaken using the median probability and severity of occurrence of each risk as per Section 4.4.7 of the Draft Guidance Document. The most likely scenario environmental liability and details on its calculation is shown in Table 6. As suggested in the Draft Guidance Document, all risks with a score of two or less are excluded from consideration.

This demonstrates that the most likely scenario cost for environmental liability is €19,500. As a conservative measure, and to ensure that adequate provisions are in place to cover the environmental liability associated with the highest severity incidents (i.e. a release of a toxic substance to the marine environment or the generation of 1,400 m<sup>3</sup> of contaminated firewater on-site) financial provisions to cover the upper range of remediation cost estimates associated with these events, i.e. €175,000, are considered appropriate.

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<sup>1</sup> Corporate Crimes: The need for an international instrument on corporate accountability and liability. Greenpeace International, June 2002.

<sup>2</sup> Study On The Valuation And Restoration Of Damage To Natural Resources For The Purpose Of Environmental Liability, report for the EC by Macalister Elliott and Partners Ltd and the Economics For The Environment Consultancy Ltd, May 2001

<sup>3</sup> Draft Initial Cost Estimates Prepared for the May 23, 2001 Public Meeting of Technical Experts to Review EPA's Preliminary Data on Cooling Water Intake Structure Technologies in Place at Existing Facilities and Their Costs May 17, 2001

<sup>4</sup> 1 €(2006) ~ 1 US\$(1999)

**Table 6: Most Likely Scenario Environmental Liability**

Risk ID	Occurrence Rating	Likelihood of Occurrence Range	Severity Rating	Cost Range	Median Probability	Median Cost	Most Likely Scenario Cost
17	1	0% - 5%	4	€50,000 – 150,000 <sup>1</sup>	2.5%	€100,000	€2,500
12	2	5 % - 10%	2	- <sup>2</sup>	7.5%	€0	€0
1	1	0% - 5%	3	€45,000 – 75,000 <sup>3</sup>	2.5%	€60,000	€1,500
6	1	0% - 5%	3	€105,000 – 175,000 <sup>3</sup>	2.5%	€140,000	€3,500
7	1	0% - 5%	3	€105,000 – 175,000 <sup>3</sup>	2.5%	€140,000	€3,500
9	1	0% - 5%	3	€105,000 – 175,000 <sup>3</sup>	2.5%	€140,000	€3,500
10	1	0% - 5%	3	€105,000 – 175,000 <sup>3</sup>	2.5%	€140,000	€3,500
14	1	0% - 5%	3	€45,000 – 75,000 <sup>3</sup>	2.5%	€60,000	€1,500
15	3	10% - 20%	1	- <sup>2</sup>	15.0%	€0	€0
<b>Total</b>							<b>€19,500</b>

Notes)

- 1 Based on USEPA fish restocking and marine environment rehabilitation estimates.
- 2 Remediation costs for releases of toxic vapours are considered to be nil.
- 3 Costs based on estimated cost to dispose of contaminated firewater of between €75 and €125 per m<sup>3</sup>.

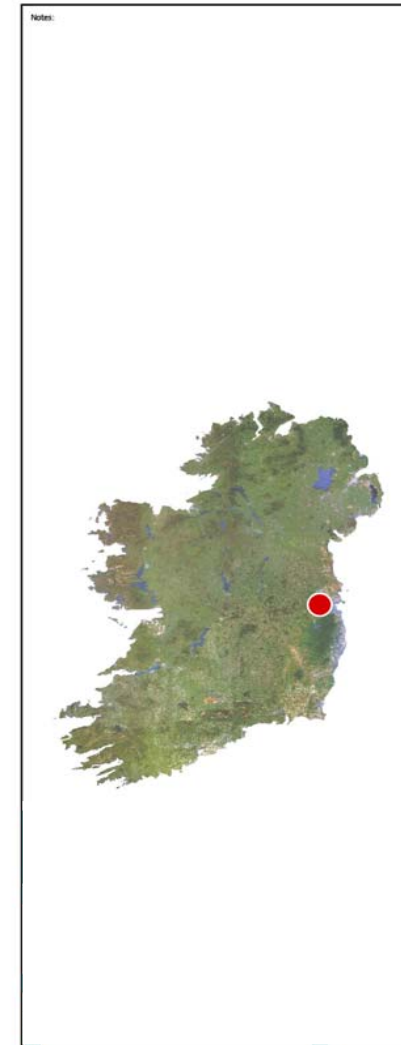
## **10 CURRENT FINANCIAL PROVISIONS AND INSURANCE STRUCTURE**

At present Indaver have not made financial provisions to cover environmental liabilities. Indaver are in the process of investigating their options in this regard and will submit a proposed package of financial provisions to the Agency for agreement.

\* \* \* \* \*

## **Appendix 1**

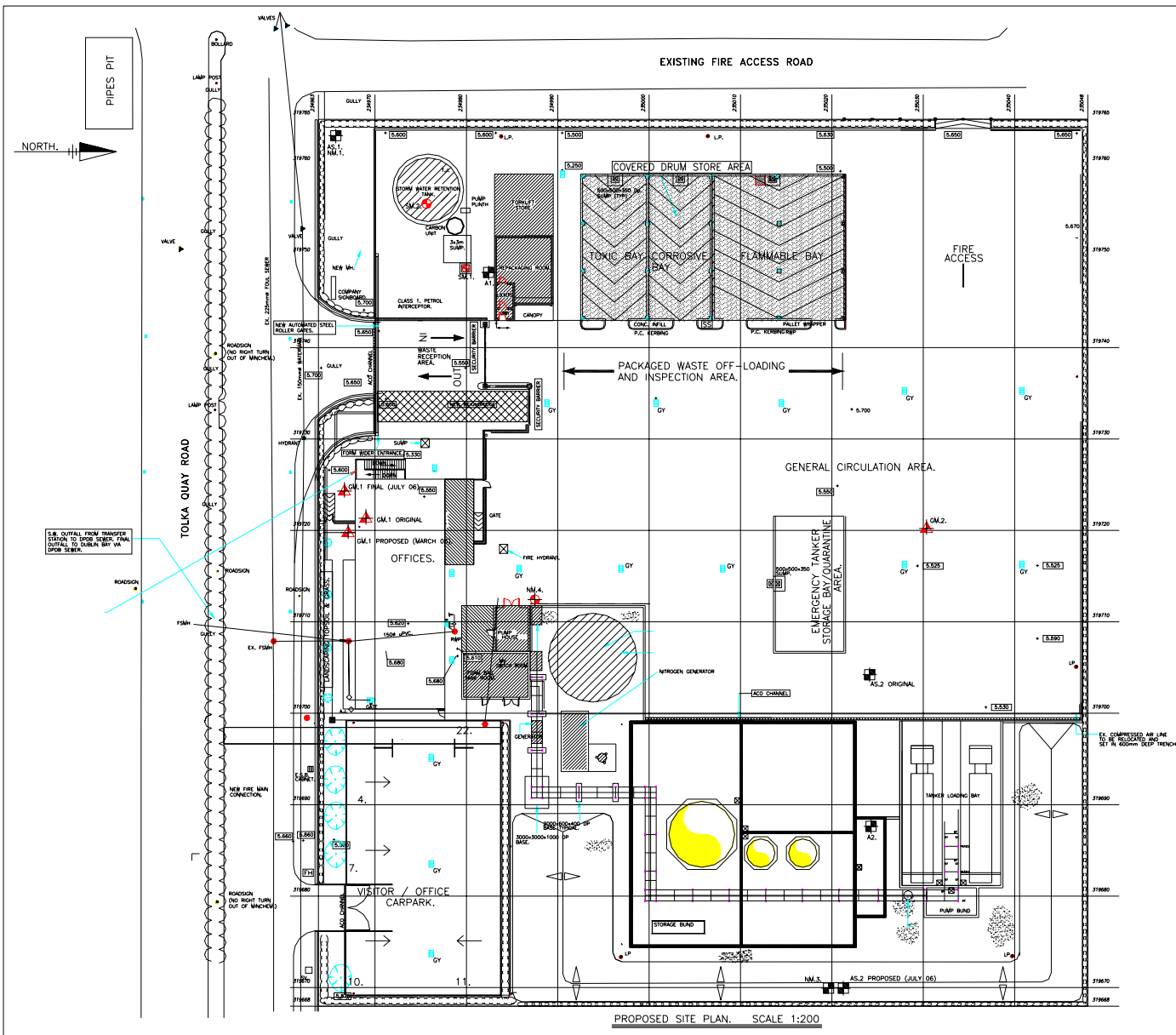
### **Location Map of Indaver's Dublin Port Site**





## **Appendix 2**

### **Site Plan**



**LEGEND**

- SURFACE WATER MONITORING POINTS.
- NOISE MONITORING POINTS.
- GROUND WATER MONITORING POINTS.
- AIR MONITORING POINTS.

	Easting		Northing	
	Original	Proposed	Original	Proposed
SURFACE WATER MONITORING POINT 1	219745	219745	219719	219719
SURFACE WATER MONITORING POINT 2	219721	219721	219719	219719
GROUND WATER MONITORING POINT 1	219724	219724	219666	219666
GROUND WATER MONITORING POINT 2	219725	219725	219666	219666
NOISE MONITORING POINT 1	219670	219670	219666	219666
NOISE MONITORING POINT 2	219670	219670	219620	219620
NOISE MONITORING POINT 3	219670	219670	219666	219666
NOISE MONITORING POINT 4	219772	219772	219666	219666
AIR MONITORING POINT 1 (AS1)	219763	219763	219666	219666
AIR MONITORING POINT 2 (AS2)	219670	219670	219620	219620
EMISSION TO AIR MONITORING POINT 1 (A1)	219724	219724	219666	219666
EMISSION TO AIR MONITORING POINT 2 (A2)	219668	219668	219620	219620

1	NOT REVISION LOCATED TO DWG	C.A.	10/06/06
2	AS1 REVISION LOCATED FOR CLARIFICATION	C.A.	10/06/06
3	REVISION TO DWG FOR APPROVAL	C.A.	10/06/06
4	REVISION FOR APPROVAL	C.A.	10/06/06

REV. NO. DESCRIPTION BY, APPR. DATE.  
 CLIENT: **INDAVER IRELAND LIMITED**

PROJECT: **TRANSFER STATION EXPANSION 2006 FUEL BLENDING FACILITY**

TITLE: **PROPOSED MONITORING POINTS LAYOUT REVISED**

McElroy Associates  
Consulting Engineers

DESIGNED: [ ] CHECKED: [ ] APPROVED: [ ]  
 DRAWN: [ ] DATE: July 06 SCALE: AS SHOWN

DRC No. 11037\CD\020 REV. D

PROPOSED SITE PLAN. SCALE 1:200

**Appendix 3**  
**Risk Reduction and Mitigation Measures**

**Master List of Risk Reduction and Consequence Mitigation Measures**

<b>Ref</b>	<b>Area</b>		<b>Measure</b>
M-001	02	Drum Store	One hour fire wall to North and South of Flammable Bay
M-002	02	Drum Store	Daily inspections of Drum Store
M-003	02	Drum Store	Each bay is kerbed & graded away from entrance towards a dedicated isolated underground sump at the back of the bay
M-004	02	Drum Store	Drum Store operations are manned activities
M-005	02	Drum Store	Drums segregated by hazard class in accordance with HSE Guideline HSG71 on storage of packaged dangerous substances
M-006	02	Drum Store	Racking bolted to floor
M-007	02	Drum Store	Fire detection in Drum Store (connected to fire alarm)
M-008	02	Drum Store	Metal cladding roof – this limits the maximum impact distance of rocketing drums
M-009	02	Drum Store	High and low level ventilation in Drum Store & emergency exit at the back of each bay
M-010	03	Fireproof Storage Cabinets	Separate banded mobile chemical cabinets for storage of Class 2.1, 5.1, 5.2, 4.2 & 4.3 materials
M-011	03	Fireproof Storage Cabinets	Cylinders containing flammable gases in protective chemstore units
M-012	04	Solvent Blending Module - Tank Farm	Concrete specification is impervious to liquids that could be stored in tanks

<b>Ref</b>	<b>Area</b>		<b>Measure</b>
M-013	04	Solvent Blending Module - Tank Farm	High bund wall at back of Tank Farm so that any large loss of containment would preferentially spill into contained Yard Area
M-014	04	Solvent Blending Module - Tank Farm	LEL detection at Tank Farm
M-015	04	Solvent Blending Module - Tank Farm	Anti-static measures on tanks in Tank Farm
M-016	04	Solvent Blending Module - Tank Farm	ASTM tests on compatibility of each road tanker delivery
M-017	04	Solvent Blending Module - Tank Farm	Bunds / pads inspected annually; and hydrostatic tested periodically
M-018	04	Solvent Blending Module - Tank Farm	Chemical composition screening
M-019	04	Solvent Blending Module - Tank Farm	Automatic foam / water deluge system on tanks in Tank Farm
M-020	04	Solvent Blending Module - Tank Farm	Double skinned tanks in Tank Farm
M-021	04	Solvent Blending Module - Tank Farm	Double valves on sampling / drain system
M-022	-	-	DELETED
M-023	04	Solvent Blending Module - Tank Farm	Flowmeters on solvent lines

<b>Ref</b>	<b>Area</b>		<b>Measure</b>
M-024	04	-	DELETED
M-025	04	Solvent Blending Module - Tank Farm	Automatic foam / water deluge system on tanks can cover bund floor with foam
M-026	04	Solvent Blending Module - Tank Farm	Frangible roof on tanks in Tank Farm
M-027	04	Solvent Blending Module - Tank Farm	Heat detection at Tank Farm
M-028	04	Solvent Blending Module - Tank Farm	High level alarms & interlocks on tanks in Tank Farm
M-029	04	Solvent Blending Module - Tank Farm	Mixing is by venturi effect with pumps (not with a mechanical device)
M-030	04	Solvent Blending Module - Tank Farm	Large dilution & heat sink - 75 m <sup>3</sup> into 300 m <sup>3</sup>
M-031	04	Solvent Blending Module - Tank Farm	Low level alarms
M-032	04	Solvent Blending Module - Tank Farm	Nitrogen blanketing of tanks in Tank Farm
M-033	04	Solvent Blending Module - Tank Farm	No heating systems on tanks - any reactions take place at ambient temperature
M-034	04	Solvent Blending Module - Tank Farm	Overfill protection

<b>Ref</b>	<b>Area</b>		<b>Measure</b>
M-035	04	Solvent Blending Module - Tank Farm	Retention bund drains to sump to minimise evaporation
M-036	04	Solvent Blending Module - Tank Farm	Retention bunds & minibunds around Tank Farm
M-037	04	Solvent Blending Module - Tank Farm	Spring loaded sampling valves
M-038	04	Solvent Blending Module - Tank Farm	Tank Farm is an EX zoned area
M-039	04	Solvent Blending Module - Tank Farm	Transfer lines purged if construction activity in the area
M-040	05	Solvent Blending Module - Road Tanker Loading / Unloading	Nitrogen purging of road tankers prior to filling
M-041	05	Solvent Blending Module - Road Tanker Loading / Unloading	Engine shutoff during tanker loading / unloading
M-042	05	Solvent Blending Module - Road Tanker Loading / Unloading	Fill meters on road tanker loading / unloading system
M-043	05	Solvent Blending Module - Road Tanker Loading / Unloading	Fixed foam / water deluge system

Ref	Area		Measure
M-044	05	Solvent Blending Module - Road Tanker Loading / Unloading	P/V vent on tanks
M-045	05	Solvent Blending Module - Road Tanker Loading / Unloading	Road tankers are earthed
M-046	05	Solvent Blending Module - Road Tanker Loading / Unloading	SOP for tanker loading / unloading
M-047	05	Solvent Blending Module - Road Tanker Loading / Unloading	Tanker loading / unloading is a manned activity
M-048	05	Solvent Blending Module - Road Tanker Loading / Unloading	Tanker unloading bay graded and drained to sump
M-049	05	Solvent Blending Module - Road Tanker Loading / Unloading	Tanks on road tankers are of stainless steel construction and are clad and are built and tested to ADR standards. Tank containers are stainless steel, clad and are built / tested to IMDG / CSC <sup>5</sup> standards.
M-050	05	Solvent Blending Module - Road Tanker Loading / Unloading	Visual inspection of truck prior to loading / unloading

<sup>5</sup> CSC is the Convention for Safe Containers, which defines the dimensions and construction standard of the tank container. IMDG defines the testing regime and the suitability of certain tank containers for different dangerous substances.



<b>Ref</b>	<b>Area</b>		<b>Measure</b>
M-051	05	Solvent Blending Module - Road Tanker Loading / Unloading	Snap shut coupling (dry link coupler) on unloading system
M-052	05	Solvent Blending Module - Road Tanker Loading / Unloading	Anti-static hoses
M-053	06	Quarantine / Repackaging Room	Breathing apparatus and other appropriate PPE supplied for use in Quarantine / Repackaging Room
M-054	06	Quarantine / Repackaging Room	Daily inspections in Quarantine / Repackaging Room
M-055	06	Quarantine / Repackaging Room	Drums labelled by hazard in Quarantine / Repackaging Room
M-056	06	Quarantine / Repackaging Room	Forced ventilation in Quarantine / Repackaging Room
M-057	06	Quarantine / Repackaging Room	Quarantine / Repackaging Room graded and drained to sump
M-058	06	Quarantine / Repackaging Room	Fire detection in Quarantine / Repackaging Room
M-059	06	Quarantine / Repackaging Room	SOP for drum operations in Quarantine / Repackaging Room
M-060	06	Quarantine / Repackaging Room	All activities in Quarantine / Repackaging Room are manned activities

<b>Ref</b>	<b>Area</b>		<b>Measure</b>
M-061	07	General Circulation Area	Provision of parking bays for tankers
M-062	07	General Circulation Area	Outdoor lighting
M-063	07	General Circulation Area	General circulation area graded and drained to sump(s) & connected to storage tank
M-064	07	General Circulation Area	Security gate
M-065	07	General Circulation Area	5 km/h speed limit on site
M-066	07	General Circulation Area	All trucks carrying waste must present paperwork prior to gaining entry to site
M-067	07	General Circulation Area	Visitor pass system
M-068	Site	Site	Break Glass Units
M-069	Site	Site	Eye washes
M-070	Site	Site	Packages / containers to UN / ADR / IMDG Shipping Standards
M-071	Site	Site	Control valves designed to fail safe
M-072	Site	Site	Damaged / corroded containers moved to Quarantine / Repackaging Room
M-073	Site	Site	Drums transported on pallets
M-074	Site	Site	All pipework bonded and earthed
M-075	Site	Site	Electrics to ETCI Rules
M-076	Site	Site	Elevated pipe tracks
M-077	Site	Site	Emergency Showers

<b>Ref</b>	<b>Area</b>		<b>Measure</b>
M-078	Site	Site	Fire Alarm
M-079	Site	Site	Fire main & hydrants
M-080	Site	Site	Firewater retention on site
M-081	Site	Site	Hazardous materials warning signs (by classification)
M-082	Site	Site	Flow meters on Preventative Maintenance (PM)
M-083	Site	Site	Forklift truck driver training / certification
M-084	Site	Site	Hand held fire extinguishers
M-085	Site	Site	HazOps
M-086			DELETED
M-087	Site	Site	Yard area drains to an isolated sump and is graded so that it acts as a ~400 m3 bunded area
M-088	Site	Site	Lock and tag system in permit to work
M-089	Site	Site	Management of change procedures
M-090	Site	Site	All drums / containers / tanks labelled with Indaver labels
M-091	Site	Site	Operator training
M-092	Site	Site	Periodic pressure testing of pipelines, vessels and hoses
M-093	Site	Site	Permit to work systems
M-094	Site	Site	Pipework located with limited access by forklift
M-095	Site	Site	Planned / preventative maintenance

<b>Ref</b>	<b>Area</b>		<b>Measure</b>
M-096	Site	Site	Purpose designed drum lifters
M-097	Site	Site	Safety briefing of contractors
M-098	Site	Site	Site wide SOPs
M-099	Site	Site	Valves and pipework to ANSI standard
M-100	Site	Site	Spill kits (including absorbent materials)
M-101	Site	Site	Spill response procedure
M-102	Site	Site	Use of experienced Engineers / Project Management firms / Contractors
M-103	Site	Site	Use of qualified vendors
M-104	Site	Site	Daily visual inspection of overhead solvent lines
M-105	Site	Site	Computerised stock control system
M-106	Site	Site	Compliance with new ATEX legislation
M-107	Site	Site	Foam supplies
M-108	Site	Site	EX rated electrical equipment in yard, Drum Store and Quarantine / Repackaging Area
M-109	Site	Site	EX rated fork trucks
M-110	Site	Site	Emergency response and spill response drills / SOPs
M-111	Site	Site	Annual training in emergency / spill response
M-112	Site	Site	Annual training in use of breathing apparatus
M-113	Site	Site	Cylinders in Drum Store and in Fireproof storage cabinets may be empty

<b>Ref</b>	<b>Area</b>		<b>Measure</b>
M-114	Site	Site	Acceptance inspection of all waste packages
M-115	04	Solvent Blending Module - Tank Farm	If pressure in each storage tank > 12 mbar a vent system ducts overpressure to a Carbon adsorption unit
M-116	04	Solvent Blending Module - Tank Farm	Pressure relief device on each storage tank that vents to atmosphere at > 20 mbar and allow air in at < -3 mbar
M-117	04	Solvent Blending Module - Tank Farm	Emergency vent on tanks - if pressure in each storage tank > 30 mbar a vent system relieves overpressure to atmosphere
M-118	Site	Site	Stormwater drains on site are lined with chemically resistant lining
M-119	Site	Site	Administration Building windows on the Northern and Eastern elevations are laminated with a protective plastic film



## Appendix 10: Residuals Management Plan (RMP)





## Appendix 10: Residuals Management Plan (RMP)





**Residuals Management Plan**

**for**

**Indaver Ireland Limited**

**Dublin Port Blending Plant**

**Certified Final**

Document No: 323-X014

Date: April 2008

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### APPENDIX 1: LOCATION MAP OF INDAVER SITE

### APPENDIX 2: SITE PLAN

## Executive Summary

In July 2005, Indaver Ireland Limited (Indaver), Tolka Quay Road, Dublin 2 was granted a Waste Management Licence (WML) by the Environmental Protection Agency (Registration No. 36-2) in respect of their operations.

The original Residuals Management Plan for Indaver Ireland Ltd's Dublin Port Blending Plant was prepared by Byrne Ó Cléirigh (BÓC) in January 2006 in compliance with Condition 4 of the site's licence.

The original Residuals Management Plan was prepared in accordance with the EPA's *Guidance Documents and Assessments Tools on Environmental Liabilities Risk Assessment and Residuals Management Plans incorporating Financial Provision Assessment (Draft for Consultation)*, published by the EPA in May 2005. Following the consultation process, the Agency published its final guidance in 2006. One of the main changes between the draft and final guidance was in the categorisation of the risk of a site in the context of the initial screening to be carried out to determine the scope of a Closure, Restoration and Aftercare Management Plan. This revision of the Plan for the Indaver site takes in to account the guidance contained in the final, 2006 version of the Agency's guidance note.

The Agency's methodology for initial screening and risk assessment was applied to the site and yielded a score of 10 but a Risk Category of 3. However, the operations at Indaver's Dublin Port site are not of a nature that would require a restoration and aftercare management plan; there are no known liabilities and the site is free from contamination. Clean closure will therefore be affected and a *Closure Plan* is therefore appropriate for the site. The closure scenario covered by the Plan is a permanent cessation of operations on site, clean closure of the facility, and the sale of the site and buildings for re-development.

There are no known liabilities on the site. Samples of soil and groundwater taken during the site investigation for the construction of the Solvent Blending Plant in 2005/2006 and for preliminary environmental studies carried out for the EIS and WML application, and subsequent groundwater samples taken in accordance with the WML, indicated that there is no contamination on the site.

The primary basis for verifying clean closure and that there are no long term issues associated with the site is that there is no soil or groundwater contamination at the site. The criteria for evaluating whether the soil or groundwater is contaminated will be that samples are assessed against the Dutch Guideline Criteria (soil) and the EPA's Interim Guideline Values (groundwater). Groundwater monitoring results are reported in the AER in accordance with the WML.

In the event of closure, all materials and equipment will be sold or returned to suppliers where possible. Where materials and equipment cannot be sold or returned to suppliers, they will be sent for recovery or disposal to appropriately licensed waste management contractors.

The estimated cost associated with labour, management, disposal of wastes, testing and verification is €426,640.

Indaver is an established organisation with a history of thirty years of successful operation and a number of ongoing large investment programmes. It is not considered likely that any circumstances will arise which would lead to the unplanned closure of the Dublin Port site. The cost of implementing the Residual Management Plan will be borne by Indaver within the overall cost of the closure project, which will be set up by Indaver in the event of a closure of the Dublin Port facility. Indaver has made provisions for the closure costs identified in this plan through (a) the deferred income from customers for the disposal of waste stored on site and (b) the sale or scrapping of the plant and equipment for the other closure costs. Indaver also has Pollution Insurance cover with AIG, which has a per incident cover limit of €12.5 million.

## 1.0 Introduction

### 1.1 Facility & Licence Details

In July 2005, Indaver Ireland Limited (Indaver), Tolka Quay Road, Dublin 2 was granted a Waste Management Licence (the licence) by the Environmental Protection Agency (Registration No. 36-2) in respect of their operations. Prior to this, Indaver's operations on site were regulated by the previous Waste Management Licence (36-1) issued on February 1999.

The original Residuals Management Plan for Indaver Ireland Ltd's Dublin Port Blending Plant was prepared by Byrne Ó Cléirigh (BÓC) in January 2006 in compliance with Condition 4 of the site's licence.

Condition 4 of the licence requires that: *Following termination, or planned cessation for a period greater than six months, of use or involvement of all or part of the site in the licensed activity, the licensee shall, to the satisfaction of the Agency, de-commission, render safe or remove for disposal/recovery, any soil, subsoils, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may results in environmental pollution.*

Condition 4.2 of the licence requires that Indaver prepare a fully detailed and costed plan for the de-commissioning or closure of the site or part thereof, while Condition 4.3 requires that the plan contains, as a minimum:

- A scope statement for the plan (§1.2);
- The criteria which define the successful de-commissioning of the activity or part thereof, which ensures minimum impact to the environment (§4.0);
- A programme to achieve the stated criteria (§3.0);
- Where relevant, a test programme to demonstrate the successful implementation of the de-commissioning plan;
- Details of costings for the plan and a statement as to how these costs will be underwritten (§5.0).

The original Residuals Management Plan was prepared in accordance with the EPA's *Guidance Documents and Assessments Tools on Environmental Liabilities Risk Assessment and Residuals Management Plans incorporating Financial Provision Assessment (Draft for Consultation)*, published by the EPA in May 2005. Following the consultation process, the Agency published its final guidance in 2006. One of the main changes between the draft and final guidance was in the categorisation of the risk of a site in the context of the initial screening to be carried out to determine the scope of a Closure, Restoration and Aftercare Management Plan. This revision of the Plan for the Indaver site takes in to account the guidance contained in the final, 2006 version of the Agency's guidance note.

## 1.2 Scope

The closure scenario covered by the Plan is a permanent cessation of operations on site, clean closure of the facility, and the sale of the site and buildings for re-development. The term *Residuals Management Plan* has been retained for the updated plan because it is the term used in the licence, although, for reasons that are explained in Section 2.7, the more correct term would be a *Closure Plan* using the terminology in the new EPA guidance document. To avoid confusion the terminology 'Plan' is used throughout this document.

The Plan has been prepared in the context of the site history and location, the site environmental sensitivity, and the past and current operations on the site, as set out in Section 2. The objectives of the Plan are:

- to provide for the efficient close-down and de-commissioning of the operations on site;
- to return raw materials and consumable materials to the original suppliers or dispose of them in a safe and proper manner;
- to dispose of all waste materials in a safe and proper manner;
- to preserve and secure the buildings on site during the post-closure period up to the disposal of the site;
- to document the close-down and de-commissioning activities and the disposal of materials and wastes.

The close-down and de-commissioning activities will be carried out in a manner that will minimise the impact on the environment. The achievement of the objectives set out above and the fulfilment of the criteria set out in Section 4 will define the successful completion of the Plan.

## 2.0 Site Evaluation

### 2.1 Facility Description & History

The Indaver site is situated on the Tolka Quay Road in the North-East of Dublin Port (the Dublin Port Oil Zone). The site occupies an area of approximately 0.8 hectares and is bounded by a fire access road to the West and by Tolka Quay Road to the South.

The site is located in an industrial area and is surrounded by tank farms and container storage sites. To the North and East of the site, there is an LPG storage and distribution facility operated by Calor Teoranta. To the West of the site, there is a fire access road beyond which there is a site occupied by the Dublin Port Company. Immediately to the West of that site, there is a tank farm for petroleum storage operated by Tedcastles Oil Products.

Due South of the site, across Tolka Quay Road, there is a single tank installation formally used by Asahi Chemicals for storing chemical raw materials for use in their

textiles processing plant at Baling. This tank has not been used for c. 8 years. Irish Shell operates a tank farm to the South-West of the site.

The site is shown on the Ordnance Survey map in Appendix 1. Indaver has operated a Waste Transfer Station at the site since February 1999 and a Fuel Blending Facility since September 2006.

The foul drainage system discharges to Dublin City Council's foul sewer on Tolka Quay Road. The drainage system for the redeveloped Waste Transfer Station is one of continuous monitoring and discharge. All storm water arising onsite (with the exception of that arising from the visitor car park and the roof of the Administration Building), are continuously monitored. The monitoring apparatus is located overground in a container with the sample line in a stormwater collection sump, which provides a sampling pool for the equipment. The monitoring apparatus in turn is connected to an automated submersible pump located in the sump. Parameters such as Total Organic Carbon (TOC), conductivity and pH are monitored to identify any contamination, be it organic or otherwise. The submersible pump can also be activated / deactivated remotely from the Control Room in the Administration Building by the activation of an emergency stop on the process. A class 1 oil / petrol interceptor is provided to minimise oils, fats and greases (OFG) levels at the outlet. If any contamination is detected the monitoring apparatus closes the valve and the storm water is diverted to the existing storage tank for testing and subsequent off-site treatment or disposal if required.

The storage tank, previously used as the storm water retention tank has a capacity of 170 m<sup>3</sup>, which would allow for approximately 10.5 hours rainfall for a 24 hour storm with a 1 in 20 year return. Should the drainage system be diverted for longer than this period the system would back up and the storm water would be contained in the Yard Area; the yard slab acts as a containment area, with an approximate capacity of 400 m<sup>3</sup>.

The solvent storage tank bund has an approximate capacity of 800m<sup>3</sup> which is well in excess of the 110% of the largest tank in the bund (300m<sup>3</sup>) and 20% of the total capacity (150m<sup>3</sup>).

In total there is approximately 1,400 m<sup>3</sup> of retention capacity onsite.

## **2.2 Environmental Sensitivity**

Being a developed urban environment, there is unlikely to be any significant flora or fauna or any protected species in the vicinity of the site. This was confirmed by an ecological survey carried out at the site in 2002 as part of the EIS for the construction of the blending plant and the extension of the waste transfer station.

The Dublin Port area was reclaimed from estuarine/tidal deposits. This was part of enlargement schemes undertaken by the Dublin Port Company from the 1920s onwards. As such, the subsurface soils on the site consist of pumped fill comprising sandy gravel underlain by silt, sand and gravel.

A study carried out in 1998 by K.T. Cullen & Co. Ltd, states that the shallow water table on the site is approximately 3m below ground level, while results of previous studies in the Docklands area have shown that shallow groundwater can vary between 1-3m. The ground water level is tidally influenced. The Geological Survey of Ireland has not yet completed the groundwater classification scheme for the Dublin area and no classifications are therefore available. However, given the tidal influence on the groundwater levels and the connection of the groundwater regime to the sea, the aquifer is considered to be poor and of low vulnerability.

### **2.3 Process & Activities**

Indaver exports hazardous waste from Ireland to Britain and other European countries for recovery, disposal or treatment. One of the operations on the site, and the original operation for which it was licensed under Waste Management Licence 36-1, is the custom-built hazardous waste transfer station (opened in 1999), for the export of these materials.

In general terms, the waste transfer station provides temporary storage for incoming hazardous and non-hazardous waste, prior to onwards shipping. In September 2006 Indaver commenced the operation of a Fuel Blending Facility at the site to blend waste solvents for re-use as a fuel in the cement industry. The licensed throughput of the waste transfer station has been extended to 50,000 tonnes per annum from 22,710 tonnes under the waste licence review granted by the EPA (Ref 36-2).

### **2.4 Compliance History**

Indaver was granted a waste management licence for a hazardous waste facility on the site in February 1999. Since then, there have been four non-compliance notices; none of these have been related to non-compliance with emission limits.

### **2.5 Inventory of Plant & Buildings**

The facility comprises the following main elements:

- 2 storey office building with adjacent car parking area;
- Waste Solvent Blending Module
  - Tanker Loading/Unloading Area
  - Tank Farm
- Laboratory;
- Marshalling yard and parking area for trucks/bulk tankers/container storage;
- Segregated (and covered) packaged waste (e.g., 200 l drums, IBCs) storage area (Drum Store);
- Firewater Storage tank;



- Pump House;
- Electrical Switch room;
- Quarantine/Repackaging Room;
- Storm water retention tank;

The layout of the site, plant and equipment is shown in the site plan (drawing 11037\CD\020 Rev D) in Appendix 2.

## **2.6 Inventory of Raw Materials & Wastes**

Being a waste transfer station and solvent blending facility, the usage of raw materials on the site is minimal.

Packaged waste materials are stored on site in appropriate containers (drums and IBC's). All hazardous waste material is stored in UN approved containers. Wastes with different hazardous characteristics are sorted and stored in accordance with the UK Health & Safety Executive guidance (HSG71) on "*Chemical Warehousing, the Storage of Packaged Dangerous Substances*". There are separate storage areas for waste materials with the following hazardous characteristics – Flammable, Toxic, Corrosive, Dangerous When Wet, Spontaneously Combustible, Flammable Gases, Oxidisers and Organic Peroxides.

Flammable, toxic and corrosive packaged waste material is stored in individually numbered racking locations in covered storage bays. The storage capacity of the storage bays for packaged waste is 259 pallet spaces (approximately 200 m<sup>3</sup>).

Dangerous when Wet, spontaneously combustible, flammable gas, oxidising and organic peroxide packaged waste material is stored in separate cabinets. These cabinets have storage capacity for 25 pallets of waste (approx.25 m<sup>3</sup> of waste).

The site also acts as a transit facility for bulk road tankers and freight containers, which are used to transport waste overseas and there are a maximum of 14 bay locations, which can store full loads in either bulk tanks or 40 ft containers. Full loads transit the transfer station in order to allow the necessary documentation to be processed for onward shipment of the waste to the final disposal/recovery facility. The solvent blending plant includes one 300 m<sup>3</sup> and two 75 m<sup>3</sup> tanks for the storage and blending of solvents<sup>1</sup>.

Therefore, the total, maximum, inventory of waste at the site is 955 m<sup>3</sup>, which is made up of: up to 450 m<sup>3</sup> in the bulk tanks, up to 225 m<sup>3</sup> in the drum storage bays and cabinets and up to 280 m<sup>3</sup> in parked bulk road tankers and freight containers.

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<sup>1</sup> These tanks are never filled above the 80% fill level.

## 2.7 Initial Screening & Operational Risk Assessment

The EPA's guidance document provides for an initial step to determine the risk category for a site which, in turn, is used to determine the type and scope of the Plan for the site. The three aspects of a facility that are used to classify it in terms of risk category are Complexity, Environmental Sensitivity and Compliance Record. This scoring system categorises risks as follows:

- Category 1: <5
- Category 2: 5 – 23
- Category 3: >23.

### Complexity

The facility is licensed under a number of different categories. The categories with the highest complexity according to the classification in Appendix B of the Guidance Document are set out in Table 1. The highest complexity rating is G5.

**Table 1: Initial Risk Category for Indaver Dublin Port Blending Plant**

No.	Activity	Complexity Band
<i>Disposal Activities</i>		
11	Blending or mixture prior to submission to any activity referred to in this Schedule	G3
12	Repackaging prior to submission to any activity referred to in this Schedule	G3
13	Storage prior to submission to any activity referred to in this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced	G5 (>10,000 tonnes pa hazardous waste)
<i>Recovery Activities</i>		
13	Storage prior to submission to any activity referred to in a preceding paragraph in this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced	G5 (>10,000 tonnes pa hazardous waste)

### Environmental Sensitivity

Table 2 summarises the environmental attribute scores for the Dublin Port site. The total score is 6, which corresponds to an Environmental Sensitivity Classification of 1 according to the Guidance Document.

**Table 2: Environmental Attribute Scores for the Indaver Site**

Category	Environmental Attribute Score
Human Occupation <sup>1</sup>	3
Groundwater Protection <sup>2</sup>	0
Sensitivity of Receiving Waters <sup>3</sup>	2
Air Quality <sup>4</sup>	0
Protected Ecological Sites <sup>5</sup>	1
Sensitive Agricultural Receptors	0
<b>Total</b>	<b>6</b>

## Notes:

- 1) The closest occupied building is the Dublin Port Company office to the west of the site. This is c. 60m from the site.
- 2) As the site is in an area where the groundwater regime is connected to the sea, an environmental attribute score of 0 for groundwater is considered appropriate.
- 3) The Liffey Estuary (Liffey Estuary - from Islandbridge weir to Poolbeg Lighthouse, including the River Tolka basin and South Bull Lagoon) is designated as a sensitive area in the Urban East Water Treatment Regulations of 2001.
- 4) The surrounding area is flat and is considered to be simple terrain as per the categories defined in the Guidance Document.
- 5) The site is not within a designated area but is within 1 km of designated areas including the South Dublin Bay SAC and the North Dublin Bay SAC.

Pollution Record

There is no record of pollution at the site and while there have been four non-compliance notices since 1999, none of these have been related to non-compliance with emission limits. The compliance record category is therefore 2.

Risk Category

Table 3 shows the derivation of an initial risk category for the Blending Plant site based on the scoring system in the guidance document.

**Table 3: Risk Category for Indaver Dublin Port Blending Plant**

Parameter	Band / Rating	Score
Complexity	G5	5
Environmental Sensitivity	Low	1
Compliance Record	Administrative Non-Compliances	2
Overall Risk Score		10
<i>Risk Category</i>		<i>Category 3</i>

While the overall Risk Score of 10 falls into the Category 2 band (5 – 23), the Guidance Document stipulates that sites at which activities with complexity G4 or G5 are undertaken, should automatically be classified as Risk Category 3.

The Guidance Document states that, for the majority of Category 3 facilities, clean closure may not be achievable due to either the nature of the operation (e.g. mining and landfill) or due to the presence of significant land contamination. However, the operations at Indaver's Dublin Port site are not of a nature that would require a restoration and aftercare management plan; there are no known liabilities and the site is free from contamination. Clean closure will therefore be affected and a *Closure Plan* is therefore appropriate for the site (see discussion of *Closure Plan / Residuals Management Plan* terminology in Section 1.2).

### **3.0 Closure Considerations**

#### **3.1 Clean Closure**

In the event of closure, the site will be left free from contamination, hazardous materials or wastes and free of any potential environmental liabilities. Therefore, clean closure will be affected.

#### **3.2 Plant & Equipment Decontamination, Disposal or Recovery**

The plant, equipment and facilities on site consists primarily of

- Waste solvent blending plant
  - Bulk tanker loading/unloading area
  - Tank farm
- Nitrogen generator and storage tank
- Firewater storage tank, firewater pumps and fire fighting system
- Repackaging room
- Forklift store

- Electrical switchroom
- Drum store
- Tanker cleaning facilities
- Compressor
- Laboratory

In general, the plant and equipment used is free of contamination, other than with lubricating oils which are essential to its operation.

Prior to closure, the inventory of wastes and waste solvents at the site will be run down, so that at closure, no wastes associated with the operation of the transfer station or the solvent blending facility will remain on site. In the unlikely event of sudden insolvency or unplanned closure, the inventory of waste solvents will be transported offsite for disposal in the usual manner.

The storage tanks, pumps and pipework associated with the solvent blending facility will have residual levels of solvents. These will be removed by flushing the system with a suitable cleaning agent, which will be collected and removed for disposal off-site.

Other items of plant such as firewater pumps, compressors, pumps, motors, etc, will be sold if a purchaser can be found or else they will be scrapped.

### **3.3 Waste Disposal or Recovery**

Wastes associated with the routine operation of the transfer station and solvent blending facility will be removed for disposal offsite during run-down of the facility prior to closure. Upon closure, any wastes associated with the operation of the facility remaining on site will be disposed of in the usual manner.

Other wastes, including packaging waste and general wastes, will be disposed off in the usual manner. During closure a number of additional wastes will be generated. These will include:

- Cleaning agent from cleansing of solvent blending plant;
- Scrap pipes;
- Scrap tanks, motors, pumps, etc. for which buyers can not be found;
- Waste oils from sumps on diesel pumps, compressors, diesel generators etc.

All wastes generated during closure will be disposed of by an appropriately licensed waste contractor and all relevant records will be maintained.

Depending on the post closure plans for the site items such as transformers, distribution panels, cables and WEEE may be left on site, sold, or sent for re-use, recovery or disposal as appropriate.

### **3.4 Soil or Spoil Removal**

#### Spoil

There will be no spoil to be removed.

#### Soil

Samples of soil taken during the site investigation and preliminary environmental studies carried out for the EIS and the licence application indicated that there is no soil contamination on the site. Further samples taken during the construction of the solvent blending facility and upgrade of the storm water system also indicate that there is no contamination of the soil.

As a condition of the licence, Indaver has taken quarterly samples of groundwater for analysis from each of the two monitoring wells since 1999. These are reported in the AER as per the WML. The results of these analyses indicated that there is no contamination on the site.

The site is covered entirely by hard-standing and it is proposed to leave the hard-standing in place after closure of the site. There will not, therefore, be any soil to be removed from the site.

### **4.0 Criteria for Successful Closure**

Successful clean closure will be achieved when it is demonstrated that there are no remaining environmental liabilities at the site. This will entail meeting the following criteria:

- All plant is safely decontaminated using standard procedures and authorised contractors.
- All wastes are disposed of or recovered by a properly licensed waste contractor and all relevant records (C1 forms etc) are kept for inspection.
- There is no soil or groundwater contamination at the site. This will be verified by successive groundwater monitoring which will be reported in the AER. The criteria for evaluating whether the soil or groundwater is contaminated will be that samples are assessed against the Dutch Guideline Criteria (soil) and the EPA's Interim Guideline Values (groundwater).
- The Environmental Management System will remain in place and continue to be implemented during the closure period.

### **5.0 Plan Costing**

During closure, costs will be incurred for items such as decommissioning of equipment and disposal of wastes. Revenues will be generated through the sale of

equipment. While the revenues from the sale of equipment could be expected to offset the costs associated with attaining clean closure, they are not incorporated into this analysis.

Table 4 contains the budget estimate costs for closure.

**Table 4: Closure Cost Estimates**

<b>Item</b>	<b>Cost Estimate</b>
Disassembly of plant and equipment Twelve man months at €5,200 per month	€62,400
Decontamination Flushing out tanks and pipes and disposal of cleaning agent.	€36,500
Plant Disposal Pumps, tanks, firewater pumps, etc	Neutral <sup>1</sup>
Waste disposal / recovery Disposal of inventory of waste held on site	€260,140
Decommissioning supervision Three man months €10,400 per month	€31,200
Demolition	- <sup>2</sup>
Test programme/Environmental Monitoring Final soil and groundwater sampling and analysis	€20,800
Verification audit/certification	€10,400
Report to EPA	€5,200
<b>Total estimated closure cost</b>	<b>€426,640</b>

Notes:

- 1) It is expected that much of the plant removed will have a resale value. Other items of plant are likely to have a scrap value. As a conservative estimate of total costs, the value of the plant is not included in the assessment and the cost of plant removal is considered as neutral.
- 2) Demolition of the buildings is not included in the Plan as it is expected that the site would be vacated with the buildings in situ.

## **6.0 Plan Update & Review**

The Plan will be reviewed annually and updated where necessary. Details of the review and any updates will be reported in the AER.

## **7.0 Plan Implementation**

In the event of closure of the facility, the EPA will be notified of the Plan, in writing, prior to the general announcement that the plant will be closing.

The Plan will then be implemented in a phased manner as described previously. Throughout the closure, the site's EMS will remain in place and it will be ensured that there are no uncontrolled releases to the environment.

Indaver will liaise with the EPA over the period to determine when it would be appropriate to apply for the surrender of the licence.

## **8.0 Plan Validation**

Prior to commencement of the implementation of the Plan, it will be reviewed by an appropriately qualified independent consultant. This consultant will be nominated and agreed with the EPA at the time.

Throughout the implementation of the Plan, the consultant will monitor progress and advise on the proper implementation of the Plan. After the Plan has been implemented and all associated works have been carried out, the consultant will conduct a Closure Audit. This audit will verify that all equipment and materials have been properly disposed of and that the site has been rendered free from potential liabilities. A report on the Closure Audit will be prepared for the EPA, and will form part of the validation certification for the Plan.

## **9.0 Current Financial Provisions & Insurance Structure**

Indaver is an established organisation with a history of thirty years of successful operation. Sales Revenue was €36,172,773 for 2006 and €33,399,714 for 2007. In recent years, the firm has undertaken several large investment programmes, one of which is the construction of a solvent blending facility at the Dublin Port site. It is not considered likely that any circumstances will arise which would lead to the unplanned closure of the Dublin Port site.

The cost of implementing the Residual Management Plan will be borne by Indaver within the overall cost of the closure project, which will be set up by Indaver in the event of a closure of the Dublin Port facility.



Provision for Disposal of Waste

Indaver Ireland Limited's audited accounts are prepared under the International Financial Reporting Standards (IFRS) accounting policies. In accordance with IFRS, the income from the disposal of waste on the site (deferred income) is not recognised until the waste has been disposed of. The value of this deferred income in the audited accounts of 31<sup>st</sup> December 2006 was €336,846. The corresponding figure in the 31<sup>st</sup> December 2007 accounts is expected to be €218,334. By means of this deferred income from its customers, Indaver makes provision for the disposal costs of all waste on site.

Provision for Other Closure Cost Items

The investment in the solvent blending facility in 2006 came to just over €4 million. The closure combined cost estimates set out in section 5.0 for all items except the waste on site is €166,500. As this is less than 4.2% of the total investment, Indaver is confident that the sale proceeds from the equipment at the site would be in excess of the costs incurred in the event of a closure of the plant.

Insurance

Indaver has Pollution Insurance cover with AIG. This includes own and third party cleanup costs for "new conditions / events" that are discovered after 1<sup>st</sup> January 1999. The total policy limit is €12.5 million. The current policy period runs until 31<sup>st</sup> December 2009.

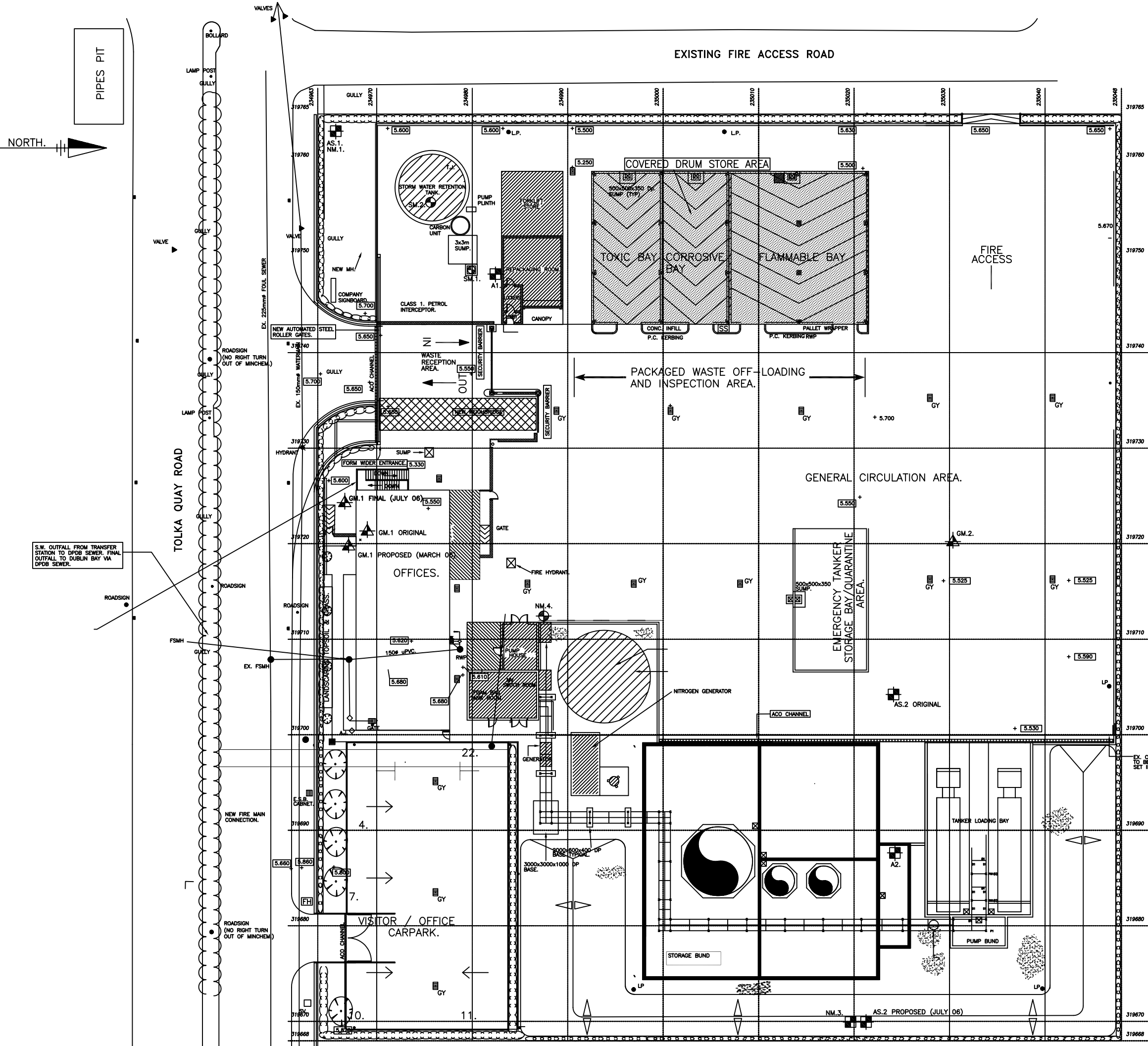
**Appendix 1**

**Location Map of Indaver's Dublin Port Site**



**Appendix 2**

**Site Plan – Drawing 11037\CD\020 Rev D**



PROPOSED SITE PLAN. SCALE 1:200

**LEGEND.**

- SURFACE WATER MONITORING POINTS.
- NOISE MONITORING POINTS.
- GROUND WATER MONITORING POINTS.
- AIR MONITORING POINTS.

	CO-ORDINATES.	
	EASTING	NORTHING
SURFACE WATER MONITORING POINT 1.	319749	234979
SURFACE WATER MONITORING POINT 2.	319757	234976
GROUND WATER MONITORING POINT 1.	319724	234966
GROUND WATER MONITORING POINT 2.	319720	235030
NOISE MONITORING POINT 1.	319763	234966
NOISE MONITORING POINT 3.	319670	235020
NOISE MONITORING POINT 4.	319712	234988
AIR MONITORING POINT 1 (AS1).	319763	234966
AIR MONITORING POINT 2 (AS2).	319670	235020
EMISSIONS TO ATM MONITORING POINT 1 (A1).	319749	234983
EMISSIONS TO ATM MONITORING POINT 2 (A2).	319688	235024

D	GM1 REVISED LOCATION ISSUED TO EPA	C.J	PMG	JUL 06
C	GM1 REVISED DRAFT FOR COMMENT	C.J	PMG	JUL 06
B	ISSUED TO EPA FOR APPROVAL	C.J	PMG	MAR 06
A.	ISSUED FOR ?????	A.T.	N.K.	????
REV.	DESCRIPTION.	BY.	APPR.	DATE.

CLIENT: **INDAVER IRELAND LIMITED**

PROJECT: **TRANSFER STATION EXPANSION 2006 FUEL BLENDING FACILITY**

TITLE: **PROPOSED MONITORING POINTS LAYOUT REVISED**

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DESIGNED:	CHECKED:	APPR'D:
DRAWN:	DATE: July 06	SCALE: AS SHOWN