Annual Environmental Report
January 08 to December 08

INDAVER IRELAND

Indaver Ireland Limited

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Dublin Port Hazwaste Facility
Tolka Quay Road, Dublin Port, Dublin 1.
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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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Appendices:

1.0 Introduction

1.1 Reporting Period

The following is the Annual Environmental Report (AER) for the period 1st January 2008 to the 31st December 2008 for the waste transfer station and solvent recovery facility located on Tolka Quay Rd., 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 Navan, Trim and Kells on behalf of Meath County Council. Indaver ceased operation of these sites on 1st March 2008
- Civic amenity sites in Newscastle West, Killmallock and Mungret on behalf of Limerick County Council.

Indaver currently employs 130 people.

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. The storage capacity of the storage bays for packaged waste is approximately 214m^3.

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 15 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 on the 15th September 2006. The facility infrastructure includes:

- 2 x 75 m^3 holding tanks and 1 x 300 m^3 blending tank. These tanks are located in a reinforced concrete watertight bund.

Figure 1.2.3 Picture of Tank Farm

- A fully bunded tanker loading/unloading area where bulk tanks are sampled for analysis.

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 labels, 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.

The incoming waste will be pumped to the storage tanks via a screening system to remove any solids. 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.

On 8th 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. Indaver has not commenced this operation as of yet.

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
Total		**50,000**

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 29 employees working on site at the Dublin Port facility.

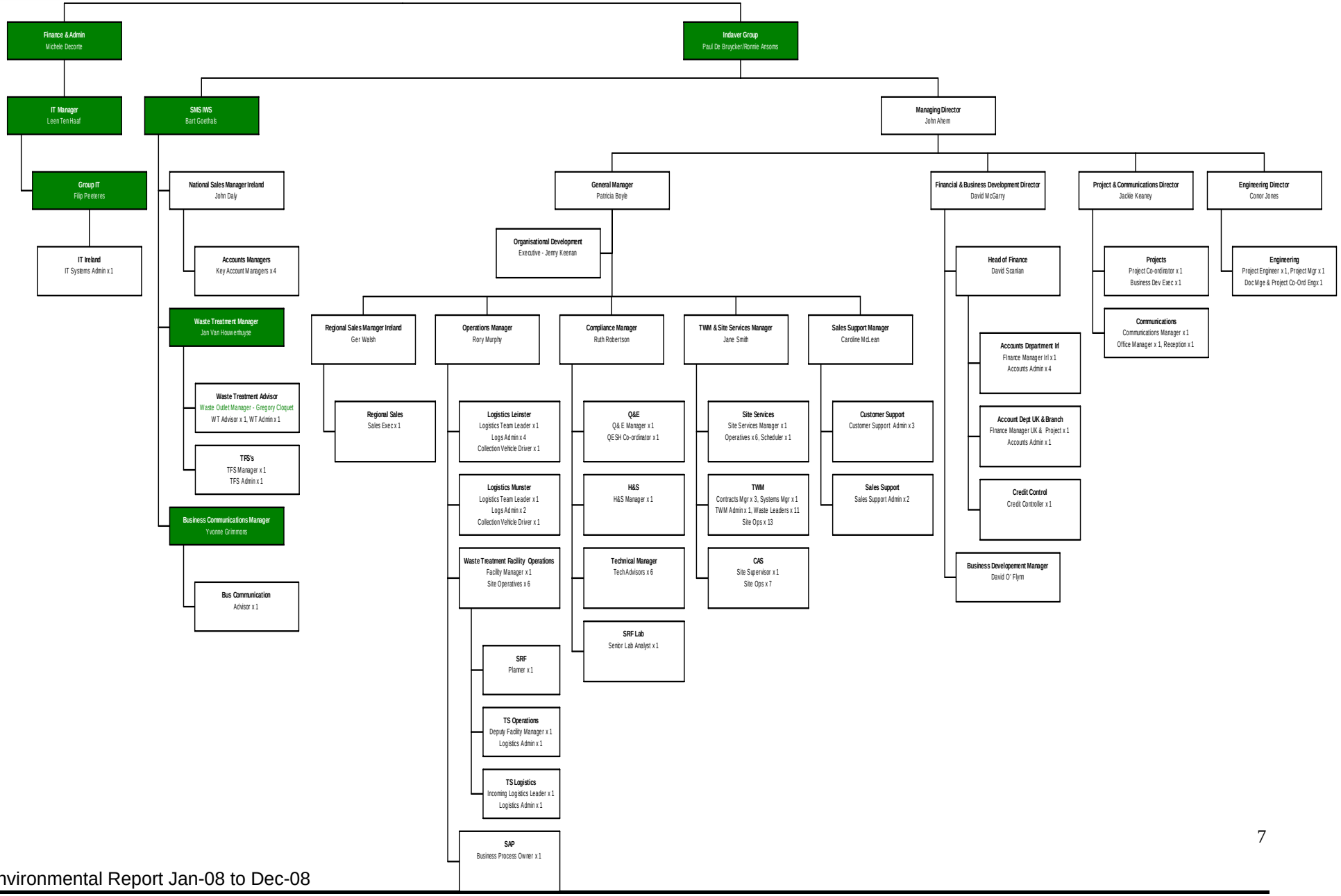
The position of Facility Manager is held by Eric McPartling. Eric has a degree in Applied Chemistry and a Managing Safety Certificate (IOSH) along with over 7 years experience working in hazardous waste transfer stations in Ireland and the UK. Eric has one module to complete in the Fás Waste Management Training Programme.

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.

Emma Tyrell holds the position of Deputy Facility Manager. Emma joined Indaver Ireland in April 2006. Emma has completed the Fás Waste Management Training Programme.

The organisational structure is outlined below


Finance & Admin
Michele Decorte
Indaver Group
Paul De Bruycker/Ronnie Ansoms
IT Manager
Leen Ten Haaf
SMS IWS
Bart Goethals
Managing Director
John Ahern
Group IT
Filip Peeteres
National Sales Manager Ireland
John Daly
General Manager
Patricia Boyle
Financial & Business Development Director
David McGarry
Project & Communications Director
Jackie Keaney
Engineering Director
Conor Jones
IT Ireland
IT Systems Admin x 1
Accounts Managers
Key Account Managers x 4
Organisational Development
Executive - Jenny Keenan
Head of Finance
David Scanlan
Projects
Project Co-ordinator x 1
Business Dev Exec x 1
Engineering
Project Engineer x 1, Project Mgr x 1
Doc Mge & Project Co-Ord Engr x 1
Waste Treatment Manager
Jan Van Houwenhuyse
Regional Sales Manager Ireland
Ger Walsh
Operations Manager
Rory Murphy
Compliance Manager
Ruth Robertson
TWM & Site Services Manager
Jane Smith
Sales Support Manager
Caroline McLean
Communications
Communications Manager x 1
Office Manager x 1, Reception x 1
Accounts Department Irl
Finance Manager Irl x 1
Accounts Admin x 4
Waste Treatment Advisor
Waste Outlet Manager - Gregory Cloquet
WT Advisor x 1, WT Admin x 1
Regional Sales
Sales Exec x 1
Logistics Leinster
Logistics Team Leader x 1
Logs Admin x 4
Collection Vehicle Driver x 1
Q&E
Q & E Manager x 1
QESH Co-ordinator x 1
Site Services
Site Services Manager x 1
Operatives x 6, Scheduler x 1
Customer Support
Customer Support Admin x 3
Account Dept UK & Branch
Finance Manager UK & Project x 1
Accounts Admin x 1
TFS's
TFS Manager x 1
TFS Admin x 1
Logistics Munster
Logistics Team Leader x 1
Logs Admin x 2
Collection Vehicle Driver x 1
H&S
H&S Manager x 1
TWM
Contracts Mgr x 3, Systems Mgr x 1
TWM Admin x 1, Waste Leaders x 11
Site Ops x 13
Sales Support
Sales Support Admin x 2
Credit Control
Credit Controller x 1
Business Communications Manager
Yvonne Grimmons
Waste Treatment Facility Operations
Facility Manager x 1
Site Operatives x 6
Technical Manager
Tech Advisors x 6
CAS
Site Supervisor x 1
Site Ops x 7
Business Developement Manager
David O' Flynn
Bus Communication
Advisor x 1
SRF Lab
Senior Lab Analyst x 1
SRF
Planer x 1
TS Operations
Deputy Facility Manager x 1
Logistics Admin x 1
TS Logistics
Incoming Logistics Leader x 1
Logistics Admin x 1
SAP
Business Process Owner x 1

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, which is presented overleaf, 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.

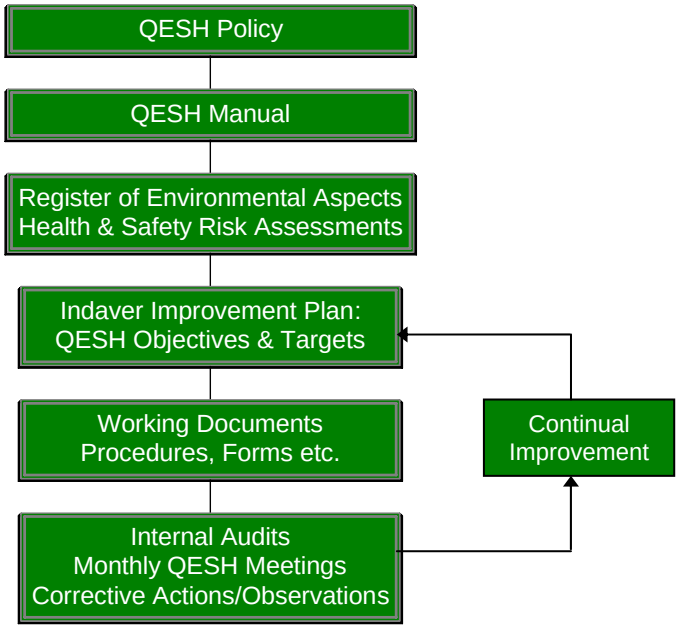
Indaver's Environmental Management System received accreditation to the Environmental Standard ISO 14001 in December 1999. A copy of the certificate of accreditation to ISO 14001 is attached in Appendix 2. The most recent surveillance audit against the Environmental Management System was held in January 2009 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 1.

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

Figure 2.1.1 Structure of QESH Management System



2.2 QESH Policy

The QESH Policy is the top-level document of the QESH management system and it defines Indaver's policies and overall aims with respect to the quality, environmental and shifty & health issues.

QESH POLICY

Indaver's Quality, Environmental, Safety & Health management system is a fundamental part of our company culture and organisation and through this system we undertake to:

- Conduct our business with integrity, in a trustworthy, ethical manner. Strive to "Do the Right Thing" and encourage this attitude in all stakeholders.
- Conduct our business in a manner, which protects the health & safety of our employees, visitors, contractors and members of the public who may be affected by the company's activities.
- Conduct our business in a manner, which protects the environment of our customers, employees and the community.
- Continually pursue the achievement of excellence and the identification of opportunities for continuous innovation, improvement and efficiency of the QESH management system and performance of the company.

We are committed to:

- Complying with all Irish and EU, environmental and health & safety, legislation and regulations, including Indaver's various licences and permits.
- Identifying the environmental aspects and health & safety hazards associated with our activities in order to assess any potential impacts on the environment or potential risks to the safety and health of our employees and all others who may be affected.
- Developing QESH management processes, operational procedures and audit capabilities to ensure that the systems put in place prevent environmental damage, function effectively, provide a quality service to customers, provide a quality workplace for employees and ensure, in so far as is reasonably practicable, the safe operation of the company.
- The continual improvement of our management systems through the setting of QESH Objectives and Targets and the measurement of them against key performance indicators and the Indaver group standards (such as Safety and Kinney).

- Minimising the potential for environmental incidents and health & safety accidents. Recording and reporting any incidents or accidents to the relevant competent authorities where applicable. Maintaining, in conjunction with the appropriate authorities, an emergency response capability to deal with foreseeable incidents and accidents.

- Identifying the major accident scenarios and maintaining an appropriate major accident prevention policy to provide a high level of protection for man and the environment in accordance with European Directive 96/82/EC (SEVESO II), as amended by Directive 03/1085/EC and transposed into Irish and UK legislation.

- Fully considering the impact on the environment and the implications and risks to safety and health before committing capital expenditure or entering into any new business ventures.

- Being open and honest and ensuring effective communication of the QESH culture of the company through:

  - Ensuring the availability of the QESH policy, procedures and access to QESH records to all employees and interested parties;
  - Providing the necessary training and support to employees and sub contractors to ensure, in so far as is reasonably practicable, that they are able to fulfil the commitments set out in this statement of company policy;
  - Displaying signs and notices in prominent positions to inform employees, contractors and visitors of necessary QESH information.

- Ensuring, in so far as is reasonably practicable, that employees comply with their duty to follow the QESH rules and procedures and to report any incidents, accidents or near accidents immediately.

- Co-operating with contractors, suppliers and customers to develop a similarly concerned approach to the protection of the environment and to the safety & health of others.

- Assisting the community with technical advice or emergency response in cases of incidents that may involve environmental pollution.

- Ensuring efficient usage of resources such as electricity, paper and diesel and promoting a policy of recycling/recovery of waste wherever possible, both in-house and with customers.

- Being at the forefront in the provision of high quality, sustainable waste management solutions and waste infrastructure.

- Creating a company culture that lives up to the core values stated in “The Indaver Way” and encouraging all employees to exhibit these values by:

- Being a customer driven company where all decisions are based on an over-riding ambition to serve our customers better, provide our customers with excellent service levels and ensure their compliance with all relevant legislative requirements;
- Encouraging employee involvement in decision-making and open and free communication between employees and management;
- Encouraging teamwork which nurtures an atmosphere of trust and respect;
- Developing and maintaining mutually beneficial relationships with partners and suppliers;
- Providing a work-life balance for employees;
- Providing employees with the skills training required to function effectively in their positions and encouraging the personal development of employees to full potential so as to maximise their contribution to the specific needs of the organisation;
- Encouraging and developing leaders who drive and inspire others towards excellence by displaying role model behaviour;
- Creating a staff culture that is challenging, rewarding and quality orientated with recognition for a job well done.

- Measuring the perceptions of employees, customers and suppliers to identify opportunities for improvement and to achieve results, which satisfy all of the organisations stakeholders.

- Making alterations and changes to the QESH policy in the light of experience and ensuring it is kept up to date.

The success of this policy will depend on each employee's co-operation and will be reviewed on an ongoing basis
Staff and others to whom this policy applies should feel free to put forward suggestions at any time.

The original is signed by the Managing Director, John Ahern.

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 was last issued on the 14th January 2008 (Version 8). The register has been reviewed by the Technical manager and Quality manager in February and March 2009 and is currently under review by the compliance manager and will then be reissued. Version 8 is attached in Appendix 2. Once issued version 9 will be sent to the Agency.

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.

Progress towards achievement of QESH Objectives & Targets:
Version 41 of the Indaver Improvement Plan was forwarded to the Agency as part of last years Annual Environmental Report (submitted on the 28th March 2008).

Version 52 of the Indaver Improvement Plan, which details the current status of the QESH objectives and targets, is attached in Appendix 3.

2.5 Operational Procedures

Indaver have over 170 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.

The following procedures relating to the operation of the Dublin Port HazWaste Facility were developed/updated during the period being reported on:

Dublin Port Hazardous Waste Facility Procedures

Operations 8.2	Soil Clean Up at the transfer station
Operations 9.5	Operation of Out of Hours Telephone System
Operations 8.9	Procedure upon Receipt of an Emergency Response call
Operations 6.7	Monitoring and Measurement of Environmental Emissions
Operations 6.6	Monitoring and Recording of Environmental Information
Operations 6.4	Environmental Incident Investigation & Reporting
Operations 6.1	Internal and External Communications
Operations 4.19	Relocation of Material within Storage bays
Operations 2.19	Dealing with a Waste Load Rejected at a Facility
Operations 2.18	Procedure for Recording and Consigning Waste on RecTracker
Operations 20.19	Equipment Calibrations and Maintenance
Operations 11.8	Control of approved facilities for Customers
Operations 10.7	Processing Preventative & Corrective Actions
Operations 10.6	Training & Staff Competence

Health & Safety Procedures

Operations 4.12	Health and Safety Checks
Operations 16.5	Identification of Safety Critical Components of an Installation
Operations 13.5	General Site Security

Laboratory Procedures

Operations 20.4	Waste Handling and Storage and Disposal
Operations 20.8	Data Handling in the Laboratory
Operations 21.4	Determination of the pH of Liquid Waste Samples
Operations 21.5	Determination of Fluoride in Liquid Waste Samples by Ion Selective Electrode
Operations 22.13	Operation and Maintenance of Varian Saturn 2100T GC/MS
Operations 22.16	Operation of the Fume Hoods
Operations 22.4	Operation of the Eutech 5500 pH/Ion Meter
Operations 22.5	Operation and Maintenance of TRICOOL 21 S2/10EXT Chiller

A full index of operational procedures is attached in Appendix 4.

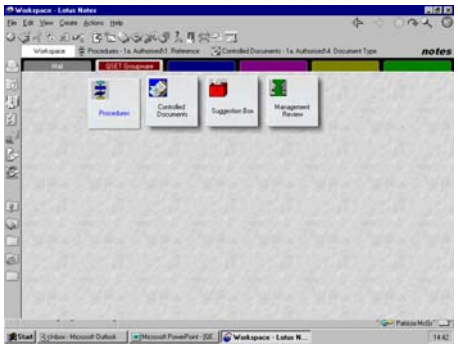
2.6 Internal Audits

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

Table 3.1.1 Annual Quantities of Waste Accepted on Site

The waste quantities accepted into storage between 1st January 2008 and the 31st December 2008 have been categorised by EWC code (as per Commission Decision of the 16th January 2001 2001/118/EC) and full details are given in Appendix 5. (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 1st January 2008 and the 31st December 2008 was 28,255 MT. This waste has been categorised by final disposal/recovery site and full details are given in Appendix 6.

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 31st December 2008 was 188 MT

3.4 Stock Reconciliation:

During 2008 a stock check in the Dublin Port Hazardous Waste Facility (DPHWF) showed a level of stock gain and stock loss.

Stock Gain

A number of items were identified in storage which according to our waste tracking system had previously been shipped. These items were re-labelled and shipped to appropriate licensed facilities for disposal.

Stock Loss

A number of items listed in our tracking system as being in stock were found to have been previously shipped. A stock reconciliation exercise assigned this material to previously shipped loads that were disposed of at appropriate licensed facilities.

Corrective Action

Periodic stock checks are now an important part of our internal control process and any stock discrepancies are reconciled as soon as they are identified.

There was no environmental impact from this issue.

The original stock check showed an accuracy level over the period of 99.34%. Following the stock reconciliation exercise this accuracy level was improved to 99.82%. Further measures are being implemented to further improve our accuracy levels.

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 tranfers of waste. Indaver submitted their E-PRTR on 28th March 2009 and is attached in Appendix 12.

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 7.

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 31st March 2008.

Prior to this date, the surface water collected in the sump was pumped into an aboveground 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. After 31st March the 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 μS/cm

The monitoring apparatus is located over-ground 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. 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 2008:

- A surface water sample was taken on the 13th March 2008
  Results were within the compliance limits for all of the required parameters except Suspended solids and Zinc. The results showed elevated suspended solids of 33mg/l (30mg/l parameter in our licence) and zinc of 3.37 mg/l (2 mg/l parameter in our licence).

  The cause of this elevated value is thought to have occurred due to the tank not being re-circulated before sampling. There have been no spillages on site, which could have resulted in this elevated level. As a result the contents of the tank were not discharged. The water was re-circulated through the carbon unit. At this stage we had switched to our continuous monitoring system. The water was discharged with no increase in any of the trigger limits.

- A surface water sample was taken on the 22nd July 2008.
  All results were within the compliance limits for all parameters with the exceptions of the suspended solids and BOD. All surface water is discharged continuously and we have not reached any of our trigger limits.

- A surface water sample was taken on the 11th December 2008.
  Results were within the compliance limits for all of the required parameters.

- A surface water sample was taken on the 2nd February 2008.
  Results were within the compliance limits for all of the required parameters.

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 2008

Sampling Date	Sampled By:	BOD mg/l	COD mg/l	SS mg/l	Detrg (as MBAS) mg/l	MinOil mg/l	pH	Temp (degrees Celcius)	OFG mg/l	NH_3-N mg/l	PO_4-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**
13-Mar-08	AD	5	<15	33	<0.2	<0.01	7	10.4	<1	<0.3	<0.005	<0.01	<0.002	50	**3.37**	0.06	0.024	<0.005	0.031
22-Jul-08	AD	33	58	136	<0.2	<0.01	6.83	12.5	<1	<0.2	0.089	<0.01	0.00001	0.001	0.159	0.004	0.003	0.002	<0.001
11-Dec-08	AD	<2	<15	12	<0.2	<0.01	8	8.2	<1	0.11	0.026	<0.01	<0.00001	<0.001	0.249	0.004	0.002	<0.001	0.002
02-Feb-09	AD	<10	<15	<10	<0.2	<0.01	7.82	4.7	<1	<0.2	0.02	<0.01	<0.00001	<0.001	0.618	0.005	0.002	0.009	0.002

Table 4.2.2 Summary of the surface water run off monitoring results for 2008

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
13-Mar-08	<3.1	<2.2	<2.2
22-Jul-08	<3.1	<2.2	<2.2
11-Dec-08	3.5	<2.2	<2.2
02-Feb-09	<3.1	<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 11th December 2008

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^3)	Total Particulates Results (mg/m^3)
Monitoring Point 1 (AS1)	<0.42	0.28
Monitoring Point 2 (AS2)	<0.42	<0.28

Table 4.3.1 Air Monitoring Results Jan-07

Also as per our licence the frequency of the ambient air monitoring increased to quarterly for a period of at least 12 months due to the commencement of solvent blending on the 15th September 2006. As this period has now lapsed, ambient air monitoring will be conducted annually.

Table 4.3.2 Quarterly Ambient air monitoring results 2007for AS1

4.4 Emissions to Atmosphere Monitoring

On 15th September 2006 Indaver Ireland Limited accepted its first load for blending in our solvent recovery facility.
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 11th December 2008 for monitoring point A1. The results were below the TA Luft standard limits.

As communicated to the agency there was no monitoring carried out in March 2008. There was no activity being carried out in our blending facility at the time of the sampling.
In relation to A1, this was an oversight on Indaver's part as when the analyst came to site there was no repacking activity being carried out. The analyst returned on a number of occasions but as no repacking was being carried out no sampling was done.

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 12th December 2008.

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_{Aeq} dB(A)	L_{Amax} dB(A)	L_{A90} dB(A)	L_{A10} dB(A)	Comments on Main Noise Source	Noise emanating from Indaver Activities
NMP1	66	83	56	69	Noise from traffic on adjacent Tolka Quay Road	Noise from occasional truck entering the site
NMP3	63	84	56	66	Noise from traffic on adjacent Tolka Quay Road and air traffic	Noise from forklift onsite
NMP4	58	71	56	60	Noise from traffic on adjacent Tolka Quay Road, constant noise from diesel powered cranes from a neighbouring site and air traffic.	Traffic on site (forklift)

Table 4.5.1 Noise Monitoring Results August-07
L_{Aeq} – Average noise levels over time
L_{Amax} – Maximum noise level recorded over time
L_{A10} – Event sound levels, this value is a good statistical indicator for expressing event noise such as passing traffic
L_{A90} – Post event sound levels, this value is a good indicator of background noise levels

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 2008, and compares the results to the baseline monitoring carried out in 1998 prior to commencement of operations:

- January to March 2007:
  The results of the groundwater monitoring showed that the following parameters were above the levels recorded in the 1998 baseline survey.

  Borehole 1 – Iron, Boron, Cadmium, Chromium and Mercury
  Borehole 2 – pH, Arsenic, Boron, Cadmium, Chromium and Mercury

  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.

  Results of organic scans showed the following:

Methyl Tert Butyl Ether:	4.1μg/l
Phenol:	<2μg/l
2,4-Dimethylphenol:	<2μg/l
Diethyl Phthalate:	<10μg/l
4-Nitrophenol:	<5μg/l

Pentachlorophenol: <5μg/l
Di-n-Butyl phthalate: <10μg/l
Bis (2-ethylhexyl phthalate): <10μg/l

- April to June 2007:

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, Arsenic and Chromium
Borehole 2 – pH, Chromium and Zinc

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.

Results of organic scans showed slightly elevated levels of the following:

Dichloromethane: <3 μg/l
1,2-Dichloroethane: <4 μg/l
Dibromomethane: <3 μg/l
1,2 – Dichloropropene: <3 μg/l
trans-1-3-Dichloropropene: <3 μg/l
Chlorobenzene: <4 μg/l
Bromoform: <3 μg/l
1.1.2.2-Tetrachloroethane: <5 μg/l
1.2.3-Trichloropropane: <9 μg/l
Propylbenzene: <3 μg/l
4-Isopropyltoluene: <3 μg/l
1.2-Dichlorobenzene <3 μg/l
1.2-Dibromo-3-chloropropane <10 μg/l
Naphthalene: 4 μg/l
1.2.3-Trichlorobenzene and Hexachlorobutadiene: <3ug/l

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 2007:

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

Borehole 1 –pH

Borehole 2 – pH and Chromium

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.

Results of organic scans show no evidence of organic contamination.

- October to December 2007:
  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 and Chromium
  Borehole 2 – pH 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.

  Results of organic scans show no evidence of organic contamination.

Table's 4.6.1 and 4.6.2 gives a summary of the groundwater monitoring results for 2008. 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)

Parameter	Quarter 3 Jan - Mar 07	Quarter 4 Apr - Jun 07	Quarter 1 July-Sep 07	Quarter 2 Oct-Dec 07	Baseline 24/09/98
pH (pH units)	7.90	7.79	7.75	7.75	**7.6**
Conductivity (µS/cm)	944	1055	1282	2148	**1420**
Iron (mg/l)	<0.05	0.091	0.005	0.007	**0.04**
Manganese (mg/l)	0.33	0.049	0.277	0.223	**0.4**
Copper (mg/l)	<0.005	0.005	0.004	0.003	**<0.01**
Aluminium (µg/l)	<20	8	22	<2	**<50**
NH3-N (mg/l)	<0.3	<0.2	0.2	0.2	**0.63**
Arsenic (µg/l)	2	3	<1	2	**2**
Boron (µg/l)	300	97	72	74	**290**
Cadmium (µg/l)	<0.5	<0.4	<0.4	<0.4	**<0.4**
Chromium (mg/l)	<0.005	0.002	<0.001	0.004	**<0.001**
Lead (µg/l)	<5	1	0.039	<1	**<5**
Mercury (µg/l)	<0.10	<0.05	<0.05	<0.05	**<0.05**
Nickel (mg/l)	<0.005	<0.001	<0.001	<0.001	**<0.01**
Selenium (µg/l)	3	4	1	3	**100**
Zinc (mg/l)	0.039	0.027	0.051	0.038	**<0.05**
Volatile Organic Compounds (µg/l)	<1.0	<2	<1.0	<1	**-**
Semi Volatile Organic Compounds (µg/l)	<1.0	<1.0	<1	<1	**-**

Table 4.6.1 Results of Groundwater Monitoring at Borehole 1 for 2008

GROUNDWATER ANALYSIS BOREHOLE 2 (GW2)

Parameter	Quarter 3 Jan - Mar 07	Quarter 4 Apr - Jun 07	Quarter 1 July-Sep 07	Quarter 2 Oct-Dec 07	Baseline 24/09/98
pH (pH units)	7.72	7.99	7.96	7.86	**7.4**
Conductivity (µS/cm)	381	422	442	463	**3040**
Iron (mg/l)	<0.05	0.004	0.003	0.031	**0.07**
Manganese (mg/l)	0.46	0.263	0.005	0.003	**0.77**
Copper (mg/l)	<0.005	0.004	0.003	0.002	**<0.01**
Aluminium (µg/l)	20	42	0.005	<0.002	**<50**
NH3-N (mg/l)	<0.3	<0.2	<0.2	<0.2	**0.46**
Arsenic (µg/l)	3	2	<1	<1	**<2**
Boron (µg/l)	<300	100	95	82	**270**
Cadmium (µg/l)	<0.5	<0.4	<0.4	<0.4	**<0.4**
Chromium (mg/l)	<0.005	<0.005	0.002	0.006	**<0.001**
Lead (µg/l)	<5	4	<1	<1	**<5**
Mercury (µg/l)	<0.10	<0.05	<0.05	<0.05	**<0.05**
Nickel (mg/l)	<0.005	<0.001	<0.001	<0.001	**<0.01**
Selenium (µg/l)	<1	1	<1	<1	**<100**
Zinc (mg/l)	0.074	0.059	0.158	0.041	**<0.05**
Volatile Organic Compounds (µg/l)	<1	<2	<1	<1	**-**
Semi Volatile Organic Compounds (µg/l)	<1	<1	<1	<1	**-**

Table 4.6.2 Results of Groundwater Monitoring at Borehole 2 for 2008

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

Integrity testing was conducted in August 2006 (to be completed every three years as per licence) in the following areas:

- Main Tank Farm Bund
- New ACO drainage Channel & Drainage Line
- New Fire Pump Cooling Water Drainage Gully
- New Weighbridge Drainage

The results of the integrity testing were that the containment sumps are watertight.

As per correspondence with the Agency, full resealing of the joints in the yards was carried out in 2008.
This was 75% complete at the time of reporting last year. This job has now been completed bar one loading bay (bay 11). This is due to operational issues and storage space in the yard. This bay will be completed as soon as practicable

During the period being reported on, USSR Limited completed work and retested Indaver's drainage system and pipelines. Please find attached report in Appendix 11.

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. These inspections will take place eight times per annum.

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.

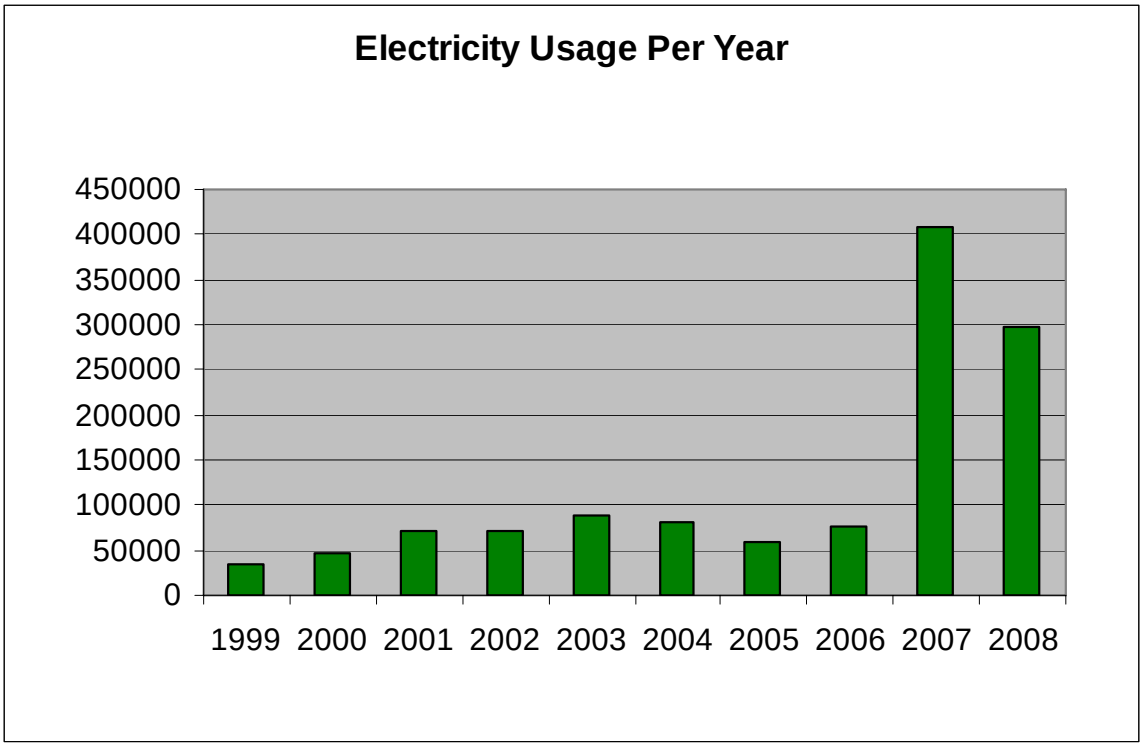


Figure 5.1.1 Graph of Electricity Usage Per Year

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.

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

As can be seen from this audit (see appendix 10) the consultant has issued some recommendations to help minimise our energy consumption. These recommendations have been entered into the Indaver improvement plan, which is managed through out QESH system.

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 decreased from last year. The number of employees has increased from 25 in 2007 to 30 in 2008.

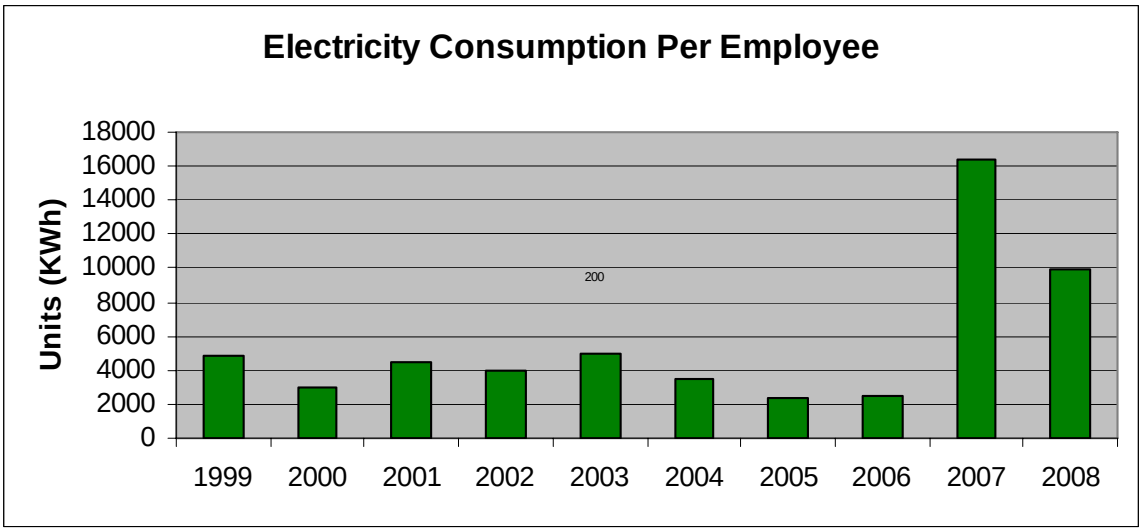


Figure 5.1.2 Graph of Electricity Usage per Employee

5.2 Diesel Usage

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

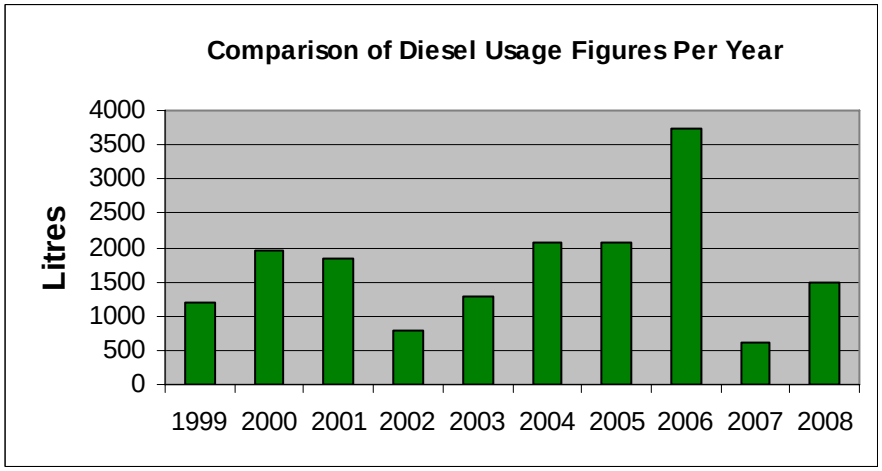


Figure 5.2.1 Comparison of Diesel Usage Figures by Year

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. 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.

In 2008 the following amounts of diesel were used onsite:

200L X 2 Top Up fills of Diesel Firewater storage Tank	= 400L
Refill of Diesel Fire Water storage Tank	= 1000L
Refill of Diesel Generator Storage Tank	= 100L
Total	=1500L

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 2008

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 and household hazardous waste	AVG & Indaver NV	D	2.47 MT
Dry Recyclables (Cardboard, Plastics etc)	Thornton's Recycling	R	8.28 MT
Residual Waste	Thornton's Recycling	D	12.65 MT
Waste Electrical & Electronic	Rehab Recycling	R	0.38 MT
Waste Pallets	Thornton's Recycling	R	15.32 MT
Waste Metal	Hammond Lane Rinsgend (Metal Recycling)	R	0.19 MT

Table 5.4.1 Waste Generated on Site in 2008

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

6.2.1 Bulking up of Drummed Waste

There are many drummed waste solvent streams generated by Indaver's customers, currently sent for incineration to Belgium and Germany, which could be blended for use as a fuel in cement kilns.

Many of these streams are currently transiting through the existing facility but due to the low volumes produced it is not economically feasible to send them for recovery or solvent blending.

Indaver intends to target these streams for blending at our Dublin Port facility in 2009.

Indaver received approval from the Agency to commence transfer of solvents from drums to the bulk storage tanks in a letter dated the 8th March 07 (Ref: W0036-02/ak04dh).

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 9 times by various customers in 2008.

Indaver's website, www.indaver.ie, is a valuable source of information for customers and interested parties.

Hardcopies of the following brochures produced by Indaver can be requested on the "**Guides/Brochures**" page.

- Integrated Waste Management Guide
- Guide to Composting at Home
- Household Waste Management
- Company Services Brochure
- Guide to the Packing and Loading of Hazardous Waste
- Guide to Waste Electrical and Electronic Equipment
- Waste Legislation Guide

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

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 free downloads of various technical guides and information sheets produced by Indaver such as the:

  - Customer Assurance Pack
  - Drum Selection for Hazardous/Special Waste Information Sheet
  - Guide to the Interpretation of the UN Marking System
  - Waste Legislation Guide

  The "**Customer Assurance Pack**" was developed in response to concerns and queries surrounding the area of waste management and the complexities involved in complying with National and European environmental legislation. The pack has been structured around a series of most 'frequently asked' questions;

  - Do we have the correct structures, systems and infrastructure in place to manage your waste?
  - Do we have the correct authorisation to handle your waste?
  - How do we ensure that your waste is classified and shipped correctly?
  - How do we control approval of sub-contractors?
  - Do we have a sound financial structure?

- 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.

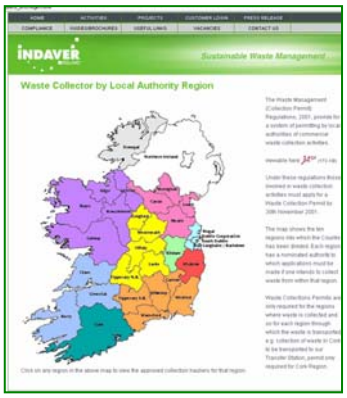
2. Waste Facility Licence Information

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 9th April 2008.

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. Indaver's RMP was submitted to the Agency on the 9th April 2008 and a copy is attached in Appendix 8.

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 24th August 2006 and a copy is attached in Appendix 9.

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 m3 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 8.

Appendix 1: Certificates of Accreditation

1. ISO 14001: Environmental Management System

2. ISO 9001: Quality Management System

3. OHSAS 18001: Occupational Health & Safety Assessment Series

Certificate IE00/51240.00

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

The scope of registration appears on page 2 of this certificate.

This certificate is valid from 13 August 2008 until 05 August 2009 and remains valid subject to satisfactory surveillance audits.
Re certification audit due before 05 August 2009
Issue 11. Certified since 13 January 2000

Multiple certificates have been issued for this scope
The main certificate is numbered IE00/51240.00

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

Authorised by

UKAS
ENVIRONMENTAL
MANAGEMENT
005

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

SGS EMS 04 0308 M2

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Certificate IE00/51240.00

The management system of

Indaver Ireland Ltd

Head Office: 4 Haddington Terrace,
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This is a multi-site certification.
Additional site details are listed on subsequent pages.

Authorised by

UKAS
ENVIRONMENTAL
MANAGEMENT
005

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

graphic design atelier roger pfund printed by orell füssli security printing ltd switzerland

Indaver Ireland Ltd

ISO 14001:2004

Issue 11

Detailed scope

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

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

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

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

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

UKAS ENVIRONMENTAL MANAGEMENT 005

Certificate IE94/3218.00

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 9001:2000

For the following activities

The scope of registration appears on page 2 of this certificate.

Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2000 requirements may be obtained by consulting the organisation

This certificate is valid from 13 August 2008 until 05 August 2009 and remains valid subject to satisfactory surveillance audits.
Re certification audit due before 05 August 2009
Issue 14. Certified since 05 May 1994

Multiple certificates have been issued for this scope
The main certificate is numbered IE94/3218.00

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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Indaver Ireland Ltd

ISO 9001:2000

Issue 14

Detailed scope

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 9001:2000 requirements may be obtained by consulting the organisation

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

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

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

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

UKAS QUALITY MANAGEMENT 005

Certificate IE02/57028.00

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 18001:1999

For the following activities

The scope of registration appears on page 2 of this certificate.

This certificate is valid from 13 August 2008 until 01 July 2009 and remains valid subject to satisfactory surveillance audits.
Re certification audit due before 05 August 2009
Issue10. Certified since 11 October 2002

Multiple certificates have been issued for this scope
The main certificate is numbered IE02/57028.00

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

Authorised by

SGS United Kingdom Ltd Systems & Services Certification
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Indaver Ireland Ltd

OHSAS 18001:1999

Issue 10

Detailed scope

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

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

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

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

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

Appendix 2: Register of Environmental Aspects

Controlled Document: Register of Environmental Aspects

Reference	Status	Version	Owner
Reg_Aspects	Authorised	8	Roisin Murphy

Type Register **Sub-Type**

TABLE OF CONTENTS

A. SUMMARY OF ASPECTS AND SIGNIFICANCE RATINGS

Aspect	Significance		Control	
	Rating	Significant Yes/No	Indaver Improvement Plan Obj. #	Procedures
1. Waste Handling - Repacking of Waste	1,000	Yes	Objective No. 1	See Procedures Index Operations 5.10 Repacking of Waste Operations 5.19 Lab Smalls Operations 16.1 Blending Pre-Acceptance Checks Operations 16.2 Sampling, Loading & Unloading at the Blending Plant Lab Procedure - Sections 20, 21 and 22 Operations 17.1 Civic Amenity Sites - Waste Acceptance, Storage, Loading & Collection Emergency Response Procedures
2. Transport of Waste Materials	1,260	Yes	Objective No. 2	See Procedures Index Operations 5.3 Inspection of Packages for Carrying Waste Operations 5.13 On Site Placarding of Bulk and Packaged Waste Loads Operations 4.2 Classification & Identification of Waste Emergency Response Procedures Operations 8.8 Indaver ADR Collection Vehicles - Emergency Response Procedure & Drivers Responsibilities Operations 8.9 Procedure Upon Receipt of an Emergency Response Call Movement Procedures
3. Waste Handling - Off-loading & Storage of Waste at the Dublin Port HazWaste Facility	1,140	Yes	Objective No. 3	See Procedures Index Waste Handling & Transfer Station Operational Procedures Operations 4.1 Acceptance & Storage of Waste at the Transfer Station & Solvent Recovery Facility Operations 16.1 Blending Pre-Acceptance Checks Operations 16.2 Sampling, Loading & Unloading at the Blending Plant Operations 16.3 Stream Acceptance & Blending Lab Procedure - Sections 20, 21 and 22 Operations 5.10 Repacking of Waste Operations 5.3 Inspection of Packages for Carrying Waste Operations 5.12 Labelling of Packages Operations 5.13 On Site Placarding of Bulk and Packaged Waste Loads Operations 4.2 Classification & Identification of Waste Emergency Response Procedures - Section 8 Operations 8.2 Spill Clean Up at the Transfer Station
4. Waste Handling - Loading of Containers and Tankers for Shipment	1,323	Yes	Objective No. 3	See Procedures Index Operations 5.4 Loading Containers for Shipment Operations 5.3 Inspection of Packages for Carrying Waste Operations 5.13 On Site Placarding of Bulk and

				Packaged Waste Loads Operations 4.2 Classification & Identification of Waste Operations 17.1 Civic Amenity Site - Waste Acceptance, Storage, Loading & Collection Emergency Response Procedures Waste Handling Procedures
5. Energy & Resource Usage and Generation of Waste	360	Yes	Objective No. 5	Operations 6.6 Monitoring and Recording of Environmental Information Movement and Waste Handling sections of the Operations manual (Section 2 and 5), Operations 6.5 Internal Waste Management Indaver Improvement Plan
6. Management of Aqueous Discharges	833	Yes	Objective No. 6	Operations 4.4 Testing and Removal of Water from Sumps Operations 4.3 Monitoring of Emissions to Surface Water Drains Operations 4.12 Health & Safety Checks Operations 4.1 Acceptance and Storage of Waste at the Transfer Station Operations 17.1 Civic Amenity Sites - Waste Acceptance, Storage and Loading Operations 7.5 Collection, Unloading, Storage and Loading of Paper in the Indaver Warehouses Emergency Response Procedures
7. Operation of Civic Amenity Sites	1,008	Yes	Objective No. 11	Operations 17.1 Civic Amenity Sites - Waste Acceptance, Storage, Loading and Collection Operations 17.2 Civic Amenity Sites - Site Maintenance, Safety & Security Operations 17.3 Emergency Response Procedure for the Civic Amenity Sites Operations 11.1 Haulier Approval and Monitoring Operations 11.2 Approval and Monitoring of Waste Facilities Operations 11.3 Approval and Monitoring of General Contractors

B. METHOD OF DETERMINING SIGNIFICANCE RATING

The significant environmental aspects in order of importance are:

1. WASTE HANDLING - REPACKING OF WASTE
2. TRANSPORT OF WASTE MATERIALS
3. WASTE HANDLING - OFF-LOADING & STORAGE OF WASTE AT THE DUBLIN PORT HAZWASTE FACILITY
4. WASTE HANDLING - LOADING OF CONTAINERS AND TANKERS FOR SHIPMENT
5. COLLECTION, TRANSPORT, STORAGE AND BALING OF WASTE PAPER FOR RECYCLING
6. ENERGY & RESOURCE USAGE AND GENERATION OF WASTE
7. MANAGEMENT OF AQUEOUS DISCHARGES
8. WEEE RECYCLING ACTIVITIES
9. OPERATION OF CIVIC AMENITY SITES

Each aspect is assigned a Significant Rating. Aspects with a significance rating of <350 are deemed not significant.

It should be noted that even though an aspect may have a significance rating of <350, all aspects will be reviewed periodically to ensure the significance has not changed. Indeed some of these aspects may be controlled by means of documented procedures, etc., so as to enhance the environmental performance of the company.

The determination of the significance of an environmental aspect is based on simple risk assessment methodology or failure mode and effect analysis (FMEA).

Significance Rating (S) = Frequency of Occurrence (F) x Likelihood of Loss of Control (L) x Severity of Consequences (C)

The **Frequency of Occurrence** of the aspect is denoted by the letter **F** and a numerical value between one (i.e. rare) and ten (i.e. regular/consistent, e.g. discharges) is assigned.

1	2	3	4	5	6	7	8	9	10
Rare								Consistent e.g. discharges	

The **Likelihood of Loss of Control** is denoted by the letter **L**. A numerical value between one and ten is assigned, where a value of one indicates control loss is highly unlikely and a value of ten indicates control loss is highly likely.

1	2	3	4	5	6	7	8	9	10
Highly unlikely									Highly likely

The **Severity of Consequences** of each environmental aspect is denoted by the letter **C** and is assessed using the following decision making criteria:

i. Legislative and Regulatory compliance
ii. Community/Employee sensitivity
iii. Impact on air, land or water
iv. Cost benefit reasons, e.g. insurance liability, strategic concern
v. Potential for resource depletion
vi. Accident and Emergency situations

A score for Severity of Consequences (C) is calculated for each Aspect by assigning a score under each criterion in the following manner:

i. <u>Legislative and Regulatory compliance:</u>

Not regulated/no legislative requirement	= 1 point
Moderately regulated and compliant	= 2 points
Strictly regulated/legislated and compliant	= 3 points
Strictly regulated/legislated and occasionally non-compliant	= 4 points
Strictly regulated/legislated and consistently non-compliant	= 5 points

ii. Community/Employee Sensitivity:

No observed reaction	= 1 point
Sporadic complaints	= 2 points
Widespread complaints	= 3 points
Vigorous community/employee action	= 4 points
Permanent injury or death caused	= 5 points

iii. Impact on Air, Land and Water:

No measurable impact on environmental media	= 1 point
Local nuisance, e.g. odour, dust	= 2 points
Short term adverse impact on environmental media e.g. fish kill	= 3 points
Long term adverse impact on environmental media,	= 4 points
Permanent damage to environmental media or ecosystem, e.g. irrevocable damage to potable groundwater sources.	= 5 points

iv. Cost Benefit Reasons:

Major financial saving to the company	= 1 point
Minor financial saving to the company	= 2 points
No financial cost to the company	= 3 points
Minor financial cost to the company	= 4 points
Major financial cost to the company	= 5 points

v. Potential for Resource Depletion:

No depletion of natural resources	= 1 point
Some depletion of **renewable** natural resources, e.g. paper/water usage	= 2 points
Some depletion of **non-renewable** natural resources e.g. gas, oil usage	= 3 points
Large scale depletion of **renewable** natural resources	= 4 points
Large scale depletion of **non-renewable** natural resources,	= 5 points

vi. Accident and Emergency situations:

No risk/**trivia**l risk (low probability and low environmental load)	= 1 point
Minor Risk (low probability and medium environmental load or medium probability and low environmental load)	= 2 points
Moderate risk (High probability and low environmental load or medium probability and medium environmental load or low probability and high environmental load)	= 3 points
Substantial Risk (High probability and medium environmental load or medium probability and high environmental load)	= 4 points
Intolerable (High probability and high environmental load)	= 5 points

The sum of the decision making criteria scores for each environmental aspect is deemed to be the numerical value for the C factor which represents the potential Severity of Consequences. Scores assigned to each decision making criteria also take account of normal, abnormal and potential emergency situations. Each criteria will be weighted to reflect abnormal or emergency situations if they apply.
Scores assigned to each decision making criterion should take account of normal, abnormal and potential emergency conditions.

Each environmental aspect is assigned an F, L, and C factors as outlined above. The product of these three values represents the Significance Rating or S value for each environmental aspect. The higher the S value, the more significant the aspect.

A Summary of the Scoring for the aspects reviewed in this register is given in the following table:

No.	Environmental Aspect	Frequency of Occurrence F	Likelihood of Loss of Control L	Severity of Consequences C = Sum of Criteria i – vi						Significance Rating S S = F x L x C
				i	ii	iii	iv	v	vi	
1	WASTE HANDLING - REPACKING OF WASTE	10	5	3	2	3	5	3	4	1,000
2	TRANSPORT OF WASTE MATERIALS	10	6	4	2	3	5	3	4	1,260
3	WASTE HANDLING - OFF-LOADING & STORAGE OF WASTE AT THE DUBLIN PORT HAZWASTE FACILITY	10	6	3	3	2	5	3	3	1,140
4	WASTE HANDLING - LOADING OF CONTAINERS AND TANKERS FOR SHIPMENT	9	7	4	2	3	5	3	4	1,323
5	ENERGY & RESOURCE USE AND GENERATION OF WASTE	10	3	2	1	1	4	3	1	360
6	MANAGEMENT OF AQUEOUS DISCHARGES	7	7	4	2	2	5	1	3	833
7	OPERATION OF CIVIC AMENITY SITES	8	7	4	2	3	4	3	2	1,008

Environmental Aspect No. 1: Waste Handling - Repacking of Waste

Activity Indaver's activities include the repacking of waste materials (both hazardous and non hazardous) on customer's sites, TWM sites, civic amenity sites and at the Dublin Port Hazwaste facility. This work, which is carried out by both Indaver operatives and site services contractors, includes opening packages for inspection, cross pumping from drums and bulk tankcontainers, venting containers, overdrumming, taking samples, packing of laboratory smalls, packing household hazardous waste, packing WEEE and fluorescents etc. Indaver constructed a solvent blending facility on the previously unused area of the Dublin Port Hazwaste facility. This activity involves the storage and blending of solvents on site in bulk storage tanks and involves additional waste handling activities including crosspumping of material from bulk tankcontainers and packages into the storage tanks and vice versa.
Aspect An incident or release of environmentally hazardous waste (solvents, acids, oxidisers etc.) during repacking or activities at the solvent recovery facility. Use of compressors, forklifts and other heavy machinery during the repacking and solvent recovery activities. Resource Usage.
Associated Impacts A spillage of waste material could result in a discharge to air, land or water causing an adverse impact to the environment. Flammable liquids/solids could ignite and result in a fire and/or explosion, giving rise to toxic or noxious fumes causing air pollution. Fire water run off could result in ground and/or water pollution. Fugitive emissions to the atmosphere could occur during waste handling/repacking or solvent recovery activities causing an adverse impact to the environment. Environmental noise resulting from the operation of heavy machinery such as Forklifts, compressors etc. Repacking activities could cause a visual impact in the immediate vicinity. Littering could result from an uncontrolled working area and bad work practises. Litter will have a negative visual impact and could attract vermin and other nuisances. Potential for odour emissions from material during repacking and solvent recovery activities. Noxious odours could degrade air quality & amenity value of the area.

(1) Frequency, F Indaver employees and site services contractors handle waste on a daily basis on customer's sites, at the Dublin Port Hazwaste facility and on site at the civic amenity sites.	**Score** **F = 10**
(2) Likelihood of Loss of Control, L All repacking of waste and solvent recovery activities are carried out in accordance with either a procedure (Operations 5.10, Operations 5.19, Operations 17.1, Operations 16.2 etc.) or a method statement. These procedures, which detail environmental controls such as control of working area, disposal of waste generated by activities etc., reduce the likelihood of loss of control. All site operatives and site services contractors are given operations manuals which contain copies of these procedures. **Technical Team:** Indaver have a technical team dedicated to the classification of waste streams. This team is responsible for ensuring that waste is in appropriate packaging (e.g. corrosive waste is packed in plastic packaging as opposed to steel). **Indaver Collection Trucks:** Indaver have collection trucks manned by fully HazChem trained drivers to collect from customer's sites. This provides increased control over the quality of material reaching the Dublin Port Hazwaste facility and hence reduces the amount of repacking required. We also conduct training where possible with haulage sub-contractors to ensure that	**L = 5**

they do not collect waste which is unsuitable for transport and hence will require repacking at the Dublin Port Hazwaste facility.

Repacking at the Dublin Port Hazwaste Facility:
Were possible, all repacking activities at the Dublin Port Hazwaste facility are carried out within the repack room. The repack room is fitted with an extraction fan which connects to an activated carbon unit to absorb fugitive emissions. Repacking of waste is only carried out if a drum is not suitable for transport (e.g. non UN approved drum), packing onsite laboratory wastes, sampling of waste streams or in an emergency situation such as a leaking drum.

Some repacking activities in the Dublin Port Hazwaste facility do take place in the yard area such as crosspumping bulk tanks, overdrumming, repacking WEEE and fluorescents. The yard itself is a hardstanding impermeable surface and the site is fully contained. All stormwater runs to the main sump and is pumped via a carbon unit into the surface water storage tank. The contents of this tank are analysed prior to discharge to ensure compliance with the discharge limits set in the facilities waste licence (W0036-2). Additionally the drains in the Dublin Port Hazwaste facility have been lined with a chemically resistant liner to ensure there is no possibility of soil or groundwater contamination.

Annual ambient air quality monitoring reports have always shown the values for the volatile organic compounds and the total suspended particulates to be below the relevant TA Luft standard limit.

Spill fighting equipment is positioned in various locations on site and site operatives receive spill training. Spill drills are conducted every 5 weeks.

Repacking outside of the Dublin Port Hazwaste Facility:
The degree of control over repacking activities is reduced when the work is taking place on a customers site as opposed to the Dublin Port Hazwaste facility due to the fact that Indaver employees and contractors do not have the same resources available to them as at the Dublin Port Hazwaste facility.
Indaver's site services vehicles are fully equipped with all necessary site services equipment, spill kits, absorbent etc and are manned by fully HazChem trained site services operatives. These vehicles increases the resources available to site services personnel.

Similarly the degree of control is less at civic amenity sites, however repacking of waste on these sites is confined to less hazardous activities such as the repacking of fluorescents etc. There are spill kits available at each of the civic amenity sites and the operatives receive spill training.

Spill Kits & Emergency Response:
There are spill kits and emergency response equipment provided on all of Indaver sites and on site services vehicles and collection trucks. All operatives receive spill training. Emergency response procedures are written for all Indaver's activities and these describe the steps to be taken in the event of an environmental incident such as a spill.

Preventative Maintenance:
A preventative maintenance programme is in place and all equipment used in the repacking activities is serviced/maintained as per this procedure, Operations 15.2.

Site Services Contractors:
All site services contractors are approved as per the procedure for the EH&S control of Contractors, Operations 11.3. All contractors must adhere to Indaver's EH&S Codes of Practice and must complete a Statement of Conformity with EH&S Codes of Practice.

Solvent Recovery Facility:
Operational procedures have been put in place to control the activities associated

with the solvent recovery facility as per condition 5.7.1 of our waste licence W0036-2.

Before any waste stream is shipped for blending to the Solvent Recovery Facility the procedure for Pre Acceptance Checks, Operations 16.1, must be followed and the Material Assessment Questionnaire (MAQ), Operations 16.1.1, must be completed by the customer to provide as much background information as possible on the waste. Only when a stream has been approved by the Blending plant Planner and a Blend ID issued for the stream in accordance with this procedure can the material be shipped to the SRF.

Upon arrival of bulk tanks or packages for blending at the facility a visual inspection of the labels, valves and emergency cord is performed.
All sampling, loading and off-loading of bulk tanks is conducted in the tanker loading/unloading bay in accordance with the procedure Operations 16.2 Sampling, Loading & Unloading at the Blending Plant.

The procedure Operations 16.3 Stream Acceptance & Blending details the decision making criteria used when determining whether a tanker of waste can be accepted for blending and outlines the methodology employed by Indaver when blending waste streams to produce a fuel of desired specification.

On Site Laboratory:
Laboratory analysis is carried out on every bulk liquid hazardous waste load to be blended.
The main objectives of the waste analysis procedures are:

- to check whether the properties of the waste delivered correspond to the characteristics described in the specification agreed with the customer
- to identify any potential safety or compatibility issues. Compatibility testing is carried out in accordance with the American Society for Testing and Materials (ASTM) Standard entitled “Standard Test Methods for Compatibility of Screening Analysis of Waste (Ref: D 5058-90) and our in-house methods that were developed by Indaver NV.

Detailed procedures have been written for all laboratory activities (see section 20, 21, 22 and 23) including waste management, operation of all equipment, management of spills etc.

Control Systems:
The blending operation is controlled remotely from the Control Room within the Administration Building. The control system monitors the fill levels in all of the tanks at the Tank Farm and controls the transfer of solvents between the bulk tanks.

Containment Systems - Stormwater Run Off:
All stormwater runs to the main sump and is pumped via a carbon unit into the surface water storage tank. The discharge valve is kept locked at all times and only the facility manager and compliance manager have keys. The contents of this tank are analysed prior to discharge to ensure compliance with the discharge limits set in the facilities waste licence.

In 2007 results from three months of monitoring of the stormwater were forwarded to the EPA and Dublin City Council for their approval of our trigger levels. Once we receive the approval from both the EPA and Dublin City Council we will be moving from a batch discharge methodology to 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), will be 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.

A class 1 oil / petrol interceptor has been installed 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.

Containment Systems - Yard Area and Drainage Network:
The yard area is fully contained in that the hardstanding area is graded and all surface water flows into the sites main drainage network.
Indaver upgraded the drainage system on site in Feb-03 by lining the pipes of the current drainage network with a chemically resistant liner in order to provide added protection against all types of potential spills. This provides a level of protection not found in similar facilities and more akin to the standards associated with process pipework and drainage in the PharmaChem sector.

Containment Systems - Repackroom:
The repackroom is contained with a sump. This sump is completely segregated from the on site drainage system so any spill within the repackroom is completely contained.

Containment Systems - Tanker Loading/Unloading Bay:
The following containment systems are in place in the Tanker Loading/Unloading Bay:

- The Tanker Loading / Unloading Bay is graded away from the entrance and drains to a dedicated sump;
- The two pump bunds contain individual sumps.
- All solvent pipelines run over paved areas. These are visually checked as part of regular site inspections.

All bunded areas are self-contained. Liquid removal is by discretionary discharge. Storm water arising from the Tanker Loading / Unloading Area is tested for contamination prior to discharge to the main drainage system. In the event of contamination, this material is sent offsite for disposal.

In the event of a leak from a road tanker on the site the tanker is parked on the Tanker Loading / Unloading Area.

Air Monitoring:
The ambient air quality is monitored annually (quarterly for the first year of operation of the solvent recovery activities) in accordance with schedule D, Table D.2.4 of Indaver's waste licence W0036-02 (volatile organic carbons and total suspended particulates). The results of this monitoring have always shown the values for the volatile organic compounds and the total suspended particulates to be below the relevant TA Luft emission standard limit.

Biannual air emissions monitoring is conducted at specified monitoring points in accordance with Table D.2.5 of Indaver's waste licence W0036-02 (TA Luft Organics and Total Organic Carbon (as C)). The monitoring locations are the carbon units outside the repack room and at the tank farm.

These two emission points are also monitored on a monthly basis, as part of the facility's Monthly Checks, Operations 4.12.3, using gas detectors.

Major Accident Scenarios:
All Major Accident Scenarios (MAS's) have been reviewed as part of the Safety Report under the Seveso regulations. Appropriate protection and intervention Measures have been put in place to limit consequences, these are also detailed in the Safety Report. An Internal Emergency plan addressing these MAS's has been prepared and submitted to Dublin Fire Brigade. Dublin Fire Brigade subsequently prepared an External Emergency Plan for the facility and a full drill was conducted on site with the Fire Brigade and Dublin port in March 2007.

Sub-Total	***F X L = 50***

(3) Severity of Consequences, C	
(i) Legislative and Regulatory Compliance Indaver could be liable to prosecution by customers, local authorities, the EPA or the HSA for any environmental incidents on customers sites resulting from repacking activities. Condition 5.1 of the waste licence (reg. no. 36-2) states that *"All waste repacking shall be carried out inside the waste repackaging room, unless otherwise agreed by the Agency under condition 5.1.2"".* Where possible all repacking is carried out within the repack room which is equipped with an extraction fan which connects to an activated carbon unit to absorb fugitive emissions. It is not possible for all repacking to take place in the repack room: ● Cross pumping of bulk tankcontainers is carried out in the tanker loading/unloading bay. As per condition 5.1.2 of our licence, Indaver have informed the EPA of the situation were repackaging outdoors is necessary. Indaver are fully compliant with all environmental legislation and with our waste licence in relation to the repacking activities conducted both on customers sites, civic amenity sites and at the Dublin Port Hazwaste facility. **Litter Pollution Act, SI 213 of 1997:** Under the Litter Pollution Act, SI 213 of 1997, Indaver must ensure that any waste stored on site or any other activity carried out on-site does not cause a litter nuisance in a public place or that is visible from a public place. When transporting waste Indaver must take reasonable measures to prevent the creation of litter from this activity. Indaver must prevent the creation of litter nuisance on their premises/land that is in a public place or is visible from a public place. **Facility Licence W0036-02:** The facility was first granted a waste licence to operate by the Environmental Protection Agency on the 26th February 1999 under the Waste Management (Licensing) Regulations 1997 (since amended by the Waste Management (Licensing) Regulations, 2004). A new licence incorporating the solvent blending activities was issued by the Agency on the 15th July 2005. This licence has 13 conditions which we must comply with. These conditions cover areas such as operating hours, vermin control, litter, noise monitoring, waste types that can be accepted on site, etc. The EPA can inspect the facility at any time that they wish to ensure that we are maintaining compliance with the conditions of this licence. They conduct an official visit once a year for which they give us prior notification but can also conduct spot checks for which no notice is given. Indaver has been issued with 4 non compliances by the EPA since commencement of operations on site. Any environmental release or incident at the facility would render Indaver liable for prosecution under the conditions of waste license Reg. No. W0036-02. **Noise Monitoring:** Noise monitoring is conducted in accordance with Schedule D (Table D.2.1) of the waste licence (W0036-02). Annual monitoring has shown that noise emissions from the site have a minimal impact on the local environment.	3

Air Monitoring:
Emissions to atmosphere and air quality monitoring is conducted in accordance with Schedule D (Table D.2.4 and D.2.5) of the waste licence (W0036-02).
Annual ambient air quality monitoring reports have always shown the values for the volatile organic compounds and the total suspended particulates to be below the relevant TA Luft emission standard limit.

Surface Water Discharge Monitoring:
Direct emissions to surface water are not allowed (Condition 6.3). Monitoring of discharges of surface water run off from the facility must be carried out in accordance with Schedule D (Table D.2.2) of the waste licence (W0036-02). Analysis of the surface water run off is carried out prior to discharge to ensure all parameters are in compliance with the emission limits set out in schedule C.1 of the waste licence (W0036-02) . Indaver have never discharged surface water outside the limits set out in the waste licence.

Under the condition 6.7 and 6.8 of the new licence (W0036-02) surface water discharges will move from batch discharges to continuous discharge. All discharges will pass through a monitoring weir were they will be tested for pH, conductivity and TOC. Any exceedances of limits/trigger values (which will be agreed with the Agency in accordance with condition 6.7.2) will result in the surface water being diverted to the surface water tank for further analysis. This system is will come into operation in 2008.

Groundwater Monitoring:
Direct emissions to groundwater are not allowed (Condition 6.4). Groundwater monitoring is conducted in accordance with Schedule D (Table D.2.3) of the waste licence (W0036-02). There are no limits or trigger values in the licence for groundwater.

Seveso:
Under the European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulations, 2006, the facility is classified as an Upper Tier Seveso site and hence must adhere to the requirements of this legislation. The final Safety Report for the Facility was submitted to the HSA in August 2006.
The Health & Safety Authority confirmed in writing on the 13th September 2006 that the Safety Report for the Solvent Recovery Facility as required under the SEVESO regulations was "Deemed Adequate". A five-year review period was allocated to the report.

Indaver have put systems and procedures in place to ensure compliance with the requirements of the Seveso regulations. These are described in the procedure Management of Seveso, Operations 13.8. Any changes to the facility will be conducted in accordance with the Management of Change Procedure, Operations 13.7 to ensure these changes are in compliance with the Seveso regulations.

Waste Management Act:
Under the Waste Management Act, 1996 Indaver must ensure that its waste facilities comply with the provisions of this Act, i.e. they are licensed by the EPA or permitted by their local authorities. Indaver must minimise waste production from its own activities and avoid causing environmental pollution from the management of waste on its site. Indaver must identify, segregate and store waste properly on site before it is sent on to be either recovered/recycled or disposed off. If sub-contracting work Indaver must use bone fide waste disposal/recovery operators who comply with the provisions of this Act, i.e. they are licensed by the EPA or permitted by their local authority. Indaver must also use appropriately licensed contractors to remove waste from their premises. Records must be kept of any hazardous waste it sends for disposal/recovery.

ATEX Regulations:
The site complies with the recent ATEX legislation SI 258 of 2003, Safety, Health and Welfare at Work (Explosive Atmospheres) Regulations, 2003.. Hazardous area zones at the site are based on various industry codes and standards and on EN

60079-10:2003 Electrical Apparatus for Explosive Gas Atmospheres Part 10: Classification of Hazardous Areas.	
(ii) Community/Employee Sensitivity Any environmental incident or release on site at Indaver's Dublin Port Hazwaste facility, one of the civic amenity sites or on a customer's site could adversely affect the company's public image and could result in sporadic complaints. During the construction of the solvent recovery facility a new repackroom was constructed. The new repackroom is a significantly larger room which has been located away from the offices. The original repackroom is now the foam bag house.	2
(iii) Impact on air, land and water Under normal operating conditions the repacking activities should have little impact on the surrounding environment. At most it would be a local nuisance e.g. odour, litter, environmental noise etc. Discharge of environmentally hazardous waste to atmosphere, land or water during an emergency situation could result in a sort term adverse impact on environmental media.	3
(iv) Cost Benefit Any environmental incident caused by Indaver could cause contamination of air, land or water. Materials such as solvents are highly flammable and potential exists for a serious incident if these materials were to come into contact with fire or ignition sparks. Indaver would incur major costs associated with the clean up of any such incident. If such a situation were to arise the reputation of the company would be damaged, adversely affecting Indaver's business and Indaver could be liable for fines. If such an incident occurred at the Dublin Port Hazwaste facility it is possible that Indaver's waste licence would be revoked. If such an incident were to occur at one of the civic amenity sites it is possible that the certificate of registration would be revoked and Indaver would lose the contract to operate the facility. This would incur major costs to the company.	5
(v) Potential for Resource Depletion Repacking of hazardous materials or the clean up of a spillage involves the use of small amounts of non-renewable resources (such as drums, personal protective equipment etc.)	3
(vi) Accidents and Emergency There is a moderate risk of an incident resulting from repacking waste on a customers site, in the Dublin Port Hazwaste facility or on one of the civic amenity sites. An incident involving large quantities of hazardous materials (bulk tank) could result in significant environmental damage (high environmental load).	4
(i) + (ii) + (iii) + (iv) + (v) + (vi) = Severity of Consequences Score, C	**C = 20**
Significance Rating S = F X L X C	**S = 1,000**

Management of this activity by:

Objective 1:
Minimise the Environmental, Health & Safety impacts associated with the repacking of waste either on customer's sites or any of Indaver's facilities.

Procedure(s) :
See Procedures Index
Operations 5.10 Repacking of Waste
Operations 5.19 Lab Smalls
Operations 16.1 Blending Pre-Acceptance Checks

Operations 16.2 Sampling, Loading & Unloading at the Blending Plant
Lab Procedure - Sections 20, 21 and 22
Operations 17.1 Civic Amenity Site - Waste Acceptance, Storage, Loading & Collection
Emergency Response Procedures

Monitoring and Measurement by:
Operations 10.6 Training & Staff Competence
Operations 10.8 Internal Audits
Operations 11.3 Approval & Monitoring of General Contractors

Environmental Aspect No. 2: Transport of Waste Materials

Activity Indaver's activities include arranging for the transport of bulk and packaged hazardous and non hazardous materials to and from Indaver's Dublin Port Hazwaste facility,TWM sites, civic amenity sites and from customer's sites directly to waste facilities. All transport of waste is carried out by either Indaver's own collection vehicle or by approved sub-contractors.
Aspect An incident or release of environmentally hazardous waste (solvents, acids, oxidisers etc.) during transport. Transit of large trucks/vehicles carrying dangerous goods through populated areas. Use of busy road networks. Resource Usage.
Associated Impacts A spillage of waste material could result in a discharge to air, land or water causing an adverse impact to the environment. Flammable liquids/solids could ignite and result in a fire and/or explosion, giving rise to toxic or noxious fumes causing air pollution. Fire water run off could result in ground and/or water pollution. Air quality degradation as a result of the fugitive emissions of exhaust fumes. Resource depletion due to the use of non renewable fuels. Badly secured loads could lead to littering of the surrounding area. Litter will have a negative visual impact and could attract vermin and other nuisances. Traffic disruption as a result of collections and deliveries. Increased environmental noise resulting from the increased volume of traffic. Potential for odour emissions from badly stowed/damaged loads during transport. Noxious odours could degrade air quality & amenity value of the area.

1. Frequency, F Collections are made from customer's sites and deliveries are made to Indaver's Dublin Port Hazwaste facility, civic amenity sites and final waste facilities on a daily basis.	**Score** **F=10**
2. Likelihood of Loss of Control, L **Technical Team & DGSA:** Indaver have a technical team dedicated to the classification of waste streams. This team is responsible for ensuring that waste is in appropriate packaging (e.g. corrosive waste is packed in plastic packaging as opposed to steel) Indaver's DGSA is responsible for ensuring that the requirements of the relevant transport legislation (ADR, IMDG, RID) are adhered to e.g. hauliers transporting dangerous goods must carry fire extinguishers, safety equipment and spill fighting material on board and must have a HazChem licence. **Tremcards:** Tremcards are provided which detail the intervention equipment which must be carried on board. Tremcards can be provided in any required language. **Indaver Collection Vehicle:** Indaver operates collection vehicles manned by fully HazChem trained drivers to carry out collections from customer's sites. This provides increased control over the transport of waste materials. Indaver vehicles are subject to a preventative maintenance programme to keep them in good state of repair and hence reduce likelihood of breakdowns, accidents and minimise noise emanating from the engines. **Service Level Agreement:** All of Indaver's main haulage sub-contractors have signed off on a Service Level Agreement. This SLA outlines the minimum service level requirements which all	**L = 6**

haulage contractors involved in the transport of dangerous goods on Indaver's behalf are expected to meet. It is the hauliers responsibility to ensure that all employees and sub-contractors engaged to carry out work on their behalf are made aware of these requirements. **Approval of Haulage Sub-Contractors:** All haulage sub-contractors used by Indaver are approved as per Operations 11.1 Haulier Approving and Monitoring. The environmental and health & safety probity of hauliers is established through EH&S probity questionnaires. All haulage sub-contractors that make collections from customers sites, civic amenity sites or deliver to the Dublin Port Hazwaste facility must conform with Indaver's EH&S Codes of Practice and must complete a Statement of Conformity with EH&S Codes of Practice. **Haulier Audits:** Indaver conducts on the spot audits of hauliers to ensure they are compliant with the ADR regs and waste collection permit requirements. **Appropriate Packing/Containers/Tankers:** All drums/packages carrying dangerous goods must be UN approved. All containers must be approved and certified under the Convention for Safe Containers (CSC) - they must be tested five years after manufacture and every 2 ½ years subsequently. Bulk tanks have periodic inspections every 2 1/2 and 5 years (or 3 and 6 for road barrels). Bulk tanks are washed and pressure tested after every use. All bulk tanks must have a certificate of approval. **Emergency Response:** Indaver have a fully trained emergency response team available to react to any emergency situations within Ireland. Indaver engage the services of emergency response companies such as Reaktie, Future Industrial Services to respond to incidents during the transport of waste outside of Ireland. **Stowage:** Indaver ensure all loads are appropriately stowed to prevent incidents during transport. All loads leaving civic amenity sites etc should be properly secured to prevent littering.	
Sub-Total	**FxL= 60**

(3) Severity of Consequences, C	
(i) Legislative and Regulatory Compliance Under the Waste Management (Collection Permit) Regulations 2007, Indaver and all of Indaver's haulage sub-contractors must have waste collection permits for the areas in which they are collecting material. Collections from civic amenity sites are exempt from the requirements of the waste collection permit regulations. Waste collection permits reference compliance with local authority bye laws in relation to presentation and collection of waste. Indaver are in compliance with both the requirements of the waste collection permits and referenced bye laws. German hauliers require a Waste License, which is issued by their local authority. UK hauliers must obtain a certificate of Registration under the Control of Pollution (Amendment Act) 1989 issued by their local Environmental Agency. Hauliers operating in Belgium must apply to the relevant Belgian authorities for authorisation to ship waste within Belgium. Transport of dangerous goods is highly regulated - ADR (Road regulations), IMDG (Sea regulations), RID (Rail regulations) and DGSA (Dangerous Goods Safety Adviser) regulations. Indaver are occasionally non compliant with the ADR/IMDG	4

regulations e.g. misdeclaration of waste, wrong packing types, missing labels etc. Under EC Regulation No. 1013/2006 enacted in Ireland under Waste Management (Transfrontier Shipment of Waste) Regulations SI 419 of 2007 a TFS is the legal documentation required for transboundary shipments waste material. Under the Waste Management (Movement of Hazardous Waste) Regulations, SI 147/1998 a C1 form is the legal documentation required to move hazardous waste within Ireland. The Convention on the Contract for the International Carriage of Goods by Road (CMR) (Geneva, 19th May 1956) requires that CMR notes be used for all cross border transport of goods. Indaver is fully compliant with the documentation requirements of these regulations. Collections from civic amenity sites are exempt from the requirements of the C1 regulations. **Litter Pollution Act,SI 213 of 1997:** When transporting waste Indaver must take reasonable measures to prevent the creation of litter from this activity.	
(ii) Community/Employee Sensitivity The generation of vehicular emissions results in degradation of air quality. In addition, noise generated by heavy goods vehicles is an increasingly sensitive issue. All of Indaver's facilities are located in industrial areas and as such there is already a heavy volume of traffic in these areas. However the volume of traffic generated by a civic amenity site is significant and could lead to sporadic complaints by neighbours if not appropriately managed. Indaver supply Tremcards (instructions in case of emergency) and advise hauliers to avoid centres of high populations during road journeys, Indaver ship from Cork where possible for Munster customers, so as to avoid the road journey to Dublin. The quality of material arriving at the Dublin Port Hazwaste facility can be dependent on the hauliers. If waste is not packed appropriately for transport then a haulier should not accept the material for transport. If a haulier consistently delivers waste requiring repacking to the Dublin Port Hazwaste facility it can result in complaints from employees. Having the ability to make collections using the Indaver trucks provides increased control over the quality of material reaching the Dublin Port Hazwaste facility and hence the amount of repackaging required.	2
(iii) Impact on air, land and water Transport has extensive impacts on the environment. The use of land for transport infrastructure, whether road or rail networks, port or airport facilities, encroaches on landscape, natural habitats and biodiversity, and agricultural use. Motor vehicle traffic emits pollutants, which affect air quality and human health, and gives rise to excessive noise, which affects the quality of life. Polluted surface water run-off from road surfaces may affect water resources. Transport due to Indaver operations is limited and would only cause a local nuisance at worst. Where possible Indaver ship directly from Cork for Munster customers thereby eliminating transport emissions associated with transport to Dublin. The Indaver trucks are diesel operated. The possibility of using a low sulphur diesel was considered however the fuel is not yet widely available. The vehicles shall be able to convert to using this fuel when it is more readily available. Any accident involving the transportation of environmentally hazardous materials could result in water pollution and/or contaminated land.	3
(iv) Cost Benefit Any environmental incident as a result of an accident could cause contamination of air, land or water. Materials such as solvents are highly flammable and potential	5

exists for a serious incident if these materials were to ignite. Indaver would incur major costs associated with the clean up of any such incident and resulting fines. If such a situation were to arise the reputation of the company would be damaged, adversely affecting Indaver's business and Indaver could be liable for fines. Indaver have Employers Liability, Public/Products Liability and Motor insurance in place with a €13,000,000, €10,000,000 and €6,500,000 limit of indemnity respectively. Indaver also put a financial guarantee to the value of approximately €19,000 in place for every load which is in transit at any one time. The premiums for such insurance and the bank charges for providing bonding facilities is a major cost to the company.	
(v) Potential for Resource Depletion The use of petrol and diesel in transportation depletes the non-renewable resources of fossil fuels.	3
(vi) Accidents and Emergency There is a moderate probability of an accident during transportation. An incident involving large quantities of hazardous materials (e.g. bulk tank) could result in significant environmental damage (high environmental load).	4
(i)+ (ii) + (iii) + (iv) + (v) + (vi) = Severity of Consequences Score, C	**C = 21**
Significance Rating S = F X L X C	**S = 1,260**

Management of this activity by:

Objective 2:
Minimise the Environmental, Health & Safety impacts associated with the transport of hazardous and non hazardous waste carried out by Indaver and Indaver's subcontractors.

Procedure(s) :
See Procedures Index
Operations 5.3 Inspection of Packages for Carrying Waste
Operations 5.13 On Site Placarding of Bulk and Packaged Waste Loads
Operations 4.2 Classification & Identification of Waste
Emergency Response Procedures
Operations 8.8 Indaver ADR Collection Vehicles - Emergency Response Procedure & Drivers Responsibilities
Operations 8.9 Procedure Upon Receipt of an Emergency Response Call
Movement Procedures

Monitoring and Measurement by:
Operations 10.6 Training & Staff Competence
Operations 10.8 Internal Audits
Operations 5.21 DGSA Incident Investigation and Recording
Operations 11.1 Haulier Approval and Monitoring
Haulier Service Level Agreement
Operations 11.3 Approval & Monitoring of General Contractors

Environmental Aspect No. 3: Waste Handling - Off-loading, Storage & Blending of Waste at the Dublin Port Ha

Activity
Indaver's activities include the operation of an EPA waste licensed transfer station and solvent recovery facility in Dublin port. The activities on site include:

- the off-loading and storage of hazardous and non hazardous packaged wastes
- repacking of non conforming waste materials
- sampling of bulk tankcontainers prior to off loading
- crosspumping of material from bulk tankcontainers into the storage tanks
- the storage and blending of solvents on site in bulk storage tanks
- off-loading of solvent liquid fuel from bulk storage tanks into bulk tankcontainers
- operations of an on site lab

Additionally there can be a number of bulk or packaged transit loads on site at any one time. Transit loads are full or partial loads prepared for shipment on the customer's site which transit the transfer station in order to collect transport documentation. These loads may need to park up in the yard for a period of time while approval to ship is obtained from the relevant competent authorities.

Aspect
An incident or release of environmentally hazardous waste (solvents, acids, oxidisers etc.) as a result of the transfer station activities - a spill during off-loading, storage or repacking.
An incident or release of environmentally hazardous waste (solvents) as a result of the solvent recovery activities - a spill during off-loading and loading of bulk tanks, a rupture of one of the bulk storage tanks, rupture of the solvent transfer lines etc.
Storage of large quantities of hazardous materials on site in drums/IBC's and in bulk tankcontainers.

Use of compressors, forklifts and other heavy machinery during day to day activities.
Resource Usage.
Production of waste samples and laboratory smalls through the laboratory activities.

Associated Impacts
A spillage of waste material could result in a discharge to air, land or water causing an adverse impact to the environment.
Flammable liquids/solids could ignite and result in a fire and/or explosion, giving rise to toxic or noxious fumes causing air pollution. Fire water run off could result in ground and/or water pollution.
Fugitive emissions to the atmosphere could occur during waste handling, sampling and repacking activities causing an adverse impact to the environment.
Fugitive emissions of exhaust fumes from the forklifts and other vehicles on site.
Environmental noise resulting from the operation of heavy machinery such as Forklifts, compressors, pumps etc.
Air emissions from the tank farm vent (carbon unit) could cause an adverse impact to the environment.
Air emissions from the repack room carbon unit could cause an adverse impact to the environment.
Air emissions from the laboratory fumehoods could cause an adverse impact to the environment.
Littering could result from uncontrolled working areas, bad work practises and sloppy housekeeping. Litter will have a negative visual impact and could attract vermin and other nuisances.
Potential for odour emissions from stored material. Potential habitat for rodents, insects, birds. Noxious odours could degrade air quality & amenity value of the area. Vermin could harbour and spread disease and infection.
The facility's infrastructure could have a visual impact on the surrounding communities.

(1) Frequency, F	**Score**
Waste materials are accepted on site between the hours 8am to 7pm, Monday to Friday and for shorter periods on Saturdays. Waste materials are stored on site continually. Waste licence W0036-02 allows for the operation of the site on a 24 hour basis.	**F = 10**
(2) Likelihood of Loss of Control, L	**L = 6**
Waste is accepted, off-loaded and placed into storage as per Operations 4.1 Acceptance & Storage of Waste at the Transfer Station & Solvent Recovery Facility.	

Packaged Waste entering Storage:
All packages are checked visually upon arrival at the facility. Any drums/packages that are not in a satisfactory condition are repacked. All drums/containers holding hazardous material must be UN approved. Any hazardous material in non-UN approved packaging is quarantined until it can be repacked.

Indaver carry out collections from customers site using the Indaver collection trucks - this ensures increased control over the quality of material reaching the facility. We also conduct training were possible with haulage sub-contractors to ensure that they do not collect waste which is unsuitable for transport and hence will require repacking upon acceptance at the facility.

Waste materials are segregated and stored on site in accordance with the UK Health & Safety Executive guidance (HSG71) on "Chemical Warehousing, the storage of packaged dangerous substances". A copy of the Segregation Plan is available on the cladding of the storage bays. The bays are segregated into flammable, toxic and corrosive and further segregation takes place within each of the bays in accordance with the segregation plan. There are also separate Chemstore cabinets for the following waste types:

- Oxidizing
- Organic peroxides
- Spontaneously combustible
- Dangerous when wet
- Flammable gases
- Quarantine

Class 9 and non hazardous waste can be stored in either the flammable, toxic or corrosive bays.

Pallets are wrapped or banded as appropriate before being put on racks in the storage bays.

Solvent Recovery Facility:
Before any waste stream is shipped for blending to the Solvent Recovery Facility the procedure for Pre Acceptance Checks, Operations 16.1, must be followed and the Material Assessment Questionnaire (MAQ), Operations 16.1.1, must be completed by the customer to provide as much background information as possible on the waste. Only when a stream has been approved by the Blending plant Planner and a Blend ID issued for the stream in accordance with this procedure can the material be shipped to the SRF.

Upon arrival of bulk tanks or packages for blending at the facility a visual inspection of the labels, valves and emergency cord is performed.
All sampling, loading and off-loading of bulk tanks is conducted in the tanker loading/unloading bay and all drumming up occurs in the repack room in accordance with the procedure Operations 16.2 Sampling, Loading & Unloading at the Blending Plant.

The procedure Operations 16.3 Stream Acceptance & Blending details the decision making criteria used when determining whether a tanker of waste can be accepted for blending and outlines the methodology employed by Indaver when blending waste streams to produce a fuel of desired specification.

On Site Laboratory:
Laboratory analysis is carried out on every bulk liquid hazardous waste load to be blended and on composite samples from the drumming up procedure.
The main objectives of the waste analysis procedures are:

- to check whether the properties of the waste delivered correspond to the characteristics described in the specification agreed with the customer
- to identify any potential safety or compatibility issues. Compatibility testing is carried out in accordance with the American Society for Testing and Materials (ASTM) Standard entitled "Standard Test Methods for Compatibility of Screening Analysis of Waste (Ref: D 5058-90) and our in-house methods that

were developed by Indaver NV.

Detailed procedures have been written for all laboratory activities (see section 20, 21, 22 and 23) including waste management, operation of all equipment, management of spills etc.

Control Systems:
The blending operation is controlled remotely from the Control Room within the Administration Building. The control system monitors the fill levels in all of the tanks at the Tank Farm and controls the transfer of solvents between the bulk tanks.

Partial/Full Transit Loads:
Bulk and packaged full loads are temporarily stored on site in bulk tank containers and containers.
All containers must be approved and certified under the Convention for Safe Containers (CSC) - they must be tested five years after manufacture and every 2 ½ years subsequently.
Bulk tanks have periodic inspections every 2 1/2 and 5 years (or 3 and 6 for road barrels). Bulk tanks are washed and pressure tested after every use. All bulk tanks must have a certificate of approval.

Every tankcontainer that transits the facility has a visual inspection of the labels, valves and emergency cord performed by a member of the site operations team. Daily inspections of containers and bulk tanks are performed by the site operations team to check for leaks/spills.

Technical Team:
Indaver have a technical team dedicated to the classification of waste streams. This team is responsible for ensuring that waste is in appropriate packaging (e.g. corrosive waste is packed in plastic packaging as opposed to steel).

Repacking of Waste on Site:
Where possible, all repacking activities at the transfer station are carried out within the repack room. Before any chemical transfer operations commence, the air handling units, which are ducted through an activated Carbon adsorption filter, are switched on. A minimum of two Indaver operatives wearing the appropriate PPE are always present during chemical transfer operations

The area is secured and signs erected to prevent any unauthorised access. An LEL indicator is used to monitor the area for flammable atmospheres and to monitor the Oxygen levels in the air.

The repack room is graded and drained to dedicated sump.

Repacking of waste is only carried out if a drum is not suitable for transport (e.g. non UN approved drum) or in an emergency situation such as a leaking drum.

This area is equipped with spill control equipment.

Containment Systems - Stormwater Run Off:
All stormwater runs to the main sump and is pumped via a carbon unit into the surface water storage tank. The discharge valve is kept locked at all times and only the facility manager and compliance manager have keys. The contents of this tank are analysed prior to discharge to ensure compliance with the discharge limits set in the facilities waste licence.

In 2007 results from three months of monitoring of the stormwater were forwarded to the EPA and Dublin City Council for their approval of our trigger levels. Once we receive the approval from both the EPA and Dublin City Council we will be moving from a batch discharge methodology to 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), will be 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.

A class 1 oil / petrol interceptor has been installed 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.

Containment Systems - Yard Area and Drainage Network:
The yard area is fully contained in that the hardstanding area is graded and all surface water flows into the sites main drainage network.
Indaver upgraded the drainage system on site in Feb-03 by lining the pipes of the current drainage network with a chemically resistant liner in order to provide added protection against all types of potential spills. This provides a level of protection not found in similar facilities and more akin to the standards associated with process pipework and drainage in the PharmaChem sector.

Containment Systems - Storage Bays:
Each of the storage bays (flammable, corrosive and toxic) are individually contained with separate sumps in each bay. These sumps are completely segregated from the on site drainage system so any spill within the bays is completely contained. Any liquid that is collected in the sumps is tested prior to removal. If the liquid is contaminated, it is collected in drums and sent offsite for disposal. If uncontaminated it is released into the main stormwater drainage network.

Containment Systems - Tanker Loading/Unloading Bay and Tank Farm:
The following containment systems are in place in the Tanker Loading/Unloading Bay and Tank Farm:

- The Tank Farm is surrounded by a dedicated bund;
- The Tanker Loading / Unloading Bay is graded away from the entrance and drains to a dedicated sump;
- The two pump bunds contain individual sumps.
- All solvent pipelines run over paved areas. These are visually checked as part of regular site inspections.
- All of solvent tanks are double skinned and have over-fill protection in the form of level switches / interlocks.
- The solvent tanks also have leak detection to detect if the inner wall has leaked

All bunded areas are self-contained. Liquid removal is by discretionary discharge. Storm water arising from the Tank Farm bund and Tanker Loading / Unloading Area is tested for contamination prior to discharge to the main drainage system. In the event of contamination, this material is sent offsite for disposal.

In the event of a leak from a road tanker on the site the tanker is parked on the Tanker Loading / Unloading Area.

Containment Systems - Firewater Retention:
The capacity of the firewater tank is 600 m3. 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 m3. 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 . The tanks within the bund are all of double walled construction.
- o Contaminated water retention tank (the current storm water retention tank) with a capacity of 170 m3;
- o The yard which will act as an effective containment area of approximately 400 m3.

In total there is approximately 1,400 m3 of firewater storage capacity onsite. If the firewater is contaminated it will be sent offsite for treatment or disposal.

Air Monitoring:
The ambient air quality is monitored annually (quarterly for the first year of operation of the solvent recovery activities) in accordance with schedule D, Table D.2.4 of Indaver's waste licence W0036-02 (volatile organic carbons and total suspended particulates). The results of this monitoring have always shown the values for the volatile organic compounds and the total suspended particulates to be below the relevant TA Luft emission standard limit.

Biannual air emissions monitoring is conducted at specified monitoring points in accordance with Table D.2.5 of Indaver's waste licence W0036-02 (TA Luft Organics and Total Organic Carbon (as C)). The monitoring locations are the carbon units outside the repack room and at the tank farm.

These two emission points are also monitored on a monthly basis, as part of the facility's Monthly Checks, Operations 4.12.3, using gas detectors.

Major Accident Scenarios:
All Major Accident Scenarios (MAS's) have been reviewed as part of the Safety Report under the Seveso regulations. Appropriate protection and intervention Measures have been put in place to limit consequences, these are also detailed in the Safety Report. An Internal Emergency plan addressing these MAS's has been prepared and submitted to Dublin Fire Brigade. Dublin Fire Brigade subsequently prepared an External Emergency Plan for the facility and a full drill was conducted on site with the Fire Brigade and Dublin port in March 2007.

Emergency Response Team:
The facility has an emergency response team. This team conducts spill drills every 5 weeks. There is a high level of staff training, including chemical spill training, fire extinguisher training and hazchem training.

Generation of Noise:
Indaver have some control over their own machinery but has less control over the potentially noisy vehicles arriving on site and noise from adjacent industrial activities.
Baseline monitoring of noise at 5 locations (NM1 to NM5) at the transfer station prior to commencement of operations showed high ambient levels. Annual monitoring since commencement of operations has shown that noise emissions from the site have a minimal impact on the local environment.

Nuisance's/Pests:
Pest control contractors have set bait and traps and carry out regular inspections. Results of these inspections indicate the absence of vermin and pests.
No food waste is stored on-site (apart from in the offices). Cleaners are contracted to clean the offices on a weekly basis. Kitchen/canteen areas are provided with adequate storage and refrigeration for food items.
Daily inspections for any signs of vermin are conducted as part of the daily health & safety checks.

Visual Impact:
In visual terms, the landscape surrounding the site and of the entire Port area in general is industrial in character. There are no visual amenity areas associated with the Port and the site is situated some distance away from any residential settlement.

Dublin Port is separated from the residential areas of Marino/Clontarf to the north and Ringsend/Irishtown to the south by water channels. In all cases the site is approximately 700m away from residential areas. The site is relatively flat and low lying. The land in Dublin Port and surrounding areas is also relatively flat. Direct and close up views of the site are limited. The site can only be viewed directly from the public roadway (Tolka Quay Road), as one approaches the site from either direction. It can also be seen from the junction of Breakwater Road North and Tolka Quay Road. The following are the main elements of the facility: o 1 x 300m³ tanks (8.5m in height) o 2 x 75m³ tanks (15 m in height) o 8m diameter x 8m high surface water storage tank o storage bay areas o 1 x Nitrogen storage tank (5 m in height) o Repackaging Room/Forklift Store (5.1m parapet height) o Administration Building (6.8m parapet height) o Fire Water Storage Tank (8.5m in height). These visual developments are of a similar nature to other existing developments in the Port area. The main visual elements of the facility are the storage tanks. These are grey in colour, so that they merge with existing surrounding facilities. A row of hardy trees has been planted along the road frontage of the facility. The facility does not have a significant visual impact. The impact on the long-range views from Clontarf are imperceptible and the character of the views are unaffected. The site will not be visible from the west or south, except close to the site within the Port itself. Annual maintenance as well as good housekeeping procedures also ensure the site is maintained to a high standard and this together with proper landscaping will minimise the visual impact of the facility. **Heavy Equipment:** Indaver's heavy equipment (such as Forklifts, pumps etc) are subject to a preventative maintenance programme to keep them in a good state of repair and hence reduce likelihood of breakdowns, accidents, reduce emissions and minimise noise emanating from their engines. **Housekeeping:** Good housekeeping reduces the likelihood of litter from the site scattering and becoming a local nuisance.	
Sub-Total	***F X L = 60***
(3) Severity of Consequences, C	
(i) Legislative and Regulatory Compliance **Facility Licence W0036-02:** The facility was first granted a waste licence to operate by the Environmental Protection Agency on the 26th February 1999 under the Waste Management (Licensing) Regulations 1997 (since amended by the Waste Management (Licensing) Regulations, 2004). A new licence incorporating the solvent blending activities was issued by the Agency on the 15th July 2005. This licence has 13 conditions which we must comply with. These conditions cover areas such as operating hours, vermin control, litter, noise monitoring, waste types that can be accepted on site, etc. The EPA can inspect the transfer station at any time that they wish to ensure that we are maintaining compliance with the conditions of this licence. They conduct an official visit once a year for which they give us prior notification but can also conduct	3

spot checks for which no notice is given. Indaver has been issued with 4 non compliances by the EPA since commencement of operations on site.

Any environmental release or incident on the transfer station site would render Indaver liable for prosecution under the conditions of waste license Reg. No. W0036-02.

Noise Monitoring:
Noise monitoring is conducted in accordance with Schedule D (Table D.2.1) of the waste licence (W0036-02). Annual monitoring has shown that noise emissions from the site have a minimal impact on the local environment.

Air Monitoring:
Emissions to atmosphere and air quality monitoring is conducted in accordance with Schedule D (Table D.2.4 and D.2.5) of the waste licence (W0036-02).
Annual ambient air quality monitoring reports have always shown the values for the volatile organic compounds and the total suspended particulates to be below the relevant TA Luft emission standard limit.

Surface Water Discharge Monitoring:
Direct emissions to surface water are not allowed (Condition 6.3). Monitoring of discharges of surface water run off from the facility must be carried out in accordance with Schedule D (Table D.2.2) of the waste licence (W0036-02).
Analysis of the surface water run off is carried out prior to discharge to ensure all parameters are in compliance with the emission limits set out in schedule C.1 of the waste licence (W0036-02) . Indaver have never discharged surface water outside the limits set out in the waste licence.

Under the condition 6.7 and 6.8 of the new licence (W0036-02) surface water discharges will move from batch discharges to continuous discharge. All discharges will pass through a monitoring weir were they will be tested for pH, conductivity and TOC. Any exceedances of limits/trigger values (which will be agreed with the Agency in accordance with condition 6.7.2) will result in the surface water being diverted to the surface water tank for further analysis. This system is will come into operations in 2008.

Groundwater Monitoring:
Direct emissions to groundwater are not allowed (Condition 6.4). Groundwater monitoring is conducted in accordance with Schedule D (Table D.2.3) of the waste licence (W0036-02). There are no limits or trigger values in the licence for groundwater.

Seveso:
Under the European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulations, 2006, the facility is classified as an Upper Tier Seveso site and hence must adhere to the requirements of this legislation. The final Safety Report for the Facility was submitted to the HSA in August 2006.
The Health & Safety Authority confirmed in writing on the 13th September 2006 that the Safety Report for the Solvent Recovery Facility as required under the SEVESO regulations was "Deemed Adequate". A five-year review period was allocated to the report.

Indaver have put systems and procedures in place to ensure compliance with the requirements of the Seveso regulations. These are described in the procedure Management of Seveso, Operations 13.8. Any changes to the facility will be conducted in accordance with the Management of Change Procedure, Operations 13.7 to ensure these changes are in compliance with the Seveso regulations.

Waste Management Act:
Under the Waste Management Act, 1996 Indaver must ensure that its waste facilities comply with the provisions of this Act, i.e. they are licensed by the EPA or permitted by their local authorities. Indaver must minimise waste production from its

own activities and avoid causing environmental pollution from the management of waste on its site. Indaver must identify, segregate and store waste properly on site before it is sent on to be either recovered/recycled or disposed off. If sub-contracting work Indaver must use bone fide waste disposal/recovery operators who comply with the provisions of this Act, i.e. they are licensed by the EPA or permitted by their local authority. Indaver must also use appropriately licensed contractors to remove waste from their premises. Records must be kept of any hazardous waste it sends for disposal/recovery. **Litter Pollution Act, SI 213 of 1997:** Under the Litter Pollution Act, SI 213 of 1997, Indaver must ensure that any waste stored on site or any other activity carried out on-site does not cause a litter nuisance in a public place or that is visible from a public place. When transporting waste Indaver must take reasonable measures to prevent the creation of litter from this activity. Indaver must prevent the creation of litter nuisance on their premises/land that is in a public place or is visible from a public place. **ATEX Regulations:** The site complies with the recent ATEX legislation SI 258 of 2003, Safety, Health and Welfare at Work (Explosive Atmospheres) Regulations, 2003.. Hazardous area zones at the site are based on various industry codes and standards and on EN 60079-10:2003 Electrical Apparatus for Explosive Gas Atmospheres Part 10: Classification of Hazardous Areas.	
(ii) Community/Employee Sensitivity Any environmental incident or release at the facility could adversely affect the company's public image and could result in complaints from the surrounding communities. A serious incident could result in the EPA revoking our waste licence. Environmental Noise - High baseline levels and the absence of dwellings in the vicinity of the facility indicate that no complaints would occur. Noxious odours or infestation of vermin pests could lead to complaints from the neighbouring businesses and from employees.	3
(iii) Impact on air, land and water Under normal operating conditions the activities on site should have little impact on the surrounding environment. At most it would be a local nuisance e.g. odour, litter, environmental noise etc. The main environmental impact would occur under emergency conditions such as a spillage during acceptance, storage, off-loading/loading of bulk solvents or blending that could contaminate surface water run off. The risk of contamination is reduced by the containment arrangements on site. Environmental noise is considered as an emission to air. Annual monitoring since commencement of operations has shown that noise emissions from the site have a minimal impact on the local environment. No complaints about odour or sightings of pests/vermin have been received.	2
(iv) Cost Benefit An accident involving the storage of hazardous materials on-site would involve an insurance liability. Materials such as solvents are highly flammable and potential exists for a serious incident if these materials were to come into contact with fire or ignition sparks. Indaver would incur major costs associated with the clean up of any such incident. If such a situation were to arise the reputation of the company would be damaged, adversely affecting Indaver's business and Indaver could be liable for fines. It is possible that Indaver's waste licence would be revoked. This would incur major	5

costs to the company.	
(v) Potential for Resource Depletion Packaging of hazardous materials or the clean up of a spill involves the use of small amounts of non-renewable resources (such as drums, personal protective equipment etc.). The use of a diesel forklift on site depletes the non renewable resources of fossil fuels. Indaver operate three forklifts on site, one diesel and two electric. It is planned that the remaining diesel forklift is replaced with a third electric forklift.	3
(vi) Accidents and Emergency A large quantity of various chemicals are stored on site which could lead to a high environmental load in the event of an accident such as a fire/spillage. However there is a low probability of such an incident due to the high level of operational controls on site. This aspect has been given a score of 3 due to low probability and high potential load, (i.e. moderate risk), of an emergency/accident situation.	3
(i) + (ii) + (iii) + (iv) + (v) + (vi) = Severity of Consequences Score, C	**C = 19**
Significance Rating S = F X L X C	**S = 1,140**

Management of this activity by:

Objective 3:
Minimise the Environmental, Health & Safety impacts associated with the off-loading and storage of hazardous and non hazardous waste on site at the transfer station.

Procedure(s) :
See Procedures Index
Waste Handling & Transfer Station Operational Procedures
Operations 4.1 Acceptance & Storage of Waste at the Transfer Station & Solvent Recovery Facility
Operations 16.1 Blending Pre-Acceptance Checks
Operations 16.2 Sampling, Loading & Unloading at the Blending Plant
Operations 16.3 Stream Acceptance & Blending
Lab Procedure - Sections 20, 21 and 22
Operations 5.10 Repacking of Waste
Operations 5.3 Inspection of Packages for Carrying Waste
Operations 5.12 Labelling of Packages
Operations 5.13 On Site Placarding of Bulk and Packaged Waste Loads
Operations 4.2 Classification & Identification of Waste
Emergency Response Procedures - Section 8
Operations 8.2 Spill Clean Up at the Transfer Station

Monitoring and Measurement by:
Operations 10.6 Training & Staff Competence
Operations 6.7 Monitoring and Measuring of Environmental Emissions
Operations 4.12 Health & Safety Checks
Operations 10.8 Internal Audits
Operations 13.8 Management of Seveso
Operations 13.7 Management of Change

Environmental Aspect No. 4: Waste Handling - Loading of Containers and Tankers for Shipment

Activity Indaver's activities include the loading of packaged hazardous and non hazardous waste materials onto containers for shipment to waste facilities within Ireland, the UK and the continent. The solvent recovery activities involve the loading of tankers for shipment to a cement kiln or a recovery or incinerator outlet. This work is carried out by both Indaver operatives and site services contractors on customers' sites, at the Dublin Port Hazwaste facility, at TWM sites, at the civic amenity sites and at the WEEE recycling facilities operated by the company.
Aspect An incident or release of environmentally hazardous waste (solvents, acids, oxidisers etc.) during loading of containers or tankers for shipment. Use of compressors, forklifts and other heavy machinery during the loading activities. Resource Usage.
Associated Impacts A spillage of waste material could result in a discharge to air, land or water causing an adverse impact to the environment. Flammable liquids/solids could ignite and result in a fire and/or explosion, giving rise to toxic or noxious fumes causing air pollution. Fire water run off could result in ground and/or water pollution. Fugitive emissions to the atmosphere could occur during loading activities causing an adverse impact to the environment. Fugitive emissions of exhaust fumes from the use of forklifts during loading. Environmental noise resulting from the operation of heavy machinery such as Forklifts, Bobcats etc. Badly secured loads could lead to littering of the surrounding area. Litter will have a negative visual impact and could attract vermin and other nuisances. Potential for odour emissions from badly stowed loads (damaged drums) or incorrectly loaded tankers. Noxious odours could degrade air quality & amenity value of the area.

(1) Frequency, F	**Score**
Site operations put together Dublin Port Hazwaste facility loads approximately 4-5 times a week. Site operations load solvent recovery tankers approximately 2-3 times a week. Site services perform load supervisions on customers' sites approximately 3 to 4 times a week. Civic amenity site loads are put together on an ongoing basis and approximately 2-3 loads leave site per week. Waste containers/skips are collected on a daily basis.	**F = 9**
(2) Likelihood of Loss of Control, L **Civic Amenity Sites:** All loads leaving the civic amenity sites are secured and covered to prevent littering. Full loads of waste fridges and WEEE are put together on site. All fridges must have the doors secured with pallet wrap or tape. WEEE is loaded in crates, boxes or cages. If these loads are not packed and secured adequately it could result in the release of the hazardous components from the fridges and WEEE during transport. Waste paint tins are also packed on the civic amenity sites. The paint tins are packed in lined boxes or steel drums depending on whether the paints are hazardous or non hazardous. If these paints are not packed correctly it can lead to leaks during transport. **Dublin Port Hazwaste Facility Loads and Loads from Customer Sites:** Packaged waste loads from the Dublin Port Hazwaste facility and from customer sites are loaded for shipment in accordance with Operations 5.4 Loading Containers for Shipment. o All 40ft containers are approved and certified under the Convention for Safe Containers (CSC) and are inspected prior to loading to ensure that the container is free of major defects and safe for transport. o All packages are visually inspected prior to being loaded in the container.	**L = 7**

- Any drums/packages that are not in a satisfactory condition are not loaded.
- All drums/packages are appropriately labelled with an Indaver label.
- All pallets are pallet wrapped/strapped securely ensuring that all the items on the pallet are packed tightly together.
- All packages must be appropriate for the material type being transported.
- The drums/packages are appropriately stowed and secured by appropriate means to prevent them from being significantly displaced during transport.
- Additional pallets are placed between any spaces on the load and the end space between the load and the door of the container.
- Side wall fastening straps are used where necessary to secure the load.
- A load plan is completed for every load.

Additional Requirements for Dangerous Goods:

- Loads for export by sea are put together in accordance with Part 7.2.1.16 (Segregation table) of Volume 1 of the IMDG code.
- All drums/containers holding regulated material must be UN approved. Any regulated material in non-UN approved packaging is not loaded.
- The pallets are loaded on the container in accordance with recommendations laid down in Part 7.5.2 (Packing of cargo transport units) of Volume 1 of the IMDG code.
- All drums/packages are appropriately labelled with an Indaver label giving a description of the waste, UN numbers, emergency contact numbers and hazard diamonds.
- Once regulated material has been loaded on the container, the container is labelled with the appropriate hazard diamonds.

If these loads are not loaded, segregated and stowed correctly it can lead to an emergency situation such as a spill, fire etc during transport.

Solvent Recovery Facility:
Before any waste stream is loaded for shipment it must be sampled in accordance with Operations 16.2 Sampling, Loading & Unloading at the Blending Plant to confirm the a fuel of desired specification has been prepared.

All loading of tankers is conducted in the tanker loading/unloading bay in accordance with the procedure Operations 16.2 Sampling, Loading & Unloading at the Blending Plant.

Control Systems:
The loading operation is controlled remotely from the Control Room within the Administration Building. The control system monitors the fill levels in all of the tankers.

Containment Systems - Tanker Loading/Unloading Bay:
The following containment systems are in place in the Tanker Loading/Unloading Bay:

- The Tanker Loading / Unloading Bay is graded away from the entrance and drains to a dedicated sump;
- The two pump bunds contain individual sumps.
- All solvent pipelines run over paved areas. These are visually checked as part of regular site inspections.

All bunded areas are self-contained. Liquid removal is by discretionary discharge. Storm water arising from the Tanker Loading / Unloading Area is tested for contamination prior to discharge to the main drainage system. In the event of contamination, this material is sent offsite for disposal.

In the event of a leak from a road tanker on the site the tanker is parked on the Tanker Loading / Unloading Area.

Air Monitoring:
The ambient air quality is monitored annually (quarterly for the first year of operation

of the solvent recovery activities) in accordance with schedule D, Table D.2.4 of Indaver's waste licence W0036-02 (volatile organic carbons and total suspended particulates). The results of this monitoring have always shown the values for the volatile organic compounds and the total suspended particulates to be below the relevant TA Luft emission standard limit. Biannual air emissions monitoring is conducted at specified monitoring points in accordance with Table D.2.5 of Indaver's waste licence W0036-02 (TA Luft Organics and Total Organic Carbon (as C)). The monitoring locations are the carbon units outside the repack room and at the tank farm. These two emission points are also monitored on a monthly basis, as part of the facility's Monthly Checks, Operations 4.12.3, using gas detectors. **Major Accident Scenarios:** All Major Accident Scenarios (MAS's) have been reviewed as part of the Safety Report under the Seveso regulations. Appropriate protection and intervention Measures have been put in place to limit consequences, these are also detailed in the Safety Report. An Internal Emergency plan addressing these MAS's has been prepared and submitted to Dublin Fire Brigade. Dublin Fire Brigade subsequently prepared an External Emergency Plan for the facility and a full drill was conducted on site with the Fire Brigade and Dublin port in March 2007. **Training:** There is a high level of staff training, including stowage, loading, IMDG & ADR awareness (segregating of waste etc.) and hazchem training. **Emergency Response:** Indaver have a fully trained emergency response team available to react to any emergency situations within Ireland. Indaver engage the services of emergency response companies such as Reaktie, Future Industrial Services to respond to incidents during the transport of waste outside of Ireland. **Heavy Equipment:** Indaver's heavy equipment such as Forklifts and Bobcats are subject to a preventative maintenance programme to keep them in a good state of repair and hence reduce likelihood of breakdowns, accidents and minimise noise emanating from them. **Stowage:** Indaver ensure all loads are appropriately stowed to prevent incidents during transport. All loads leaving civic amenity sites etc should be properly secured to prevent littering.	
Sub-Total	***F X L = 63***
(3) Severity of Consequences, C	
(i) Legislative and Regulatory Compliance Transport of dangerous goods is highly regulated - ADR (Road regulations), IMDG (Sea regulations), RID (Rail regulations) and DGSA (Dangerous Goods Safety Adviser) regulations. Indaver are occasionally non compliant with the ADR/IMDG regulations e.g. misdeclaration of waste, wrong packing types, missing labels etc. Indaver loads are inspected sporadically by the Dutch and German transport police and also by the local authority office of environmental enforcement. Indaver could be liable to prosecution by customers, local authorities, the EPA or the HSA for any incidents involving containers we have loaded for shipment. Indaver have received minor fines on a number of occasions for non compliance with the stowage requirements of the IMDG. **Facility Licence W0036-02:** The facility was first granted a waste licence to operate by the Environmental Protection Agency on the 26th February 1999 under the Waste Management	4

(Licensing) Regulations 1997 (since amended by the Waste Management (Licensing) Regulations, 2004). A new licence incorporating the solvent blending activities was issued by the Agency on the 15th July 2005.

This licence has 13 conditions which we must comply with. These conditions cover areas such as operating hours, vermin control, litter, noise monitoring, waste types that can be accepted on site, etc.

The EPA can inspect the facility at any time that they wish to ensure that we are maintaining compliance with the conditions of this licence. They conduct an official visit once a year for which they give us prior notification but can also conduct spot checks for which no notice is given. Indaver has been issued with 4 non compliances by the EPA since commencement of operations on site.

Any environmental release or incident on the facility site would render Indaver liable for prosecution under the conditions of waste license Reg. No. W0036-02.

Noise Monitoring:
Noise monitoring is conducted in accordance with Schedule D (Table D.2.1) of the waste licence (W0036-02). Annual monitoring has shown that noise emissions from the site have a minimal impact on the local environment.

Air Monitoring:
Emissions to atmosphere and air quality monitoring is conducted in accordance with Schedule D (Table D.2.4 and D.2.5) of the waste licence (W0036-02).
Annual ambient air quality monitoring reports have always shown the values for the volatile organic compounds and the total suspended particulates to be below the relevant TA Luft emission standard limit.

Surface Water Discharge Monitoring:
Direct emissions to surface water are not allowed (Condition 6.3). Monitoring of discharges of surface water run off from the facility must be carried out in accordance with Schedule D (Table D.2.2) of the waste licence (W0036-02). Analysis of the surface water run off is carried out prior to discharge to ensure all parameters are in compliance with the emission limits set out in schedule C.1 of the waste licence (W0036-02) . Indaver have never discharged surface water outside the limits set out in the waste licence.

Under the condition 6.7 and 6.8 of the new licence (W0036-02) surface water discharges will move from batch discharges to continuous discharge. All discharges will pass through a monitoring weir were they will be tested for pH, conductivity and TOC. Any exceedances of limits/trigger values (which will be agreed with the Agency in accordance with condition 6.7.2) will result in the surface water being diverted to the surface water tank for further analysis. This system is will come into operation in 2008.

Groundwater Monitoring:
Direct emissions to groundwater are not allowed (Condition 6.4). Groundwater monitoring is conducted in accordance with Schedule D (Table D.2.3) of the waste licence (W0036-02). There are no limits or trigger values in the licence for groundwater.

Seveso:
Under the European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulations, 2006, the facility is classified as an Upper Tier Seveso site and hence must adhere to the requirements of this legislation. The final Safety Report for the Facility was submitted to the HSA in August 2006.
The Health & Safety Authority confirmed in writing on the 13th September 2006 that the Safety Report for the Solvent Recovery Facility as required under the SEVESO regulations was "Deemed Adequate". A five-year review period was allocated to the report.

Indaver have put systems and procedures in place to ensure compliance with the

requirements of the Seveso regulations. These are described in the procedure Management of Seveso, Operations 13.8. Any changes to the facility will be conducted in accordance with the Management of Change Procedure, Operations 13.7 to ensure these changes are in compliance with the Seveso regulations. **Waste Management Act:** Under the Waste Management Act, 1996 Indaver must ensure that its waste facilities comply with the provisions of this Act, i.e. they are licensed by the EPA or permitted by their local authorities. Indaver must minimise waste production from its own activities and avoid causing environmental pollution from the management of waste on its site. Indaver must identify, segregate and store waste properly on site before it is sent on to be either recovered/recycled or disposed off. If sub-contracting work Indaver must use bone fide waste disposal/recovery operators who comply with the provisions of this Act, i.e. they are licensed by the EPA or permitted by their local authority. Indaver must also use appropriately licensed contractors to remove waste from their premises. Records must be kept of any hazardous waste it sends for disposal/recovery. **ATEX Regulations:** The site complies with the recent ATEX legislation SI 258 of 2003, Safety, Health and Welfare at Work (Explosive Atmospheres) Regulations, 2003.. Hazardous area zones at the site are based on various industry codes and standards and on EN 60079-10:2003 Electrical Apparatus for Explosive Gas Atmospheres Part 10: Classification of Hazardous Areas. **Litter Pollution Act, SI 213 of 1997:** When transporting waste Indaver must take reasonable measures to prevent the creation of litter from this activity.	
(ii) Community/Employee Sensitivity Any environmental incident or release during loading on one of Indaver's sites or on a customer's site could adversely affect the company's public image and could result in sporadic complaints. An environmental incident during transport resulting from the incorrect loading of waste material could result in a fine and/or prosecution from the relevant authorities (e.g. Dutch/German transport police).	2
(iii) Impact on air, land and water Under normal operating conditions the loading activities should have little impact on the surrounding environment. At most it would be a local nuisance e.g. odour, litter, environmental noise etc. Poor loading/stowage of waste materials could lead to an environmental incident during transport. There is also the possibility of a spill during the loading operation itself. Discharge of environmentally hazardous wastes to atmosphere, land or water as a result of a such an incident could cause short term adverse impact on environmental media.	3
(iv) Cost Benefit Any environmental incident caused by Indaver could cause contamination of air, land or water. Materials such as solvents are highly flammable and potential exists for a serious incident if these materials were to come into contact with fire or ignition sparks. Indaver would incur major costs associated with the clean up of any such incident. If such an incident occurred at the Dublin Port Hazwaste facility it is possible that Indaver's waste licence would be revoked. If such an incident occurred during transport it could result in a fine and/or prosecution from the relevant authorities e.g. Dutch/German transport police. If such an incident occurred at one of the civic amenity sites it is possible that the facilities certificates of registration would be revoked.	5

If such a situation were to arise the reputation of the company would be damaged, adversely affecting Indaver's business and Indaver could be liable for fines.	
(v) Potential for Resource Depletion Stowage of containers involves the use of both renewable and non renewable resources - pallets, ratchet straps etc.	3
(vi) Accidents and Emergency There is a moderate to high probability of an accident occurring as a result of the incorrect stowage of a container for shipment or loading of a tanker with a medium to high environmental load. Any damage caused (spill, fire, water pollution and/or contaminated land) would be fully cleaned up and the area reinstated to previous condition.	4
(i) + (ii) + (iii) + (iv) + (v) + (vi) = Severity of Consequences Score, C	**C =21**
Significance Rating S = F X L X C	**S = 1,323**

Management of this activity by:

Objective 3:
Minimise the Environmental, Health & Safety impacts associated with the loading of hazardous and non hazardous waste into containers for shipment.

Procedure(s) :
See Procedures Index
Operations 5.4 Loading Containers for Shipment
Operations 5.3 Inspection of Packages for Carrying Waste
Operations 5.13 On Site Placarding of Bulk and Packaged Waste Loads
Operations 4.2 Classification & Identification of Waste
Operations 17.1 Civic Amenity Site - Waste Acceptance, Storage, Loading & Collection
Emergency Response Procedures
Waste Handling Procedures

Monitoring and Measurement by:
Operations 10.6 Training & Staff Competence
Operations 10.8 Internal Audits
Operations 5.21 DGSA Incident Investigation and Recording

Environmental Aspect No. 5: Energy & Resource Usage and Generation of Waste

Activity Waste storage and management activities at Indaver's facilities: o Dublin Port Hazwaste Facility o Civic Amenity Sites - Limerick and Meath o Office facilities - Dun Laoghaire and Cork
Aspect Indaver's activities utilise renewable and non renewable natural resources such as diesel, electricity, paper, packaging etc. o **Water** is used on the different sites for general office purposes and for the testing of the Dublin Port Hazwaste facility's fire suppression system, fire hydrants and safety showers. o **Electricity** is required for the operation of office equipment, lighting and heating as well as site floodlighting and the operation of heavy machinery such as the electric forklift, compactors, balers, compressors, compactors etc. o **Diesel** is used for the operation of the forklifts, Bobcat, Teleporter, company vehicles, Diesel back up generator, collection trucks and vans. o **Paper** is used in large quantities in the offices. o **Other resources** are used in the form of packaging materials during repacking operations. PPE etc. during waste handling. Timber pallets are used during loading and stowage of containers. Indaver's activities and the utilisation of renewable and non renewable resources results in the generation of hazardous and non hazardous waste materials. o Repacking activities result in the generation of waste such as contaminated PPE, used packaging and broken or contaminated pallet. o Obsolete electrical equipment and fluorescent tubes are generated. o Non hazardous waste is generated through the office activities on each site e.g. paper, cardboard, cartridges etc. o Waste broken/contaminated pallets are accumulated at the Hazwaste facility. o Residual waste is generated at each location from general welfare facilities e.g. canteen waste, plastics etc. o Where necessary contamination such as cardboard, plastics and other residual fractions are removed from the waste paper stream at the paper warehouse.
Associated Impacts Depletion of renewable and non renewable natural resources. Disposal of hazardous and non hazardous waste has an impact on air, land and water through the effects of incineration, landfilling and physical /chemical treatment.

(1) Frequency, F Water, electricity, diesel and other resource usage is a day to day requirement of Indaver's operations. Electricity is utilised outside of operating hours for site floodlighting at the Hazwaste facility and civic amenity sites and for running alarm systems, computer systems etc. Non Hazardous and hazardous waste is generated daily. Waste paper, cardboard etc. is generated mainly by office activities. Contaminated PPE occurs daily during repacking and on site activities. Broken pallets are generated through the Hazwaste facility's activities.	**Score** **F = 10**
(2) Likelihood of Loss of Control, L **Water:** Indaver are not major users of Water. The uses being confined to toilet and washroom facilities on the different sites and testing safety showers (daily) and fire system (weekly) at the Hazwaste facility - which is a necessary Health and Safety issue. **Electricity:** Energy consumption associated with Indaver activities have increased steadily between 1999 and 2003 but has now levelled out and the energy usage in 2005 was significantly less than in 2004.	**L = 3**

In 2004, Indaver developed and displayed Energy Efficiency posters with the aim of increasing awareness and encouraging employees to switch off equipment, lighting etc. when not in use. This campaign was continued in 2005. In 2006 the energy usage increased as a consequence of the commissioning of the Solvent Recovery Facility in September 2006 and it is expected that the energy usage figures will further increase in 2007. An Energy Audit by an independent consultant occurred in the Dublin Port Hazardous Waste Facility in 2007 and once the audit has been reviewed any recommendations will be implemented with the aim of minimising the increase in energy consumption. **Diesel:** Diesel is used to operate the forklifts, nitrogen generator, fire pumps in the Dublin Port Hazwaste facility, bobcats in the civic amenity sites. Diesel is also used to run the various different collection vehicles operated by Indaver. Up to October 2006 there were two forklifts in operation at the Dublin Port Hazwaste facility. Both forklifts were initially diesel powered, however in September 2001 one of these forklifts was 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. In October 06 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 07 one of the diesel forklifts was replaced with an electric forklift and there are currently plans to replace the remaining diesel forklift with an electric one. Replacing this diesel forklift will help to reduce diesel consumption in 2008. As Indaver's operations and number of sites continue to grow the diesel utilisation will grow representatively. **Paper:** All waste office paper generated by Indaver is sent for recycling and hence diverted from landfill. In 2008, the purchase of paper from manufacturers who use resources from properly managed forests will be reviewed and hopefully implemented. **Resource Usage & Generation of Waste:** Indaver maintain an extensive recycling campaign for material generated through its activities - paper, cardboard, batteries, glass, aluminium, plastic, fluorescent tubes, cartridges, uncontaminated pallets and waste electrical & electronic are all diverted from landfill and sent for recovery/recycling. The amount of residual waste going to landfill has been minimised as a result of this recycling initiative. All hazardous waste generated such as contaminated PPE, household hazardous materials such as cleaning products which cannot be recycled/recovered are sent for appropriate disposal i.e. incineration at AVG.	
Sub-Total	***F x L = 30***
(3) Severity of Consequences, C	
(i) Legislative and Regulatory Compliance There is no definitive legislation on Energy & Resource usage. However; ● Condition 8.1 of Indaver's waste licence (Reg. No. W0036-2) required that an energy audit be conducted within 12 months of grant of the licence. This was done in July 2007. ● Condition 8.2 requires that control of energy usage be included in the QESH Objectives & Targets and condition 4.8 specifies minimum site lighting requirements. ● Condition 8.3 requires that opportunities for the reduction in water usage on site at the transfer station be identified and incorporated into the QESH Objectives & Targets. ● Condition 8.4 requires that an assessment of raw material usage be conducted	2

having regard to the reduction of waste generated and that the results of the assessment be included in the QESH Objectives & Targets. Indaver must ensure that waste generated through its activities is appropriately recovered/disposed off at facilities which have the appropriate authorisations under the Waste Management Act 1996. Indaver must ensure that its activities do not result in littering - Litter Pollution Act SI 213 of 1997.	
(ii) Community/Employee Sensitivity The energy/resources utilised by Indaver; electricity, water, diesel and paper are in use throughout the community and so would not generate any undue concern amongst employees or the local community. The limited amount of hazardous and non hazardous waste generated by Indaver should not generate any concern from external parties.	1
(iii) Impact on air, land and water The quantities of electricity and water used would not cause any measurable impact on environmental media such as air or watercourses. The emissions from Indaver's various vehicles are insignificant and are within air quality guidelines. Indaver have purchased two electric forktrucks to reduce diesel usage and reduce exposure to emissions while working in the yard at the Dublin Port Hazwaste facility. There is a negligible impact due to the insignificant quantities of waste generated relative to the total landfill space. Indaver has minimised the amount of residual waste sent for landfill and where possible waste streams are recycled. Indaver's hazardous waste is sent to approved waste facilities for disposal.	1
(iv) Cost Benefit Indaver has a preventative maintenance programme in place for all equipment and vehicles to ensure they are kept in good working order and do not use excessive quantities of electricity or diesel etc. The preventative maintenance programme is a minor cost to the company. Disposal and recycling of waste generated by Indaver on site is a minor cost	4
(v) Potential for Resource Depletion Minor amounts of renewable and non-renewable resources are used. Recycling of waste material has a positive impact on the environment as it diverts waste from landfill. However Indaver send residual waste (which cannot be recycled) for landfill which is a depletion of land, a non-renewable natural resource. Disposal of hazardous waste by thermal treatment with energy recovery reduces the use of fossil fuels and diverts material from landfill.	3
(vi) Accidents and Emergency There is no accident or emergency scenario in relation to the utilisation of energy or resources. There is a low probability of a spill/release of materials resulting from the storage of waste generated through Indaver's activities. The environmental load of such an incident is low due to the nature of the waste generated.	1
(i) + (ii) + (iii) + (iv) + (v) + (vi) = Severity of Consequences Score, C	**C = 12**
Significance Rating S = F X L X C	**S = 360**

Management of this activity by:

Objective 5:
Minimise Energy & Resource Usage and Minimise the Waste generated at any of company's sites

Procedure(s):
Operations 6.6 Monitoring and Recording of Environmental Information
Movement and Waste Handling sections of the Operations manual (Section 2 and 5),
Operations 6.5 Internal Waste Management
Indaver Improvement Plan

Monitoring and Measurement by:
Operations 6.6 Monitoring and Recording of Environmental Information

- Invoices for water usage from local authority
- Electricity usage records
- Diesel usage records
- Paper usage records
- Tracker
- Newstracker
- RecTracker

Environmental Aspect No. 6: Management of Aqueous Discharges

Activity Waste storage and management activities at Indaver's facilities: o Dublin Port Transfer Station o Civic Amenity Sites - Limerick and Meath
Aspect Discharge of surface water run off to surface water drains at Indaver's facilities. Contamination of land and/or groundwater in the event of an emergency situation.
Associated Impacts A fire at any of the facilities could result in ground and/or water pollution from fire water run off. A spillage of waste material could result in a discharge of contaminated surface water to stormwater drains causing an adverse impact to the environment.

(1) Frequency, F	**Score**
Discharges to stormwater drains occur whenever it rains at Indaver's transfer station, civic amenity sites. There are no surface water run off discharges from either of the paper warehouses. The only possible discharge to drains would be from fire water run off in the event of a fire.	**F = 7**
(2) Likelihood of Loss of Control, L **Dublin Port Hazardous Waste Facility:** The drainage philosophy of the hardstanding areas of the transfer station is set out to provide a total containment system in that anything falling on the concrete yard area is directed to the underground drainage system and to the main containment sump. From this sump the surface water run-off is pumped via a carbon unit to an overground storage tank. Direct emissions to surface water are not allowed (Condition 6.3). Monitoring of discharges of surface water run off from the transfer station must be carried out in accordance with Schedule D (Table D.2.2) of the waste licence (W0036-2). Analysis of the surface water run off is carried out prior to discharge to ensure all parameters are in compliance with the emission limits set out in schedule C.1 of the waste licence (W0036-2) - See Operations 4.3 Monitoring of Emissions to Surface Water Drain. Indaver have never discharged surface water outside the limits set out in the waste licence. In 2007 results from three months of monitoring of the stormwater were forwarded to the EPA and Dublin City Council for their approval of our trigger levels. Once we receive the approval from both the EPA and Dublin City Council we will be moving from a batch discharge methodology to 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), will be 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. All drain gullies are kept covered with drain covers to prevent any releases of spillage from entering the drains and to give the site operatives time to react to a spill. The water storage tank discharge valve is locked at all times and only the facility manager and compliance manager have keys. This prevents any uncontrolled releases.	**L = 7**

Failure of the main tank valve could result in an accidental discharge. The water level in the storage tank is checked weekly. Any drop in the water level would highlight if there was a problem with the main tank valve. The transfer station is built on reclaimed land and natural settling can be expected. This can lead to underground pipes shifting, cracks in concrete etc. In February 2003, Indaver upgraded the drainage system on site by lining the pipes of the current drainage network with a chemically resistant liner in order to provide added protection against all types of potential spills. This provides a level of protection not found in similar facilities and more akin to the standards associated with process pipework and drainage in the PharmaChem sector. This integrity of this lining is guaranteed for 10 years and will counteract the effects of the natural settling of the land. In the event of a fire on site, all fire water run off will run to the drainage network **Transfer Station Storage Bays:** Each of the storage bays (flammable, corrosive and toxic) are individually contained with separate sumps in each bay. These sumps are completely segregated from the on site drainage system so any spill within the bays is completely contained. Surface water run off collected in these sumps is tested (visual, odour and pH) on a daily basis. If uncontaminated the material can be pumped into the main transfer station drainage network. If contaminated the material is drummed and sent for disposal to an approved waste facility. Under conditions 3.7.6, 6.7.14 and 10.4.4 of the new waste licence (W0036-2) all liquid collecting in the sumps/bunds must undergo analysis detailed in schedule C2. This is a new condition and will not come into force until commencement of the solvent blending activities. As per the condition 4.9.4 of the facility's waste licence, integrity testing in the storage bays must be conducted every 3 years. **Civic Amenity Sites:** Waste is stored on each civic amenity site both inside warehouses and outside on impermeable paved surfaces in containers. There is a diesel storage tank maintained on 5 of the 6 civic amenity sites. Any release of hazardous components from the waste streams stored on site could result in these materials (oils, paints, mercury, heavy metals, coolant etc.) entering the drains. The WEEE and oil storage areas on each site are located as far from the drain gullies as possible. Drain covers are used in the WEEE storage compounds to prevent any releases of hazardous components from entering the drains and to give the site operatives time to react to a spill. Diesel and waste paints are stored in the warehouses. There are no drain gullies within these warehouses. There are also oil interceptors installed on the drainage network in Limerick and Kells. These interceptors are inspected weekly for any signs of spillages. **Spill Kits & Emergency Response:** There are spill kits and emergency response equipment provided on all of Indaver sites and operatives receive spill training. Emergency response procedures are written for all Indaver sites and these describe the steps to be taken in the event of an environmental incident such as a spill.	
Sub-Total	***F x L = 49***
(3) Severity of Consequences, C	***Sub-Total***
(i) Legislative and Regulatory Compliance	4

Aqueous discharges from each of Indaver's sites are controlled by the relevant authorisation for each site:

- Transfer station - Waste licence
- Civic amenity sites - EPA certificate of registration

Transfer Station Waste Licence:
Direct emissions to surface water are not allowed (Condition 6.3). Monitoring of discharges of surface water run off from the transfer station must be carried out in accordance with Schedule D (Table D.2.2) of the waste licence (W0036-2). Analysis of the surface water run off is carried out prior to discharge to ensure all parameters are in compliance with the emission limits set out in schedule C.1 of the waste licence (W0036-2) - See Operations 4.3 Monitoring of Emissions to Surface Water Drain. Indaver have never discharged surface water outside the limits set out in the waste licence.

In 2007 results from three months of monitoring of the stormwater were forwarded to the EPA and Dublin City Council for their approval of our trigger levels. Once we receive the approval from both the EPA and Dublin City Council we will be moving from a batch discharge methodology to 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), will be 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.

Under the condition 6.7 and 6.8 of the new licence (36-2) surface water discharges will move from batch discharges to continuous discharge. All discharges will pass through a monitoring weir were they will be tested for pH, conductivity and TOC. Any exceedances of limits/trigger values (which will be agreed with the Agency in accordance with condition 6.7.2) will result in the surface water being diverted to the surface water tank for further analysis. This system is now installed and we are awaiting the approval from the EPA and Dublin City Council before moving over completely.

Surface water run off collected in the storage bay sumps is tested (visual, odour and pH) on a daily basis. If uncontaminated the material can be pumped into the main transfer station drainage network. If contaminated the material is drummed and sent for disposal to an approved waste facility. This would be treated as an incident and reported to the EPA. Indaver are in compliance with this condition of our licence. Under conditions 3.7.6, 6.7.14 and 10.4.4 of the new waste licence (W0036-2) all liquid collecting in the sumps/bunds must undergo analysis detailed in schedule C2.

As per the condition 4.9.4 of the facility's waste licence, integrity testing in the storage bays must be conducted every 3 years. Indaver received a non compliance in relation to this condition under licence reference 36-1.
The storage bays are contained however they are not fully bunded and hence it is not possible for full integrity testing to be conducted. Indaver have submitted a proposal to the Agency on a testing regime for the bays which will ensure a permanent solution to this issue and ensure compliance with the waste licence. this proposal was accepted by the Agency and all future integrity testing in the bays will follow this regime.

Direct emissions to groundwater are not allowed (Condition 6.4). Groundwater monitoring is conducted in accordance with Schedule D (Table D.2.3) of the waste licence (W0036-2). There are no limits or trigger values in the licence for groundwater.

EPA Certificate of Registration: The EPA Certificates of Registration for the civic amenity sites state that the activity shall not cause, or be likely to cause, environmental pollution and that any emission from the activity concerned will not result in the contravention of any relevant standard.	
(ii) Community/Employee Sensitivity Any incident resulting in an environmental release to ground and/or water could result in complaints from the affected communities and from local authorities, the EPA and the HSA.	2
(iii) Impact on air, land and water During normal operation of these activities there should be no measurable impact on environmental media from aqueous discharges to land and/or water. In the event of a fire there would be significant fire water run off to surface water. The risk of contamination at the transfer station is reduced by the containment arrangements on site. Fire water run off from the civic amenity sites could result in a short term adverse effect on the environment due to the large amount of plastics being stored on site.	2
(iv) Cost Benefit The environmental monitoring for the transfer station waste licence is a minor cost to the company. Fees are also paid to the EPA , independent sampling laboratories and the Sanitary Authority for monitoring of discharges. There are no ongoing costs associated with control of aqueous discharges at any other of Indaver's facilities. Indaver could incur major costs associated with the clean up of an incident (e.g. fire water run off) on any of its facilities.	5
(v) Potential for Resource Depletion There is no potential for resource depletion associated with this aspect.	1
(vi) Accidents and Emergency The probability of an accident or emergency situation leading to the discharge of contaminated surface water or fire water run off is low at the transfer station, due to the controls in place, and moderate at Indaver's other facilities. The environmental load associated with such an incident differs depending on the site. The highest environmental load would be for an incident at the transfer station due to the high volume of hazardous materials stored on site. Hence an incident at the transfer station would have a low probability and high environmental load. An incident at any of Indaver's other facilities has a moderate probability and a moderate to low environmental load.	3
(i) + (ii) + (iii) + (iv) + (v) + (vi) = Severity of Consequences Score, C	**C = 17**
Significance Rating S = F X L X C	**S = 833**

Management of this activity by:

Objective 6:
Minimise the environmental impact of Aqueous Discharges

Procedure(s):
Operations 4.4 Testing and Removal of Water from Sumps
Operations 4.3 Monitoring of Emissions to Surface Water Drains
Operations 4.12 Health & Safety Checks
Operations 4.1 Acceptance and Storage of Waste at the Transfer Station
Operations 17.1 Civic Amenity Sites - Waste Acceptance, Storage and Loading
Emergency Response Procedures

Monitoring and Measurement by:

Operations 4.3 Monitoring of Emissions to Surface Water Drains
Operations 4.12 Health & Safety Checks
Engineering controls/ water holding tank.
Operations 6.7 Monitoring and Measurement of Environmental Emissions
Results of Surface Water Run off Monitoring
Results of Toxicity Testing
Results of Groundwater Monitoring

Environmental Aspect No. 7: Operation of Civic Amenity Sites

Activity Indaver operate a number of civic amenity sites around Ireland. These facilities accept a wide range of waste types from members of the public. The majority of the streams are non hazardous however there are a limited number of streams with hazardous properties.
Aspect Storage of waste oils, cylinders, waste paints, other household hazardous materials and WEEE on site. Storage of diesel on site for refuelling the Bobcats. An incident or release of environmentally hazardous waste (oils etc.) during storage. Use of compressors, forklifts and other heavy machinery during the repacking activities. Resource Usage.
Associated Impacts Release of hazardous compounds to the environment could result in an adverse impact to the surrounding air, land or water. Disruptions and environmental noise as a result of increased traffic associated with theses activities. Environmental noise resulting from the operation of heavy machinery such as Bobcats, compactors etc. Air quality degradation as a result of the fugitive emissions of exhaust fumes from the Bobcats and other vehicles on site. Storage of flammable liquids/solids could result in a fire, giving rise to toxic or noxious fumes causing air pollution. Fire water run off could result in ground and/or water pollution. Potential for odour emissions from stored material. Potential habitat for rodents, insects, birds. Noxious odours could degrade air quality & amenity value of the area. Vermin could harbour and spread disease and infection. Littering due to bad housekeeping. Litter will have a negative visual impact and could attract vermin.

(1) Frequency, F	**Score**
Daily collections of waste are made from the civic amenity sites between Monday and Saturday.	**F = 8**
(4) Likelihood of Loss of Control, L **Release of substances:** Waste is stored on each civic amenity site both inside warehouses and outside on impermeable paved surfaces in containers. There is a diesel storage tank maintained on 5 of the 6 sites for refuelling the Bobcats. All but one (Trim) of the diesel storage tanks are doubled skinned with leak sensors. Any release of hazardous components from the waste streams stored on site could result in these materials (oils, paints, mercury, heavy metals, coolant etc.) entering the drains. Waste types containing hazardous components should be located as far from the drain gullies as possible or in contained/bunded areas where available. All waste oil storage containers should be bunded or on spill trays. Drain covers are used on any gullies which are in close proximity to waste streams containing hazardous components to prevent any releases of hazardous components from entering the drains and to give the site operatives time to react to a spill. Diesel and waste paints are stored in the on site warehouses (with the exception of Mungret where they are stored in a bunded area). There are no drain gullies within these warehouses. There are also oil interceptors installed on the drainage network in Limerick and Kells. These interceptors are inspected weekly for any signs of spillages.	**L = 7**

Visual Impact: The civic amenity sites are located in primarily industrially zoned areas and make no susceptible impact on the surrounding community. Annual maintenance as well as good housekeeping procedures also ensure the facilities are maintained to a high standard, minimising their visual impact. **Vermin Control:** Weekly inspections for any signs of vermin are conducted as part of the weekly health & safety checks. **Heavy Equipment:** Indaver's heavy equipment such as Bobcats and compactors are subject to a preventative maintenance programme to keep them in a good state of repair and hence reduce the likelihood of breakdowns, accidents, reduce emissions and minimise noise emanating from them **Housekeeping:** Good housekeeping reduces the likelihood of litter from the site scattering and becoming a local nuisance. The sites are swept on a daily basis.	
Sub-Total	***F x L = 56***
(3) Severity of Consequences, C	
(i) Legislative and Regulatory Compliance Under the Waste Management (Permit) Regulations, 2007, Local Authorities require a certificate of registration from the EPA for recycling centres/civic amenity sites, operated by them or on their behalf, which are solely for the recovery of hazardous or non-hazardous waste and where the annual intake is less than 5,000 tonnes. Occasionally waste types not specified on the Certificate of Registration are found on site. When discovered these wastes are quarantined on site until a suitable disposal/recovery solution is found for them. Collections from civic amenity sites are exempt from the requirements of the Waste Management (Collection Permit) Regulations 2007. Collections from civic amenity sites are exempt from the C1 paperwork requirements of the Waste Management (Movement of Hazardous Waste) Regulations, SI 147 of 1998. Under EC Regulation No. 1013/2006 enacted in Ireland under Waste Management (Transfrontier Shipment of Waste) Regulations SI 419 of 2006 a TFS is the legal documentation required for transboundary shipments of waste material. All waste collected from civic amenity sites for export from Ireland must comply with these regulations. Indaver is fully compliant with the documentation requirements of these regulations. Transport of dangerous goods is highly regulated - ADR (Road regulations), IMDG (Sea regulations), RID (Rail regulations) and DGSA (Dangerous Goods Safety Adviser) regulations. All collections of dangerous goods from civic amenity sites must comply with these regulations. Indaver are occasionally non compliant with the ADR regulations e.g. misdeclaration of waste, wrong packing types, missing labels etc. Under the Waste Management Act, 1996 Indaver must ensure that its waste facilities comply with the provisions of this Act, i.e. they are licensed by the EPA or permitted by their local authorities. Indaver must minimise waste production from its own activities and avoid causing environmental pollution from the management of waste on its site. Indaver must identify, segregate and store waste properly on site before it is sent on to be either recovered/recycled or disposed off. If sub-contracting work Indaver must use bone fide waste disposal/recovery operators who comply with the provisions of this Act, i.e. they are licensed by the EPA or permitted by their local authority. Indaver must also use appropriately licensed	4

contractors to remove waste from their premises. Indaver must not mix different categories of hazardous waste (or hazardous waste with non-hazardous waste). Records must be kept of any hazardous waste it sends for disposal/recovery. Under the Litter Pollution Act, SI 213 of 1997, Indaver must ensure that any waste stored on site or any other activity carried out on-site does not cause a litter nuisance in a public place or that is visible from a public place. When transporting waste Indaver must take reasonable measures to prevent the creation of litter from this activity. Indaver must prevent the creation of litter nuisance on their premises/land that is in a public place or is visible from a public place.	
(ii) Community/Employee Sensitivity Newcastle West has an apartment block neighbouring it, Trim has a halting site neighbouring it. There are no residential homes in the vicinity of the other civic amenity sites. Recycling centres have a significant amount of traffic associated with them. Any traffic disruptions could result in complaints from the affected community and businesses. Environmental noise resulting from increased traffic and operation of heavy machinery on site could result in complaints from the surrounding community and businesses. Any incident (such as a fire) resulting in an environmental release at any of the facilities adversely affect the company's public image and could result in complaints from the surrounding communities. Any litter resulting from our activities could result in sporadic complaints from the affected community and businesses.	2
(iii) Impact on air, land and water During normal operation of these facilities there should be no measurable impact on environmental media. Any release of hazardous components during storage could result in these materials (paints, mercury, heavy metals, coolant etc.) entering the drains in the civic amenity sites. This could have a short term adverse impact on the environment. The Kells civic amenity site is located adjacent to the river Blackwater and Mungret civic amenity site is in the vicinity of a small stream. Any releases on site would enter this water network. An oil interceptor is installed on these sites and drain covers are available on site to block drains in the event of a spill/release. In the event of a fire there would be emissions to air and fire water run off to surface water. This could have a short term adverse impact on the environment. Environmental noise is considered as an emission to air. At worst this would be a local nuisance.	3
(iv) Cost Benefit Any environmental incident caused by Indaver could cause contamination of air, land or water. Indaver would incur a financial cost associated with the clean up of any such incident at one at the civic amenity sites. If such an incident occurred at one of the civic amenity sites it is possible that the facility's certificate of registration would be revoked. If such a situation were to arise the reputation of the company would be damaged, adversely affecting Indaver's business and Indaver could be liable for fines.	4
(v) Potential for Resource Depletion	3

There is some depletion of diesel (non renewable resource) as a result of this activity. The recycling of waste diverts material from landfill resulting in the saving of non renewable natural resources.	
(vi) Accidents and Emergency A fire at one of the civic amenity sites could result in the release of toxic fumes from the large amount of plastics being stored on site. There is a low probability with a medium environmental load. Malicious damage on any of the sites (e.g. a break in) could result in the discharge of the hazardous components from the waste streams stored on site (e.g. heavy metals from fluorescent tubes) entering the drains. There is a moderate probability of malicious damage with a relatively low environmental load associated with this sort of damage.	2
(i) + (ii) + (iii) + (iv) + (v) + (vi) = Severity of Consequences Score, C	**C = 18**
Significance Rating S = F X L X C	**S = 1,008**

Management of this activity by:

Objective 11:
Minimise the EH&S impacts associated with activities on the civic amenity sites.

Procedure(s):
Operations 17.1 Civic Amenity Sites - Waste Acceptance, Storage, Loading and Collection
Operations 17.2 Civic Amenity Sites - Site Maintenance, Safety & Security
Operations 17.3 Emergency Response Procedure for the Civic Amenity Sites
Operations 11.1 Haulier Approval and Monitoring
Operations 11.2 Approval and Monitoring of Waste Facilities
Operations 11.3 Approval and Monitroing of General Contractors

Monitoring and Measurement by:
Internal Audits - Operations 10.8 Internal Audits
Operations 17.2.1 Civic Amenity Site - Weekly Checklist

Change History

- End of Document -

Appendix 3: Indaver Improvement Plan

Schedule of QESH Objectives & Targets

Controlled Document: Indaver Improvement Plan

Reference	Status	Version	Owner
Operations_10.4.1	Authorised	53	Mary Miller

Type QESH Management Program **Sub-Type**

The Indaver Improvement Plan is made up of objectives & targets which demonstrate the company's commitment to continual, on-going improvement in the company's QESH performance and to achieving the overall goals as stated in the company's QESH policy. The objectives & targets are derived from:

- Monthly QESH Meetings
- The Register of Environmental Aspects
- The Health & Safety Risk Assessments
- QESH Policy
- Legislative and Regulatory requirements
- Waste Licences, Waste Permits, Waste Collection Permits
- Corporate Requirements e.g. corporate performance indicators such as the Kinney and Safety indices
- Customer Satisfaction Surveys
- Employee Satisfaction Surveys
- Leaders Forum/Employee Forum
- Annual Indaver Group Objectives

The Indaver Improvement Plan is currently made up of the following objectives & targets, which are detailed, in the following tables:

- Objective 1: Repackaging of Waste
- Objective 2: Transport of Bulk & Packaged Waste Materials
- Objective 3: Waste Handling - Off-loading, Blending & Storage of Waste at the Dublin Port Hazardous Waste Facility
- Objective 4: Energy & Resource Usage and Generation of Waste
- Objective 5: Management of Aqueous & Atmospheric Discharges
- Objective 6: Customer Focus
- Objective 7: Employee Focus
- Objective 8: Efficiency - Finances & Operations
- Objective 9: Suppliers/Contractors
- Objective 10: Civic Amenity Site's & TWM Sites
- Objective 11: Evaluation of Legislative Compliance

Key Performance Indicators

Objective	Resp.	Area	Year To Date 2009	Previous Year To Date 2008	Previous Year Total 2008	Target
		Dublin Port Hazardous Waste Facility Activities				
2	**DC**	DGSA Incidents Resulting from Facility Loads	**0**	**1**	1	5% Reduction
3	**EMcP**	Amount of Stock in Storage over 12 Months	**188**	**252**	-	5% Reduction
3	**EMcP**	Amount of Stock in Storage over 6 Months	**177**	**487**	-	< 1 Tonne
3	**EMcP**	No. of Loads Stripped (Loads Generated at the Facility only)	**4**	**5**	*	5% Reduction
3	**CS**	Reportable Accidents/Dangerous Occurrences	**1**	**0**	0	0
4	**MM**	Minimise waste going to landfill this year not greater than previous year	1.66T	**3T**	12.65T	5% Reduction
1, 3	**EMcP**	Items Requiring Repacking over 1 Month	**1**	*	-	5% Reduction
2, 3	**RRob**	Written Negative Formal Remarks from the Authorities (Facility operation or Loads)	**0**	**6**	11	0
3, 5	**DC**	Environmental Complaints	**0**	**0**	0	0
3, 5	**DC**	Environmental Incidents	**0**	**0**	0	0
		Civic Amenity Site & TWM Activities				
10	**CS**	Reportable Accidents/Dangerous Occurrences	**1**	**0**	3	0
10	**DC**	DGSA Incidents Resulting from Facility Loads	**1**	**0**	8	5% Reduction
4	**JS**	Minimise waste going to landfill this year not greater than previous year - Limerick Sites Only	**1.68**	**2.6**	8.44	5% Reduction
2, 10	**JS**	Written Negative Formal Remarks from the Authorities (Facility Operation or Loads)	**0**	**0**	0	0
6, 10	**DC**	Environmental Complaints	**0**	**0**	0	0
6, 10	**DC**	Environmental Incidents	**0**	**0**	0	0
		Site Services Activities				
1	**DS**	Items Requiring Repacking (Following our work)	**1**	*	*	5% Reduction
1	**CS**	Reportable Accidents/Dangerous Occurrences	**0**	**0**	**1**	0
2	**DS**	Written Negative Formal Remarks from the Authorities (Supervised/Prepared Loads)	**0**	**0**	**0**	0
2	**DC**	Environmental Incidents	**0**	**0**	**1**	0
1, 2	**DC**	DGSA Incidents Resulting on Supervised Loads	**1**	**0**	**5**	5% Reduction
1, 2	**DS**	No. of Supervised Loads Stripped/Requiring further work	**7**	**2**	*	5% Reduction
		Logistics Activities				
1	**RpM**	No. of Our Vehicle Collections Requiring Repacking	**4**	*	*	5% Reduction

2	**DC**	DGSA Incidents Resulting from Our Vehicle Collections	**2**	**1**	**2**	5% Reduction
2	**DC**	DGSA Incidents Resulting from Logistics Errors	**2**	**1**	**5**	5% Reduction
2	**RRob**	Written Negative Formal Remarks from the Authorities on our Shipments	**0**	**6**	**10**	0
2	**RRob**	No. of Loads Stopped with Issues	**1**	*	**17**	0
2	**CS**	Reportable Accidents/Dangerous Occurrences	**0**	**0**	**0**	0
		Commercial Activities				
6	**CMcL**	No. Customer Complaints & Comments	**36**	**13**	**153**	5% Reduction
6	**CMcL**	Outstanding Customer Complaints & Comments	**19**	**10**	**11**	0
		Compliance Activities				
2	**DC**	DGSA Incidents Total	**33**	**10**	95	5% Reduction
2	**DC**	DGSA Incidents Resulting from Technical Errors	**4**	**0**	6	5% Reduction
7	**JK**	**Rolling Turnover (Employee turnover as a % of average number of employees over 12 month period. Excl TUPE's)**	**11.9%**	**24.3%**	**13.9%**	5% Reduction
7	**JK**	**Rolling Absenteeism (% of working days lost to sickness in last 12 month period)**	**3.4%**	**1.5%**	**3.0%**	5% Reduction
7	**JK**	**Total number of sick days YTD**	**190**	**97**	**994**	4 days per employee per year
7	**CS**	Reportable Accidents/Dangerous Occurrences (Company as a Whole)	**2**	**1**	4	0
7	**MM**	Internal CAR's	**57**	**5**	158	5% Reduction
7	**MM**	Outstanding Internal CAR's	**57**	**3**	90	5% Reduction
9	**MM**	Vendor CAR's	**5**	**8**	50	5% Reduction
9	**MM**	Outstanding Vendor CAR's	**5**	**2**	24	5% Reduction
		Accounts Activities				
8	**FC**	Invoices - On Hold/Not Passed less than 6 months	**170**	**158**	**-**	5% Reduction
8	**FC**	Invoices - On Hold/Not Passed older than 6 months	**48**	**17**	-	5% Reduction
8	**FC**	Number of supplier stops	**1**	**7**	21	
4	**FC**	Energy Costs this year not greater than previous year kWh per person	*	*	*	5% Reduction

* = Data not available at this time
- = Not Applicable
Figures not in bold not updated accept where zero and remains unchanged or previous year total.
KPI's Updated on: **05/03/2009**

OBJECTIVE 1: WASTE HANDLING - REPACKAGING OF WASTE

Objective No. 1:

Minimise the Environmental, Health & Safety impacts associated with the repacking of waste either on customer's sites or at the transfer station

Responsible Manager: Rory Murphy & Jane Smith

Target	Action	Due date	Arising from	Res.	Status
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 and general operation of the transfer station.	Q2 2009		Colum S	Crosspumping of organics, nitric acid and ammonia was monitored in 2004. The results have come back within exposure limits. A translation of Indaver's Hygiene monitoring procedure has been obtained. To review to determine what aspects we can adopt. Monitoring on hold until construction of blending plant completed so blending plant activities can be included. Postpone till Q3 06 as blending plant not operational yet. Euro Environmental are carrying out this monitoring awaiting on suitable date (nothing to repack) Occupational exposure monitoring report was completed. Results should be communicated on noticeboard.
	Noise Monitoring is also to be carried out	Q2 2009	PM	Colum S	Monitoring on the supplied air required.
	A procedure needs to be written outlining the requirements for Biological Monitoring carried out for operatives, i.e. Details of medical requirements	Q2 2009	Indaver SLA Audit 2005	Ruth Rob	
Reduce the hazards associated with repacking waste	Need to determine if our cylinders are expired	**Q3 2009**	QESH meeting 04/10/2007	Denise C/Denis S	Spoke to the HSA and there is no company in Ireland at the moment who can do this. They are still setting up this

	Need to determine if Sheridan's are accredited to refill or cylinders	Q1 2009	QESH meeting 04/10/2007	Denise C/Denis S	Spoke to the HSA and there is no company in Ireland at the moment who can do this. They are still setting up this system in the HSA. To review at a later date **We no longer use Sheridans, we now use IPT who are accreditated to NSAI. This can be closed off and will be reviewed further if the HSA bring in new requirments for refilling cylinders. COMPLETE**
	Operations 5.8.3 Approved PPE list must be reviewed and updated	**Q2 2009**	QESH Meeting 10/07/2008	Denise C/Denis S	Moved from Obj 7. Denise and Denis have reviewed and updated, procedure to be updated and reissued
Ensure there is a pricing aid in place to allow for immediate invoicing of customers in an incident where serious incident of repacking occurs	Template for repacking costs e.g. man hour cost, drum costs, etc incurred at the Transfer Station after a serious repacking incident to be drawn up	Q1 2009	QESH Meeting 03/04/2008	Rory M	Rory to pass to commercial for review and discussion
Ensure provision of information on site in the DPHWF	Poster to be created showing useful information for operatives in the yard such as ltd quantity weight restrictions, allowed drum types etc. Review with operatives the information that would be useful and design a poster	Q3 2009	Good Idea	Denise C/Eric McP	
Ensure EH&S control of repacking on	Ensure that our procedures include communication with	Q1 2009	QESH Meeting 08/06/06	Denis S	Tracker to be modified to include a customers sign off on instructions

customer sites	customer to assess what other activities will be taking place on their site and how this might impact on repacking activities we are carrying out				to work. **Customers sign off added to instructions to work - COMPLETE**

OBJECTIVE 2: TRANSPORT OF BULK & PACKAGED WASTE MATERIALS

Objective No. 2:

Minimise the Environmental, Health & Safety impacts associated with the transport of hazardous and non hazardous waste carried out by Indaver and Indaver's subcontractors

Responsible Manager: Rory Murphy

Target	Action	Due date	Arising from	Res.	Status
All movements of waste must be 100% accurate and in compliance with all relevant transport and waste regulations	Review of movement procedures to be conducted by logistics personnel.	Q1 2009		Aisling C/Lynette Caul	In progress meeting with QESH Dept on 14/03/2007 to issue 3 movement procedures. Operations 2.1 & 2.16 have bee reissued. awaiting for more procedures to issue. A number are been reviewed at present. Ops 2.1 and 2.3 have been reviewed and are ready for issue.
	Ensure that both hauliers and Indaver are complying with the new security requirements of the ADR regulations	**Q2 2009**	PM	Denise C	
	Information on the C1 and TFS load packs are to be translated into Polish, Latvian and Lithuanian	Q1 2009	QESH Meeting 07/06/07	Rory M	Inserts to be created then sent for translation. Quote obtained for translation **Translated - Hungarian instead of Latvian. Copies are provided with C1 and TFS packs from 04/03/2009. All stored in Operations\Logistics\ Medmedia folder - COMPLETE**
	Ensure Compliance with Dublin Port Tunnel Bye-Laws. Finalise details of Regulations with IBEC.	Q2 2009	QESH Meeting 01/03/2007	Ruth Rob	
	Packing Guide is to be updated in light of new Waste Management (Shipment of Waste) Regulations 2007	Q2 2009	QESH Meeting 02/08/07	Ruth Rob	
	Legislation Guide is to be updated in light of new Waste Management (Shipment of Waste) Regulations 2007	Q2 2009	QESH Meeting 02/08/07	Ruth Rob	

Ensure all employees are adequately training on the transportation of waste in accordance with regulatory and legislative requirements	Training on Movement Procedures will need to be completed once all Movement Procedures have been reviewed and updated	Q1 2009	QESH Meeting 09/02/06	Aisling C/ Lynette Caul	
Ensure Compliance with Road Transportation requirements	Ensure relevant persons are trained in the Certificate of Professional Competence in Road Haulage	On hold	QESH Meeting 11/08/2006	Rory M	Course run by Dept of Transport, date to be finalised. The new legislation S.I. No. 91 needs to be reviewed by RpM and a new target date set
	Following the completion of CPC training, Operations 14.2 needs to be reviewed and training conducted with relevant personnel	On Hold	RM (OFI 05/08)	Rory M	The new legislation S.I. No. 91 needs to be reviewed by RpM and a new target date set
	Send a Memo regarding the weights permitted on vehicles	Q2 2009	QESH Meeting 11/08/2006	Rory M/Denise C	
Ensure CAS Sites which we collect from are aware of how to correctly package and label drums for collection	Posters and guidelines to be drawn up to send to our CAS customers on the correct packaging and labelling of items for collection	**Q2 2009**	QESH Meeting 03/04/2008	Ger W/Tech	
Ensure empty unclean tanks are moved correctly	A procedure needs to be written for moving empty unclean tanks	Q3 2009	Trish	**Lynette Caul**	

OBJECTIVE 3: WASTE HANDLING - OFF-LOADING, BLENDING & STORAGE OF WASTE AT THE DUE

Objective No. 3:

Minimise the Environmental, Health & Safety impacts associated with the off-loading, storage and blending of waste on site at the Dublin Port Hazardous Waste Facility

Responsible Manager: Rory Murphy

Target	Action	Due date	Arising from	Res.	Status
Emergency Response Preparedness	Install SMS messaging from SCADA. To alert on call manager of system alarms.	Q1 2009	PM/CJ	Rory M	Waiting on Belgium engineer to schedule.
	Draw up a list of all equipment that must be considered in the event of an unplanned electrical shutdown in the TS	Q1 2009	QESH Meeting 06/11/2008	Anita R/Peter O'B	
Stock Control at the Transfer Station	Install radio frequency identification or barcoding in storage bays	On Hold	QESH Meeting 01/04/04	Rory M	Evaluating SAP V's Tracker for 5 year strategy for packaged waste in the Transfer Station. Target QI
	Carry out a review of the internal emergency plan	Q1 2009	QESH Meeting 06/11/2008	Ruth Rob/Peter O'B/Colum S	
Ensure appropriate training provided on emergency response situations	Emergency exercise drill to take place including senior management team. To take place at crisis or backup crisis management centre	Q1 2009	HSA Visit 13th June 2008	Peter O'B/Colum S	Training took place on Oct 15th. IEP plan updated to reflect backup Network Crisis Management Centres location in DL. Follow up training session to be arrange for Q1 2009
Ensure Safety Requirements for the Site are Adequate	Carry out a review of the safety requirements for the site e.g. safety shoes compulsory	Q1 2009	QESH Meeting 07/08/2008	Eric McP/Ruth Rob/Colum S	
Ensure adequate preventative maintenance and servicing of equipment	Ensure integrity of the main sump and drainage network of the whole site is retested	Q1 2009	Trish	Denise C	Lining of drains not completed, USSR to do this and then test. USST recommend spraying which was completed. Testing to be carried out, scheduled to happen between 5th and 8th August.

					USSR carried out work and test Sheets provided for all work. Testing demonstrated that more work is required on manhole near Main Bund. Work scheduled. USSR have retested and sent report January, Denise to send to EPA
	Joints and cracks in hardstanding area to be resealed	Q1 2009	Trish/EPA Audit 22/05/08	Peter O'B/Denise C	To be completed January 08. Job was completed , however some joint lifting occurred and a crack reappeared at the rear of the storage bays. MV O'Halloran were on site on the 12th/13th of July, however still more work to finish. Punchlist work carried on Sept 28th 2008. Inspection of Yard demonstrated one Bay that needs further lining Work scheduled with MV O Halloran
	Levels in yard becoming a problem. Engineering team to assess options available to us	Apr 2009	PB	Conor J	
Ensure compliance with the conditions the new waste licence W0036-02	Condition 2.1.2 Facility manager and deputy to attend course agreed by Agency within 12 months	Q1 2009	W0036-02	Rory M	Emma attending. Eric to attend.Emma has completed course, cert required - need to ensure has completed site assessment.
	Condition 10.2 Risk assessment to be conducted to determine fire fighting and fire water retention facilities needed. Fire Authority to be consulted.	Q2 2009	W0036-02	Denise C/Ruth Rob	
	Condition 3.11 Oil Intercepter to be fitted with a high liquid level alarm	Q1 2009	Trish/EPA Audit 22/05/08	Conor J	Equipment sourced and priced. Awaiting confirmation on installation details. Sourced a suitable alarm however it was not electrically rated to be submersed in water.

					Now that continuous discharge is happening the high level alarm to be fitted as soon as possible.
	Condition 9.7 Monitoring and Sampling points all need to be labelled	**Q3 2009**	Trish	Denise C	EPA have issued new labelling methods. To clarify new names and will then report
Ensure all required elements are installed during Construction of Blending Plant	Condition 6.7.13 Surface water run off must be screened prior to discharge.	Q1 2009	W0036-02	Peter O'B/Denise C	Letter Submitted Feb 07 requesting clarification from the Agency as to the need for this measure. We don't not have any coarse solids in our stormwater run off because of the nature of the site and silt traps in all gullys and settlement in main sump. We should clarify that this is not required from the EPA-Denise
	Condition 3.13 High level alarms to be fitted to significant sumps, tanks etc within 9 months.	Q1 2009	W0036-02	Peter O'B/Denise C	This requirement needs to be clarified with the Agency. The Main Sump, Interceptor and Solvent Tanks will have high level alarms, other areas checked daily for liquid collection. Letter submitted to EPA Feb-07 requesting confirmation of their satisfaction with these arrangements. I think that PMG wrote to the agency to seek clarification on this one-Check Communication folder-Denise
	Need to determine if an additional warning system is required in the event of a major accident	Q1 2009	Seveso Team Meetings	Rory M	Additional warning system is required by HSA. Dublin Port to install warning system, visit complete, waiting on installation date
Ensure adequate storage facilities on site	Diesel storage licence required for blending plant	Q1 2009	QESH Meeting 09/09/05	Ruth Rob	Submission made to Dublin Port. Tim Rafter from Dublin Port visited

					site waiting to hear back from Tim. Denise preparing application Feb 09
	The method of storing cylinders on their side on the racking in the storage bays, as identified by the HSA, needs to be reviewed and an alternative method of storage identified and implemented.	Q1 2009	QESH Meeting 04/10/2007	Ruth Rob/Rory M	Cylinder cages are being sourced to accommodate the varying sizes. These will be stored at the rear of the Drum Stores. The items that are currently in storage will be shipped week 37 to Chemogas.
Assess disposal options most efficient disposal/recovery options	Assess other options for the disposal/recovery of cylinders	Q1 2009	QESH Meeting 05/09/2008	Eric McP	Contact BOC to establish if they can be returned rather than expensive disposal. Investigate option of releasing gas and scraping cylinder as scrap metal
	Need to ensure awkward items are managed and priced appropriately, classified as LQ where possible and shipped in a timely manner. Interdepartmental meeting to be held to review these issues.	Apr 2009	PB	Eric McP/Caroline McL/Denise C	
Ensure Compliance with Seveso Regulations	Need to review the contacts on the emergency phone list-resequence or retrain people on the list	Q1 2009	Seveso Team Meetings	Ruth Rob	Reviewed must be reviewed again. Reviewed and reissued, training required.
	Need to amend tracker to recommend checking certain chemicals as to whether they will affect our emergency plans if accepted into the TS.	**Q3 2009**	Seveso Team Meetings	Denise C	
	Will need to carry out training with the Tech Team to recognise chemicals which will affect our emergency response plans if accepted into the TS and how to record this information on Tracker.	**Q3 2009**	Seveso Team Meetings	Denise C	
	Procedure 13.6 HazId Safety Study needs to be developed	Q1 2009	Seveso Team Meetings	Ruth Rob	May incorporate this procedure and the Hazop procedure into the risk assessment

					procedure and reference out to guidance documents.
	Review of Seveso system to take place to ensure it is still valid and all relevant employees are aware of requirements	Q3 2009	QESH Mgt Review 2009	Ruth Rob/Colum S/Conor J	
	Review of MAPP to take place to ensure system is still valid and effective & Increase general awareness within the DPHWF	Q3 2009	QESH Mgt Review 2009	Ruth Rob/Colum S/Conor J	
Ensure Safety Critical Components are identified and managed	Determine the desired reliability of all safety critical components and update this information into the Register of Safety Critical Components	Q1 2009	HSA Visit 13th June 2009	Conor J/Colum S	
	Review to be arranged with Byrne O'Cleirigh to verify that all safety critical components have been identified and have been accurately assessed. And that all procedures in place are adequate	Q1 2009	HSA Visit 13th June 2009	Conor J/Colum S	
Ensure EH&S controls for the solvent recovery facility have been reviewed and assessed	Operations 4.2 (Classification) to be amended to reflect changes made to Tracker and new fields added to record Seveso information.	**Q3 2009**	Seveso Team Meetings	Conor J/Denise C	A Seveso button has been added to the Tech screen in Tracker to allow recording of information for Seveso. Meeting to be held with BOC to clarify exactly what information will need to be recorded
	Procedure to be written for work permits to be issued at the Hazardous Waste Facility Dublin Port. Ops 16.7	Q1 2009	Trish	Ruth Rob	Draft completed to be issued for comment. Some new permits to be created.
	Install LEL & O2 monitoring with audible alarm in unloading pump area	Q1 2009	Trish	Conor J/Oliver K	
	F.I.T for filling tankers to be recalibrated	Q1 2009	Trish	Peter O'B	Recalibration complete, need cert for file.
	All operatives working on the SRF are to receive working at heights	Q1 2009	Accident Reference 2007001	Colum S	To include training on new working at heights permit once complete

	training				
	Retraining for all operative on Operations 16.2 Emphasis on: ● Positioning of tankers in bays and checking the access afforded with the safety cage before the tractor unit level ● Use of sample jar basket ● No walking on tanker cladding ● Number of times the top of the tanker is accessed	Q1 2009	Accident Reference 2007001	Rory M	
Reduce the hazards associated with working Laboratory	Occupational exposure monitoring to be conducted on laboratory activities in the Transfer Station	On Hold	Grace McCormack	Ruth Rob	Euro Environmental are carrying out this monitoring awaiting on suitable date. This is being put ON HOLD and will be reviewed at a later stage when lab and SRF back to full capacity
Optimising Efficiency of the SRF	Install dry run protection	On Hold	Trish	Conor J/Oliver K	
Increase Efficiency during Indaver collections	Indaver drivers to receive waste handling training	Q2 2009	Good Idea	Denis S/Lynette Caul	**Training has been organised for Monday March 30th for both Paul and Alan for Lab smalls and repacking of waste along with basic spill clean theory.**
Ensure Traffic Management in place at the DPHWF	Review traffic management at the site and put in place a traffic management plan	Q1 2009	QESH Meeting 07/08/2008	Eric McP/Ruth Rob	

OBJECTIVE 4: ENERGY & RESOURCE USAGE AND GENERATION OF WASTE

Objective No. 4:

Minimise Energy & Resource Usage and Minimise the Waste generated at any of company's sites

Responsible Manager: Ruth Robertson

Target	Action	Due date	Arising from	Res.	Status
Review in house energy & resource usage	Electrical Inspection to be conducted at each facility	Q1 2009	QESH Meeting 13/01/06	Ruth Rob/Office Co-ordinators	A new electrical contractor needs to be sourced
	Condition 8.4 An assessment of raw material usage must be conducted upon commencement of blending plant operations	**Q4 2009**	W0036-02	Denise C/Rory M/Ruth Rob	
	To review lighting in TS yard - how long are lights staying on in the evening	Q1 2009	QESH Meeting 13/01/06	Eric McP	TS Yard lights are on Photocell SRF Facility are controlled by ON\OFF Review of TS Yard lighting on photocell to evaluate reduced lighting during afterwork hours.
	Start recording energy consumption by operational and administrative activities. Once this is done focus needs to be put on reducing the energy consumed by administrative activities	Q2 2009	Energy Audit DPHWF	Denise C/Env Officers	
	Develop KPIs to monitor ongoing energy consumption	Q2 2009	Energy Audit DPHWF	Denise C/Env Officers	
	The on/off operation of the compressor needs to be investigated	Q1 2009	Energy Audit DPHWF	Peter O'Brien	
	Night time power usage needs to be investigated	Q2 2009	Energy Audit DPHWF	Denise C/Env Officers	
Review In House Carbon Footprint	Carry out an assessment of our carbon footprint	Q3 2009	QESH Meeting 05/09/2008	Kirsty F/Claire D/Mary M	
	Develop further measures to reduce our	Q3 2009	QESH Meeting	Kirsty F/Claire	

	carbon footprint and implement and ensure these measures are documented		05/09/2008	D/Mary M	
Develop Energy Reduction Initiatives	Develop measures/awareness campaign to ensure that all devices when not in use are switched off in each location	Q2 2009	Energy Audit DPHWF	Denise C/Env Officers	
	Energy mass balance needs to be calculated in the DPHWF every 6 months, put a plan in place to ensure this is completed	Q2 2009	Energy Audit DPHWF	Denise C	
	Review the possibility of introducing time and/or daylight controlled switching for lighting in DPHWF	Q2 2009	Energy Audit DPHWF	Denise C/Peter O'B	
	Implement an energy management system	Q2 2009	Energy Audit DPHWF	Denise C/Env Officers	
	Need to develop a system to ensure that in future developments consideration is given to the provision of task lighting and local switching	Q2 2009	Energy Audit DPHWF	Denise C	
	Install motion detectors in shared areas such as corridors, meeting rooms, toilets	Q2 2009	Energy Audit DPHWF	Denise C	
	Develop a system for monitoring the storage and pumping operations on a monthly basis	Q2 2009	Energy Audit DPHWF	Denise C/Peter O'B	
	Reduce usage of submersible pump to level switching only	Q1 2009	Energy Audit DPHWF	Peter O'Brien	
Develop Waste Minimisation Initiatives	Reduce amount of waste going to landfill from the transfer station and offices	Ongoing	Env Officers Meetings & QESH Meeting 12/08/04	Env Officers	
Control internal Waste Management Systems	Waste management in the new TS canteen is to be reviewed	Q1 2009	QESH Meeting 13/01/06	Mary M/Harry	Ops. 6.5 will need to be reissued once this has been completed. Recycling bins now located at the entrance. Signs up in canteen telling people where

					bins are located.
	All wastes generated on our sites is to be recorded on RecTracker	Q1 2009	QESH Meeting 02/08/07	Rory M	
Assess transfer station water usage upon construction of the blending plant	Condition 8.3 water usage must be monitored once Dublin Port start metering	Q1 2009	W0036-02	Peter O'B/Denise C	
	Condition 8.3 Must identify opportunities for reduction of water use on site(upon commencement of blending plant ops)	Q1 2009	W0036-02	Denise C	

OBJECTIVE 5: MANAGEMENT OF AQUEOUS & ATMOSPHERIC DISCHARGES

Objective No. 5:

Minimise the Environmental Impact of Aqueous & Atmospheric Discharges

Responsible Manager: Ruth Robertson

Target	Action	Due date	Arising from	Res.	Status
Ensure validation of transfer station drainage system and bunds	Water Balance to be carried out on Transfer Station.	Ongoing		Ruth Rob	OBS 03/139 Water Balance suggests that we should be retaining more water however testing has demonstrated that there are no leaks in the drainage network. Could be caused by evaporation due to the length of time water sits in sumps and drainage network. Sump to be emptied on a more ongoing basis. This was added to the TS daily checklist. Continuous discharge now in operation, can conduct mass balance 2-3 months after commencing discharge
	Check the integrity of the new drains in the Solvent Recovery Plant	Q1 2009	QESH Meeting 11/08/2006	Rory M	
Monitoring of Continuous Discharge	Carry out a check on the continuous discharge system in the DPHWF to ensure it is working effectively	Q1 2009	QESH Meeting 07/08/2008	Denise C/Ruth Rob/Eric McP	monthly check, organise training from Gilroys
Ensure control over aqueous discharges civic amenity sites	Review aqueous discharges from civic amenity sites and determine if additional controls are required. Ensure Register of Aspects for aqueous discharges aspect reviews all locations	Q1 2009	PM	Ruth Rob	Drawings of surface water drainage networks to be requested.
Ensure control over Atmospheric	Environmental air emissions monitoring to be conducted on	On Hold	PM	Anita R/Ruth Rob	Euro Environmental are carrying out this monitoring awaiting on

discharges from permitted facilities and civic amenity sites	emissions from the Laboratory fume hood ducts				suitable date. This is being put ON HOLD and will be reviewed at a later stage when lab and SRF back to full capacity

OBJECTIVE 6: CUSTOMER FOCUS

Objective No. 6:

Provision of a customer focused, quality service

Responsible Manager: Caroline McLean

Target	Action	Due date	Arising from	Res.	Status
Develop Customer Training Aids and Guides	New Transport Guide to be prepared	Q1 2009	Customer Action Plan May-03	Ruth Rob	
	Prepare drum/packaging type guide which describes the different package types, there uses and giving a picture.	Q1 2009	Internal	Eoin R	Hire photographer to take photos of different package types. Denise drew up a guide. Photos were taken and need to be added to the guide and then added to the company website. ER to complete.
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.)	Q1 2009	Customer Survey, Customer Sphere, Efficiency Sphere	Jane H	Folder with all relevant information to be made available at reception for when reception is being covered by other departments. Copy to be made available in Cork. This information is to be put on the staff website (including which a/c managers are resp for different customers) Possibility to be investigated regarding logistics and technical going directly to the customer instead of going through customer support etc if there is a query.
	Develop a Tracker interface for customers where customers can input waste descriptions directly, track their waste etc.	On Hold	JA	Rory M	This is to be put on hold as it will depend on whether or not the waste flows are moved on to SAP (Rmp).
	The procedure for	Q1 2009	QESH	Lynette	

	Certificate of Disposal/Recovery needs to be updated and reissued.		Meeting 13/04/06	Caulfield	
	A procedure for non haz rectracker disposal certs to be written	Q1 2009	Caroline McL	Sarah R	
	Develop a standard audit pack to give to customers when auditing	Q3 2009	Good Idea 212	Ruth Rob/Mary M	Suggested items for inclusion in pack forwarded to Commercial and TWM for feedback. Look at option of making this pack electronic to cut down on print outs & carbon footprint.
Increase interaction/communication with customers both on and off customers sites	Develop a email based Newsletter which will be used to send customers regular updates on Indaver news, technical and legislative up dates etc.	Q1 2009	Waste Awareness Action Plan	Rory M/Ruth Rob	PMcG passed details to RpM
	Organise a customer information day	Q1 2009	QESH Meeting 02/10/2008	John D	

OBJECTIVE 7: EMPLOYEE FOCUS

Objective No. 7:

To encourage the development of employees to full potential so as to maximise their contribution to the specific needs of the organisation and to maintain employee satisfaction through the provision of a quality workplace.

Responsible Manager: Patricia Boyle

Target	Action	Due date	Arising From	Res.	Status
Provide a Quality Workplace to employees. Provide adequate welfare facilities and ensure their health & safety while carrying out their work.	Document to be drawn up with guidelines on use of video links and presentation function	13/02/09	QESH Meeting 01/05/2008	Stephen M	Guidelines posted in TS. Confirm posted in DL and Cork
	Risk assessment to be conducted on general site security in each of Indaver's premises	Jul 2009	Trish	Colum S	
	Access to offices from yard area to be secured through fob access system	**End Apr 2009**	Procedure Review	Eric McP	
	In accordance with the "Holding a Mobile phone whilst Driving" Regulations 2006. All managers are to confirm whether each of their employees who are issued with a mobile phone and company vehicle have a car kit which work for the given phone.	End Mar 2009	QESH Meeting 01/02/2007	Stephen M	Email sent to IT and Mgt Team to check what employees possess company mobile phones and car kits. Car kits need to provided to all employees with company mobile phone regardless of whether they drive a company car. Using a mobile while driving policy issued in employee handbook All employees with company mobiles and cars should be provided with hands free
	VDU Assessments to be carried out on people who work from home on a constant basis	End Jun 2009	QESH Meeting 03/04/2008	Colum S	

Ensure adequate training and development	Adest Training & Pricing	End Feb 2009	QESH Meeting 07/02/2008	Fiona C	Training carried out Cork 10.04.08 and TS 16.04.08. DL complete also. Training sign offs required. 10 sign offs outstanding.
	Carry out necessary training to develop site services team as secondary sales team	Q1 2009	Customer Sphere	Denis S	Training dates to be arranged for Q1 09 **John Daly attended December S/S meeting and started this. Will invite members of sales and/or commercial team to next site services meeting to carry training forward.**
	Photo's to be taken of all container types (drums & IBCs/FIBCs for haz waste and the different crates etc for WEEE). This can be used as training aid. Make available on the staff website.	Q2 2009	Good Ideas 2005	Eoin R	Photos have been taken. Denise drew up a guide and these photos need to be put into the guide and then added to the company website. ER to complete.
	Training to be carried out with all team leaders on the Training Management Software	Q1 2009	PB	Joseph M	
	Look at feasibility and resources required for applying to Excellence Through People scheme. Proposal to be presented to MGT Team	End Sept 2009	PB	Joseph M	
	In House training on disciplinary action for Leadership Development team members to be organised	Q3 2009	QESH Mgt Review 2009	Joseph M/Jenny K	
Ensure All Procedures Up to Date and Relevant	A schedule for procedure reviews to be put in place and agreed. Target in schedule to have all procedures reviewed over next 6 months	Q3 2009	Ruth Rob	Mary M	Schedule in S:\23_Region Ireland\QESH\QESH Spreadsheets - target dates for each procedure review to be entered
Review & Improve Internal Communication Systems	Talks to be arranged to explain company schemes such as Pension Schemes,	End Mar 2009	People Sphere	Jenny K/Timea S	Presentation from New Ireland to explain pension scheme to be arranged (DS)

	BUPA Scheme etc.				Presentation from Quinn Healthcare to explain health insurance scheme to be arranged (JK)
	Provide employees with information on tax breaks for working from home and for using public transport	End Feb 2009	Employee Forums	David S	Memo to be sent by DS
	Develop internal website dedicated to HR. To include topics such as training, employee forum, vacancies, HR policies & procedures etc	End Jul 2009	Good Idea 193	Jenny K	
Promote and improve consultation and participation in relation to QESH issues	Update QESH website using new template and ensure current information is available	Q1 2010	QESH Mgt Review 2009	Mariola P/Colum S/Mary M	
	Organise QESH Awareness day for all employees	Q3 2009	QESH Mgt Review 2009	Mariola P	
	Organise a QESH training day for all members of the LDP	Q4 2009	QESH Mgt Review 2009	Colum S/Mary M	
Ensure team meetings happen regularly within teams and between depts with standard agenda as per employee forum	Ensure schedule in place for team meetings, an agenda is being followed and that they are being minuted and stored in central location	End Mar 2009	Employee Forums	Patricia B	Employee forum meetings to be included. All agenda are available on the S drive and should be saved in S/Meeting Minutes Interdepartment and team meetings to be recorded on Meetings 2009.xls spreadsheet. Ongoing
Create Awareness of Data Protection	Develop a Data Protection Policy referencing the 8 principles of Data Protection	End Jul 2009	Grace	Patricia B	
	Password controls to be added to ITRS and Communicator	Q4 2009	Internal Audit of Data Protection	Rory M	
	Data protection (8 principles and company policy) to be added to company induction	End Aug 2009	Internal Audit of Data Protection	Jenny K	
	Educate team leaders on	Q4 2009	Internal	Patricia B	

	data protection - where to store confidential information, password protecting documents etc		Audit of Data Protection		
	Add Data Protection privacy statement to staff website	Q4 2009	Internal Audit of Data Protection	Patricia B	
	Clarify within data protection policy the use of CCTV in the TS and ensure data protection guidelines are being satisfied	End Jul 2009	Internal Audit of data Protection	Patricia B	
Conduct Review of Performance Management Process	Review and update performance management form to make it more user friendly	End May 2009	Employee forums and LDP training sessions	Jenny K	
	Ensure performance reviews and goal setting carried out regularly by conducting an audit companywide to establish that reviews are complete or not	End Mar 2009	Employee forums and LDP training sessions	Jenny K	Currently reviewing which performance reviews are outstanding. Management team being goaled to ensure these are completed. Goal setting will be reviewed once this task completed
Develop a Flexitime Policy	To aid work life balance – policy to be drafted with guidelines on flexible working arrangements	End Mar 2009	Employee Forum	Jenny K	Any policy will be launched on Work Life Balance day which is usually in Mar-09.

OBJECTIVE 8: EFFICIENCY - FINANACES & OPERATIONS

Objective No. 8:

Maintaining continuous innovation, improvement and efficiency that add value to the company

Responsible Manager: David Scanlan/Patricia Boyle

Target	Action	Due date	Arising from	Res.	Status
Increase efficiency of processes/procedures	More interdepartmental meetings to be arranged. Approx. 2 interfacing meetings between various departments each year	Ongoing	Leaders Forum Meeting 11/05/04	Jenny K	PM to prepare format for schedule for these meetings.
	Invoicing systems to be reviewed for increased efficiencies	Q1 2009	QESH Meeting 13/04/06	David S	Document prepared for top ten customers regarding the efficiency of interactions within the finance department.Write up guideline on how top 10/20 customers like to receive their invoices, contact name, etc
	A projects flowchart should be developed outlining issues such as putting contracts in place, ensuring contractors aware of EH&S codes of practise etc based on experience in building blending plant	Q1 2009	QESH Meeting 13/04/06	Conor J	
	Set up auto email of sales invoices from Tracker	Q2 2009	David S	David S/Rory M	
Ensure adequate IT systems and resources are in place	IT Skills to be assessed through testing following IT Training sessions.	Q2 2009	QESH Meeting 13/05/04	Rory M/Stephen M	JON goal Q3 07 to Coordinate Stephen and ext Contractors. Previous survey on IT skills to be used as KPI to measure improvement in IT Skills.
	Carry out a review of QESH Software, ensure system working to it's full potential and that all employees, as required, have access	Q1 2009	QESH Meeting 07/08/2008	Stephen M/Mary M	Stephen forwarded list of all employees on QESH Software, Mary to review. Possibly need to survey to see what people's main

					problems are with system.
	Further training on SAP financials and Webfocus to take place	Q1 2009	David S	David S	
	Investigate options for more user friendly software system for OFI's and CAR's to enable better notification, reminders and close out	Q1 2009	Ruth Rob/Mary M	Ruth Rob/Mary M	CAR form and procedure updated as first step towards preparing for software system
	An email policy is to be developed which covers email etiquette, rules on the use of email and email management tips	Q1 2009	Patricia B	Patricia B	
	Map of main process flows in order to ensure no duplication of work and any re-engineering possibilities are identified	Q2 2009	Employee Forum	Patricia B	
Implement Indaver NV group financial procedures	Procedure for purchasing to be implemented	Q1 2009	Indaver QESH Review 18/01/06	David S/Stef T	An Ireland and UK based system "Non Cost of Sales" has been implemented. ST has a goal for Q3 07 to document procedure within QESH system. Being regulated by SAP non-waste flow - procedure to be developed once all training complete
	Procedure for the management of petty cash to be implemented	Q1 2009	Indaver QESH Review 18/01/06	David S/Joan D	Joan has a goal for Q3 07 to document Impress procedure within QESH system. Editor training with Joan
	Procedure for debtor management to be implemented	Q1 2009	Indaver QESH Review 18/01/06	David S/Michael C	Paper procedure drafted and awaiting issue from QESH department. Credit control letters have been drafted and a collection agency engaged. The procedure now needs to be expanded into the general business, AS is working on this. New credit controller has a goal for Q3 07 to document procedure within QESH system.
	Procedure for management of payments to be implemented	Q1 2009	Indaver QESH Review 18/01/06	David S/Joan D	Joan has a goal for Q3 07 to document I procedure within QESH system.

OBJECTIVE 9: SUPPLIERS/CONTRACTORS

Objective No. 9:

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

Responsible Manager: Ruth Robertson/Caroline McLean

Target	Action	Due date	Arising from	Res.	Status
Ensure Control Over the Entry and Exit of Hauliers in the DPHWF	Develop and implement a haulier in/out log for the DPHWF	Q1 2009	QESH Meeting 07/08/2008	Ruth Rob/Eric McP	The system is in place. This is under the control of James Askin primarily. This includes a site induction with date recorded; visual inspection of Hazchem licence and times in and out. This needs to documented in Ops 13.3. In order to pre-empt the next step, the same system will now be in place for contractors and will be controlled by Peter O'Brien. This will be in effect from 08/09/2008.
Ensure Contractors are aware of Environmental, Health & Safety controls/rules when working at our premises.	A contractor induction presentation is to be prepared an given to all contractors prior to commencing work at the Dublin Port Hazardous Waste Facility	Q1 2009	HSA visit July 2007	Ruth Rob	

OBJECTIVE 10: CIVIC AMENITY SITES & TWM SITES

Objective No. 10:

Ensure EH&S control over activities on the civic amenity sites and TWM activities on customers sites and develop waste awareness systems and initiatives to improve and refine service provided to customers.

Responsible Manager: Jane Smith

Target	Action	Due date	Arising from	Res.	Status
Ensure operatives have adequate resources, training and equipment to carry out activities in safe and environmentally sound manner	Ensure adequate training systems in place for temporary staff	Q1 2009	QESH Meeting 12/05/05	Colum S	Guide has been prepared by RM which covers basic manual handling, operation of compactors etc JA/GG/PM/LCr to review and pass on comments before April QESH Meeting. JA has reviewed and reverted back with comments. Anthony F to update manual. Discussed AF, MM and JS 01/05/08, AF to update Jane and Colum to review manual together.
	Need to clarify with each TWM customer how they indicate on equipment next inspection date and ensure operatives are aware of these systems. Maintenance records to be obtained.	**30/04/09**	TWM Team Meetings	**Olivia T** **Maeve B** **Seamus G**	Astellas Abbott Wyeth Pfizer DL GSK Dung GSK Cork MSD Honeywell Boston All contract managers must update maintenance register with all equipment used by our operatives on site whether owned by customer or Indaver. **Work in progress this Q.**

	Ensure all operatives have received training in the operation of Balers and Compactors	Q1 2009	TWM Team Meetings	**Olivia T** **Maeve B** **Seamus G**	Astellas Colm Bissett & Michael Lawler received training certs **Stephen C and Les Charles training certs required** Pfizer DL Kiran received training - complete Abbott? Wyeth? GSK Ger O'Connor received training - complete **Donal H - complete** Boston/Honeywell, need to check?
	Compactors: ● Ensure that all electrical panels are locked closed. ● Ensure doors fitted to all compactors and place interlocking switches on compactor doors	**16/03/09**	HSA Inspection 13/04/2007	Colum S/Tom K	**Contractor onsite and work in progress**
	Compactors: ● Prepare isolation procedure for maintenance activities to include system of lock out tag out on CAS	**Q3 2009**	HSA Inspection 13/04/200	Colum S/Tom K	
Ensure control over CAS & TWM Vendors	Assess where waste streams are ultimately ending up for recovery/disposal i.e. end destinations. Add this question to the probity questionnaire	Q1 2009	QESH Meeting 01/12/04	Mary M	Report presented at Mar-05 meeting on CAS vendors, types of waste collected and final destination. Vendor control procedures under review - probity questionnaire being expanded to request info on end destinations. Need to add tick box to Q. 17.

					Letter to be sent to all relevant contractors informing them it is their responsibility to keep us informed of any changes of end destinations within 2 weeks. Draft letter circulated by PMcG. Wording to be softened. Check was sent, if not send letter and populate end destination screen in CRM. Extra tab needed on waste facility screen to record waste stream, end destination and licence/permit number. Trouble ticket raised. SMr to talk to Sean on 27th Feb. Done QESH Probity will be reissued this week and then forwarded to all vendors - once completed questionnaire returned - end destination screen in CRM can be fully populated - letter re updates can then be sent annually
	Develop system for linking approval of waste facilities to the waste types they are permitted to accept	On Hold	QESH Meeting 11/08/05	Ruth Rob/Mary M	
Review Loan Working and Security Issues to ensure suitability	As the sites are handling money, security issues need to be reviewed for suitability.	Q1 2009	H&S Risk Assessments	Colum S	
Ensure adequate risk assessments have been conducted covering all activities on site	Incorporate SGS recommendations from April 05 audit into risk assessments	Q1 2009	SGS Audit April-05	Ruth Rob	o Risk Assessment for the Compactor & Bailer does not make reference any training required by operators. - Need to double check

					o Risk Assessment for Lone Working should detail the controls in place for routine monitoring of the site if an operator is working by themselves. - No lone working need to remove from Risk Assessments o It is suggested that there is a clear link from the hazards to the risk into the controls in the risk assessment programme, this would enable easier understanding and traceability - Done
	Risk assessments need to be conducted for all TWM sites where we have personnel based	Q1 2009	RM (OFI 06/120)	Ruth Rob/ **Colum S**	Wyeth, Pfizer, Boston and Honeywell assessments completed. Quote requested from Nifast to complete remaining assessments and provide training on findings. Outstanding: GSK Dungarvan GSK Cork Abbott Sligo MSD Wyeth, Pfizer, risk assessment have been updated and clarified and actions have been added to OFI spreadsheet. To be issued on QESH. Boston and Honeywell assessments completed and issued on QESH. Nifast completed assessments for Astellas, Abott, MSD and GSK sites waiting for reports.
	Carry out risk assessments on the acceptance of paint in	Q2 2009	QESH Meeting 01/11/2007	Colum S	AF needs to review and update RA for Newcastlewest and

	the CASs				Kilmallock
Ensure adequate procedures in place for all TWM sites	Need to ensure that all procedures and forms for TWM sites are controlled and issued through QESH Software.	Q1 2009	Mary	**Olivia T** **Maeve B** **Seamus G**	Olivia Tuffy: Astellas Abbott Wyeth - 1 procedure left to issue by Mary Pfizer DL - 1 procedure left to issue by Mary GSK Dung GSK Cork MSD Honeywell Boston
	Set up operation manuals for each site/operative once all procedures/forms issued	Q1 2009	Mary	Mariola P	
	Provide training for all relevant people on new procedures/forms	Q1 2009	Mary	**Olivia T** **Maeve B** **Seamus G**	Astellas Abbott Wyeth - 1 procedure left to issue by Mary Pfizer DL - 1 procedure left to issue by Mary GSK Dung GSK Cork MSD Honeywell Boston
Ensure Responsibility for consignor on TWM sites is clarified and documented	Document to be drawn up for TWM sites that clearly defines whose responsibility each role is (customer or Indaver) under consignor duties, this document to be signed as part of all future TWM tenders	Q1 2009	QESH Meeting 05/06/2008	Maeve B/Jane S	**This has been reviewed and a document will only be drawn up to define these duties if specifically requested by a customer - COMPLETE**
Develop communication aids and waste awareness systems for CAS's & TWM Sites	TWM Manual Template to be completed. Template to be issued through QESH Software once complete	Q1 2009	TWM/QESH Meeting May 08	Sarah R/Mary M	Draft template complete Manuals to be in place for Pfizer, GSK by Q4 2008 - it will then be issued through QESH with any changes **Jane/Sarah to pass to**

					Mary for issue
	A TWM Manual should then be drawn up for each TWM site once template complete	Q1 2009	TWM/QESH Meeting May 08	**Olivia T** **Maeve B** **Seamus G**	Astellas Abbott Wyeth Pfizer DL GSK Dung GSK Cork MSD Honeywell Boston Each Contracts Manager is to adapt the template to suit each of their TWM Sites Manuals to be in place for Pfizer, GSK by Q4 2008, all other TWM sites by Q1 2009

OBJECTIVE 11: EVALUATION OF LEGISLATIVE COMPLIANCE

Objective No. 11:

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

Responsible Manager: Ruth Robertson

Target	Action	Due date	Arising from	Res.	Status
Ensure priority legislation is evaluated in a timely manner	Draw up a list of priority legislation to complete TMS compliance evaluation questionnaires on	Q2 2009	QESH Mgt Review 2009	Ruth Rob	
Ensure Actions Related to the Waste Management (Facility Permit and Registration) Regulations 2007 and (Amendment) Regulations 2008 are Closed Out	Conduct a further review of Belview permit requirements and compliance	Q1 2009	Completion of TMS Q.	Ruth Rob.	Mary and Ruth Rob conducting an internal audit
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	Kit out a first aid room in the DPHWF	Q2 2009	Completion of TMS Q.	Colum S	Dr from CHI has visited site. She is formulating list of required equipment for first aid room and potential suppliers.
	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	Q1 2009	Completion of TMS Q	Colum S	

	Set up system to ensure first aid administered is recorded Provide emergency contact details on or beside each first aid sign Include first aid contact details in the emergency response procedure Perform regular checks on all first aid boxes and record details of check	Q1 2009	Completion of TMS Q	Colum S	
	Assess first aid facilities, and personnel on each of the TWM sites to ensure there are adequate supplies and cover with trained personnel at all times. Ensure TWM staff know where the facilities are, who the first aiders are and how to contact them	Q1 2009	Completion of TMS Q	Colum S	
	Organise training for Lorraine in DL and 2 additional people in the transfer station to ensure cover on all shifts. Assess training options for all site services operatives to ensure they know how to use the first aid kits provided.	Q1 2009	Completion of TMS Q	Colum S	Lorraine training completed. We have volunteers from transfer station. Training to be arranged.
	Ensure that the necessary supplies and training are provided to enable first aid for accidents involving HF and cyanide	Q1 2009	Completion of TMS Q	Colum S	Dr from CHI has visited site to assess requirements. She will forward first aid kit required and potential suppliers and also develop training slides to be given to all operators potentially handling cyanide or HF.
Ensure actions related to the SHWW (Gen App) Regs 2007 Part 2 Chp 4 Manual Handling of Loads	Identify all employees who require manual handling training and complete the training with all	Q1 2009	Completion of TMS Q	Colum S	Mariola is co-ordinating the training, setting dates and arranging for people to attend. This has commenced
	Identify all employees	Q1 2009	Completion	Colum S	Mariola is co-ordinating

	who require refresher manual handling training , schedule and complete the training with all		of TMS Q		the training, setting dates and arranging for people to attend. This has commenced
	Manual Handling to be included on all site work assessments	Q1 2009	QESH Meeting 05/09/2008	Colum S	
	Awareness campaign required to ensure all employees on all sites are aware of the requirement to report all accidents and incidents to ensure that they are logged and investigated and corrective actions identified	Q1 2009	Completion of TMS Q	Colum S	
	Set up procedure for annual medicals for all operatives involved in handling operations to ensure that any ill effects from work such as back injuries are identified and managed	Q1 2009	Completion of TMS Q	Jenny K/ Colum S	Belgium procedure in place, need to use as template
	Set up standard risk assessment form to be completed prior to carrying out annual Handling training to identify risks and understand tasks so that the training can be appropriate to the job being done	Q1 2009	Completion of TMS Q	Colum S	
Ensure all new requirements from the SHWW Act 2005 in relation to employees are complied with	Regulation 9(4)(a) Indaver must provide information to fixed term employees or temporary employees on: o Hazards identified by the risk assessment o Health Surveillance o Special Qualifications required for the work	Q1 2009	SHWW Act 2005	Colum S	Moved from Objective 7
	Review and update all Indaver risk assessments and communicate findings and controls to all employees. Risk Assessment procedure to be reviewed and updated	Q4 2009	QESH Mgt Review 2009	Colum S	

	Regulation 10(5) Indaver must provide instructions in relation to any risks to employees of any other employee working at our place of work.	Q1 2009	SHWW Act 2005	Colum S/Joseph M	Moved from Objective 7. This is partly covered by the action on permit to work and the objective on contractor induction training. Minimum training requirements for temporary staff e.g. company induction, QESH induction need to be added to training procedure.
	Regulation 10(6) Indaver must ensure that each fixed-term or temporary employee has the appropriate training for the work they are to complete.	Q1 2009	SHWW Act 2005	Colum S/Joseph M	Moved from Objective 7. This applies to all employees, all employees must be trained to do their job. Minimum training requirements for temporary staff e.g. company induction, QESH induction need to be added to training procedure as per action above.

Change History

- End of Document -

Appendix 4: Index of Operational Procedures

Controlled Document: Procedures Index

Reference	Status	Version	Owner
Op_index	Authorised	16	Mary Miller

Type Index **Sub-Type**

Administration of System

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

Approval Amendment & Control

Operations 1.1	Amendment, Issue and Control of QESH System Documentation

Civic Amenity Site

Operations 17.1	Civic Amenity Site - Waste Acceptance, Storage, Loading & Collection
Operations 17.2	Civic Amenity Site - Site Maintenance, Safety & Security
Operations 17.3	Emergency Response Procedure for the Civic Amenity Sites

Classificaton & Identification of Waste

Operations 4.2	Classification & Identification of Waste
Operations 4.8	Safety Data Sheets

Commercial Support

Operations 3.12	Entering and Updating Costs in the Fixed Disposal Rates Screen in Tracker

Communications

Operations 6.1	Internal & External Communications

Customer Support

Operations 3.1	Customer Enquiry Processing and Quotation
Operations 3.21	Customer Complaints & Comments

Dublin Port Hazardous Waste Facility

Operations 16.1	Blending Pre-Acceptance Checks
Operations 16.2	Sampling Loading and Unloading at the Blending Plant
Operations 16.3	Stream Acceptance and Blending
Operations 16.8	Operation of the Nitrogen Blanketing System
Operations 4.1	Acceptance & Storage of waste at the Transfer Station
Operations 4.3	Monitoring of Storm Water Emissions to Surface Water Sewer
Operations 4.4	Testing and Removal of Water from Sumps
Operations 4.10	Acceptance and Storage of Asbestos Waste at the Transfer Station & SRF
Operations 4.19	Relocation of Material within Storage Bays
Operations 4.22	Forklift Charging Procedure
Operations 4.23	Storm Water Monitoring System

Emergency Response

Operations 8.2	Spill Clean Up at the Transfer Station
Operations 8.3	General Fire & Evacuation Procedure
Operations 8.4	Internal/External Flooding Procedure
Operations 8.5	Malicious Damage Procedure
Operations 8.7	General Emergency Response & Spill Clean Up
Operations 8.8	Indaver ADR Collection Vehicle's - Emergency Response Procedure and Drivers Responsibilities
Operations 8.9	Procedure upon Receipt of an Emergency Response Call

Environmental

Operations 6.2	Environmental Complaints
Operations 6.3	Environmental Non Compliance
Operations 6.4	Environmental Incident Investigation & Reporting
Operations 6.5	Internal Waste Management
Operations 6.6	Monitoring and Recording of Environmental Information
Operations 6.7	Monitoring and Measuring of Environmental Emissions

Equipment

Operations 15.1	SAP for the Creation of Maintenance
Operations 15.2	Maintenance of Equipment
Operations 9.1	Purchase Hire & Decommissioning of Equipment

Health & Safety

Operations 13.10	Control of Hot Work
Operations 13.11	Control of Confined Space Entry
Operations 13.1	Health & Safety Accident Investigation & Reporting
Operations 13.2	Completion of Time Sheets
Operations 13.3	Signing In and Out
Operations 13.4	Hazard Identification & Risk Assessment
Operations 13.5	General Site Security
Operations 13.6	HazID Safety Study
Operations 13.7	Management of Change Procedure
Operations 13.8	Management of Seveso - Monitoring, Auditing and Review of Major Accident Prevention Policy (MAPP) and the Safety Management System
Operations 13.9	The HAZOP Safety Study
Operations 16.4	Lock Out and Tag Out Procedure
Operations 16.5	Identification of Safety Critical Components of an Installation
Operations 16.6	Opening Pipelines and Vessels
Operations 4.12	Health & Safety Checks
Operations 5.22	Use of Portable Breathing Air Units

HR Procedures

Operations 18.1	Employee Recruitment & Induction
Operations 18.2	Employee Performance Management
Operations 18.3	Employee Leaving Procedure
Operations 18.4	Employee Absence Management Procedure

IT Systems

Operations 9.4	Backing Up Computer System
Operations 9.5	Operation of the Out of Hours Telephone System

Lab

Operations 20.1	Receiving Logging and Storage of Samples
Operations 20.12	Handling and Storage of Stock Reagents
Operations 20.19	Equipment Calibrations and Maintenance
Operations 20.21	Laboratory Quality Control System
Operations 20.23	Operation of the Lone Worker System
Operations 20.24	Emergency and Safety Equipment
Operations 20.29	Laboratory Spills and Leaks
Operations 20.4	Waste Handling and Storage and Disposal
Operations 20.8	Data Handling in the Laboratory
Operations 21.11	Determination of the Flash Point of Waste Samples
Operations 21.12	Determination of methanol in waste
Operations 21.13	Determination of organic solvents in waste
Operations 21.14	Density Determination
Operations 21.1	Determination of Metals and Halogens and Sulphur Using XRF
Operations 21.2	Determination of the Calorific Value Using an IKA Bomb Calorimeter

Operations 21.3	Determination of Free Solids in Liquid Waste Samples
Operations 21.4	Determination of the pH of Liquid Waste Samples
Operations 21.5	Determination of Fluoride in Liquid Waste Samples by Ion Selective Electrode
Operations 21.6	Determination of Ash Content
Operations 21.7	Determination of Water Content by Karl Fischer Titration
Operations 21.9	Determination of Waste Compatibility
Operations 22.1	Operation and Calibration of the Bruker XRF Spectrometer
Operations 22.10	Calibration and Use of the Analytical Balances
Operations 22.13	Operation and Maintenance of Varian Saturn 2100T GC/MS
Operations 22.14	Operation of the Stuart Magnetic Stirrer and Hotplate
Operations 22.16	Operation of the Fume Hoods
Operations 22.2	Operation of the IKA C 500 Bomb Calorimeter
Operations 22.20	Operation and Maintenance of the Micropipettes
Operations 22.23	Handling of Compressed Gases
Operations 22.3	Operation of the Hettich Universal 320R Centrifuge
Operations 22.4	Operation of the Eutech 5500 pH/Ion Meter
Operations 22.5	Operation and Maintenance of TRICOOL 21 S2/10EXT Chiller
Operations 22.6	Operation of the Binder FD53 Laboratory Oven
Operations 22.7	Operation of the Carbolite Muffle Furnace
Operations 22.8	Operation of the Metrohm 787 Karl Fischer Titrino
Operations 22.9	Operation of the Millipore Direct Q 5 Water Purification System
Operations 23.1	X-Ray Radiation Protection

Movement & Tracking

Operations 2.1	Moving a Waste Load under Transfrontier Shipment Form (TFS) direct from a Customer's Site to a Waste Facility
Operations 2.2	Moving a Waste Load under C1 from a Customer's site transiting the Transfer Station to a Waste Facility on TFS
Operations 2.3	Moving a Waste load under Transfrontier Shipment Form (TFS) from Storage in the Transfer Station to a Waste Facility
Operations 2.4	Obtaining Licenses for the shipment of Controlled Drugs
Operations 2.8	Moving a Waste Load to Indaver's Transfer Station
Operations 2.9	Moving a Waste Load to a Waste Facility within Ireland
Operations 2.10	Moving Waste from Storage in the Transfer Station to a Waste Facility within Ireland
Operations 2.13	Obtaining approval from Chemviron for a new spent carbon stream
Operations 2.14	Movement of Waste to Kinsale Road Landfill and then on TFS to the Continent
Operations 2.15	Moving Meat & Bone Meal by Vet Cert off a Customer Site to a Disposal Facility
Operations 2.16	Moving Green List Waste for Recovery on CMR Note
Operations 2.18	Procedure for Recording & Consigning Waste on RecTracker
Operations 2.19	Dealing with a Waste Load Rejected at a Facility

Pfizer Dun Laoghaire TWM

Operations 27.1	Pfizer Dun Laoghaire TWM - Collection and Disposal of Mixed Vials
Operations 27.2	Pfizer Dun Laoghaire TWM - Collection and Packing of Solid Pharmaceutical Waste On Site

Operations 27.3	Pfizer Dun Laoghaire TWM - Collection and Disposal of Non Hazardous Waste
Operations 27.4	Pfizer Dun Laoghaire TWM - Collecting and Disposal of Uncontaminated Glass Vials
Operations 27.5	Pfizer Dun Laoghaire TWM - Collection and Disposal of Waste Batteries
Operations 27.6	Pfizer Dun Laoghaire TWM - Collection and Disposal of Waste Electronic Electrical Equipment (WEEE)
Operations 27.7	Pfizer Dun Laoghaire TWM - Collection and Recycling of Cardboard & Plastic Waste
Operations 27.8	Pfizer Dun Laoghaire TWM - Collection and Disposal of Waste Fluorescent Tubes
Operations 27.9	Pfizer Dun Laoghaire TWM - Collection and Disposal of Waste Cooking Oils
Operations 27.10	Pfizer Dun Laoghaire TWM - Collection and Packaging of Toners/Ink Cartridges for Disposal
Operations 27.11	Pfizer Dun Laoghaire TWM - Collection and Packaging of Toners/Ink Cartridges for Disposal
Operations 27.12	Pfizer Dun Laoghaire TWM - Collecting and Disposing of Triple Rinsed Winchesters in Pfizer
Operations 27.13	Pfizer Dun Laoghaire TWM - Collection and Packing of Biohazardous Waste/Cin Bins
Operations 27.14	Pfizer Dun Laoghaire TWM - Collection Listing and Packing of Laboratory Smalls On Site
Operations 27.15	Pfizer Dun Laoghaire TWM - Loading of Waste Shipments for Movement Off Site
Operations 27.16	Pfizer Dun Laoghaire TWM - Collection and Disposal of Chloroform Bovine Waste
Operations 27.17	Pfizer Dun Laoghaire TWM - Collection of Empty Contaminated Drums

Sales & Invoicing

Operations 3.14	GSK Change Control Procedure
Operations 3.2	Completion of New Customer Account Application Forms and New Supplier Account Opening Forms
Operations 3.4	Preparing Jobs for Invoicing
Operations 3.5	Invoice Approval
Operations 3.9	Certificates of Disposal/Recovery
Operations 3.10	Drum Supply Procedure

TFS

Operations 3.6	Raising a TFS & a Financial Guarantee

Training & Staff Competence

Operations 10.6	Training & Staff Competence

Transport Issues

Operations 14.1	Vehicle Maintenance & Servicing
Operations 14.2	Ensuring Compliance with Driver Hours

Vendor Control

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

Waste Handling

Operations 4.6	Taking and Moving a waste Sample for Analysis
Operations 5.1	Requesting Completing and Issuing Instructions to Work
Operations 5.2	Interpretation of UN Marking System
Operations 5.3	Inspection of Packages for Carrying Waste
Operations 5.4	Loading containers for Shipment
Operations 5.6	Earthing
Operations 5.8	Assignment and Use of Personal Protective Equipment
Operations 5.10	Repackaging of Waste
Operations 5.12	Labelling of Packages
Operations 5.13	On Site Placarding of Bulk and Packaged Waste Loads
Operations 5.19	Laboratory Smalls
Operations 5.21	DGSA Incident Investigation & Reporting

Wyeth Grangecastle TWM

Operations 26.1	Wyeth Medica Grangecastle TWM - Collection and Triple Rinsing of Empty Contaminated Drums
Operations 26.2	Wyeth Medica Grangecastle TWM - Collection and Packing of Red Bagged Waste and Sharps Bins On Site
Operations 26.3	Wyeth Medica Grangecastle TWM - Collecting Listing and Packing of Lab Smalls On Site
Operations 26.4	Wyeth Medica Grangecastle TWM - Collecting Listing Decanting of Liquid Waste and Packing of Jerricans On Site
Operations 26.5	Wyeth Medica Grangecastle TWM - Collection and Packing of Inactivated Biohazardous Yellow Bagged Waste / Cin Bins (Autoclaved) On Site
Operations 26.6	Wyeth Medica Grangecastle TWM - Collection and Packing of Biohazardous Yellow Bagged Waste / Cin Bins (Autoclaved) On Site
Operations 26.7	Wyeth Medica Grangecastle TWM - Collecting and Storing of Genetically Modified Microorganisms Biohazardous Waste On Site
Operations 26.8	Wyeth Medica Grangecastle TWM - Collection of Empty Contaminated Drums On Site
Operations 26.9	Wyeth Medica Grangecastle TWM - Collection Waste Vials Containing Prevnar MNTX Tygacil and Media On Site
Operations 26.10	Wyeth Medica Grangecastle TWM - Collection of Waste Cooking Oils from On Site Canteens
Operations 26.11	Wyeth Medica Grangecastle TWM - Collection of Waste Hydraulic Lubricant Compressor and Engine Oils On Site
Operations 26.12	Wyeth Medica Grangecastle TWM - Collection and Disposal of Waste Electronic Electrical Equipment (WEEE)
Operations 26.13	Wyeth Medica Grangecastle TWM - Collection and Disposal of Waste Batteries
Operations 26.14	Wyeth Medica Grangecastle TWM - Collection and Disposal of Waste Fluorescent Tubes
Operations 26.15	Wyeth Medica Grangecastle TWM - Collection and Disposal of Toner and Ink Cartridges
Operations 26.16	Wyeth Medica Grangecastle TWM - Loading of Containers for Waste Shipments

	On Site

Change History

- End of Document -

Appendix 5: Hazardous Waste Data

Waste quantities accepted into storage between the 1st Jan 08 and the 31st Dec 08 categorised by EWC Code

INDAVER IRELAND

APPENDIX 5 Waste Accepted into Storage 1st Jan 2008 - 31st Dec 2008 by EWC CODE

02	**WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING**									**TOTAL**	**739.29**	**MT**
02 02 01	24.92											
02 07 04	724.93											
02 07 05	14.36											
03	**WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD**									**TOTAL**	**24.11**	**MT**
03 02 05*	24.11											
06	**WASTES FROM INORGANIC CHEMICAL PROCESSES**									**TOTAL**	**298.11**	**MT**
06 01 01*	5.12		06 02 01*	2.15		06 04 04*	1.22					
06 01 02*	8.78		06 02 03*	0.04		06 04 05*	12.83					
06 01 03*	0.09		06 02 04*	52.98		06 05 02*	0.01					
06 01 04*	11.00		06 02 05*	42.96		06 08 02*	4.51					
06 01 05*	14.05		06 03 13*	0.01		06 08 99	0.06					
06 01 06*	142.30											
07	**WASTES FROM ORGANIC CHEMICAL PROCESSES**									**TOTAL**	**19,967.51**	**MT**
07 01 03*	1.04		07 05 11*	308.75		07 06 04*	1.15					
07 02 04*	36.8		07 05 12	0.95		07 06 99	2.71					
07 02 16*	0.52		07 05 13*	2065.31		07 07 03*	0.21					
07 05 01*	1873.7		07 05 14	15.14		07 07 04*	68.22					
07 05 03*	6194.26		07 05 99	140.5		07 07 10*	69.60					
07 05 04*	9060.16		07 06 01*	39.21		07 07 11*	20.78					
07 05 08*	0.64											
07 05 09*	0.09											
07 05 10*	67.77											
08	**WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS**									**TOTAL**	**1,119.44**	**MT**
08 01 11*	151.12		08 02 01	3.32								
08 01 13*	1.61		08 03 08	373.89								
08 01 17*	0.99		08 03 12*	64.95								
08 01 19*	0.78		08 03 17*	4.46								
08 01 20	113.8		08 04 09*	378.92								

APPENDIX 5 Waste Accepted into Storage 1st Jan 2008 - 31st Dec 2008 by EWC CODE												
08 01 21*	3		08 04 13*	8.3								
08 01 99	0.13		08 04 99	14.17								
09	**WASTES FROM THE PHOTOGRAPHIC INDUSTRY**									**TOTAL**	**0.10**	**MT**
09 01 04*	0.1											
11	**WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY**									**TOTAL**	**135.88**	**MT**
11 01 05*	5.95		11 01 11*	83.64								
11 01 06*	36.05		11 01 98*	2.83								
11 01 08*	7.41											
12	**WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS**									**TOTAL**	**3.53**	**MT**
12 01 07*	0.07											
12 01 09*	2.49											
12 01 12*	0.07											
12 03 01*	0.9											
13	**OIL WASTES AND WASTES OF LIQUID FUELS (except edible oils, and those in chapters 05, 12 and 19)**									**TOTAL**	**112.53**	**MT**
13 01 10*	3.36		13 03 07*	2.7								
13 01 11*	0.02		13 03 08*	1.08								
13 01 13*	10.57		13 03 09*	0.34								
13 02 04*	0.03		13 03 10*	5.81								
13 02 05*	0.85		13 07 01*	5.13								
13 02 06*	3.18		13 07 03*	2.4								
13 02 08*	14.83		13 08 99*	62.23								

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APPENDIX 5 Waste Accepted into Storage 1st Jan 2008 - 31st Dec 2008 by EWC CODE

14	**WASTE ORGANIC SOLVENTS, REFRIGERANTS AND PROPELLANTS (except 07 and 08)**									**TOTAL**	**1,981.09**	**MT**
14 06 01*	0.12											
14 06 02*	1214.17											
14 06 03*	766.8											
15	**WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED**									**TOTAL**	**783.20**	**MT**
15 01 01	0.68		15 01 07	6.3								
15 01 02	4.14		15 01 10*	358.91								
15 01 04	1.2		15 02 02*	401.43								
15 01 06	10.54											
16	**WASTES NOT OTHERWISE SPECIFIED IN THE LIST**									**TOTAL**	**1,051.50**	**MT**
16 02 09*	2.58		16 06 01*	0.77								
16 02 10*	0.07		16 06 04	0.93								
16 02 13*	0.42		16 09 01*	0.16								
16 03 03*	28.1		16 09 02*	0.07								
16 03 05*	224.95		16 09 03*	2.15								
16 03 06	2.36		16 09 04*	3.72								
16 05 04*	45.77		16 10 01*	0.54								
16 05 06*	145.65		16 11 05*	6.59								
16 05 07*	183.76											
16 05 08*	402.91											
17	**CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)**									**TOTAL**	**33.95**	**MT**
17 05 03*	3.62											
17 05 05*	22.86											
17 09 03*	7.47											
18	**WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (except kitchen and restaurant wastes not arising from immediate health care)**									**TOTAL**	**33.56**	**MT**
18 01 01	0.08											
18 01 03*	4.57											
18 01 06*	28.76											
18 02 05*	0.15											

APPENDIX 5 Waste Accepted into Storage 1st Jan 2008 - 31st Dec 2008 by EWC CODE												
19	**WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE**									**TOTAL**	**24.28**	**MT**
19 02 05*	21.85											
19 02 08*	0.12											
19 09 04	0.49											
19 09 05	1.82											
20	**MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS**									**TOTAL**	**934.72**	**MT**
20 01 01	0.01		20 01 27*	796.59		20 01 35*	0.14					
20 01 02	1.28		20 01 29*	11.06		20 01 39	0.02					
20 01 14*	31.67		20 01 30	0.51		20 01 40	0.25					
20 01 15*	0.23		20 01 31*	19		20 03 01	0.1					
20 01 19*	3.43		20 01 32	2.12								
20 01 21*	1.89		20 01 33*	17.43								
20 01 13*	1.66		20 01 34	3.58								
20 01 25	32.07											
20 01 26*	13.11											
					TOTAL WASTE ACCEPTED JAN 2008 - DEC 2008						**27,242.80**	**MT**

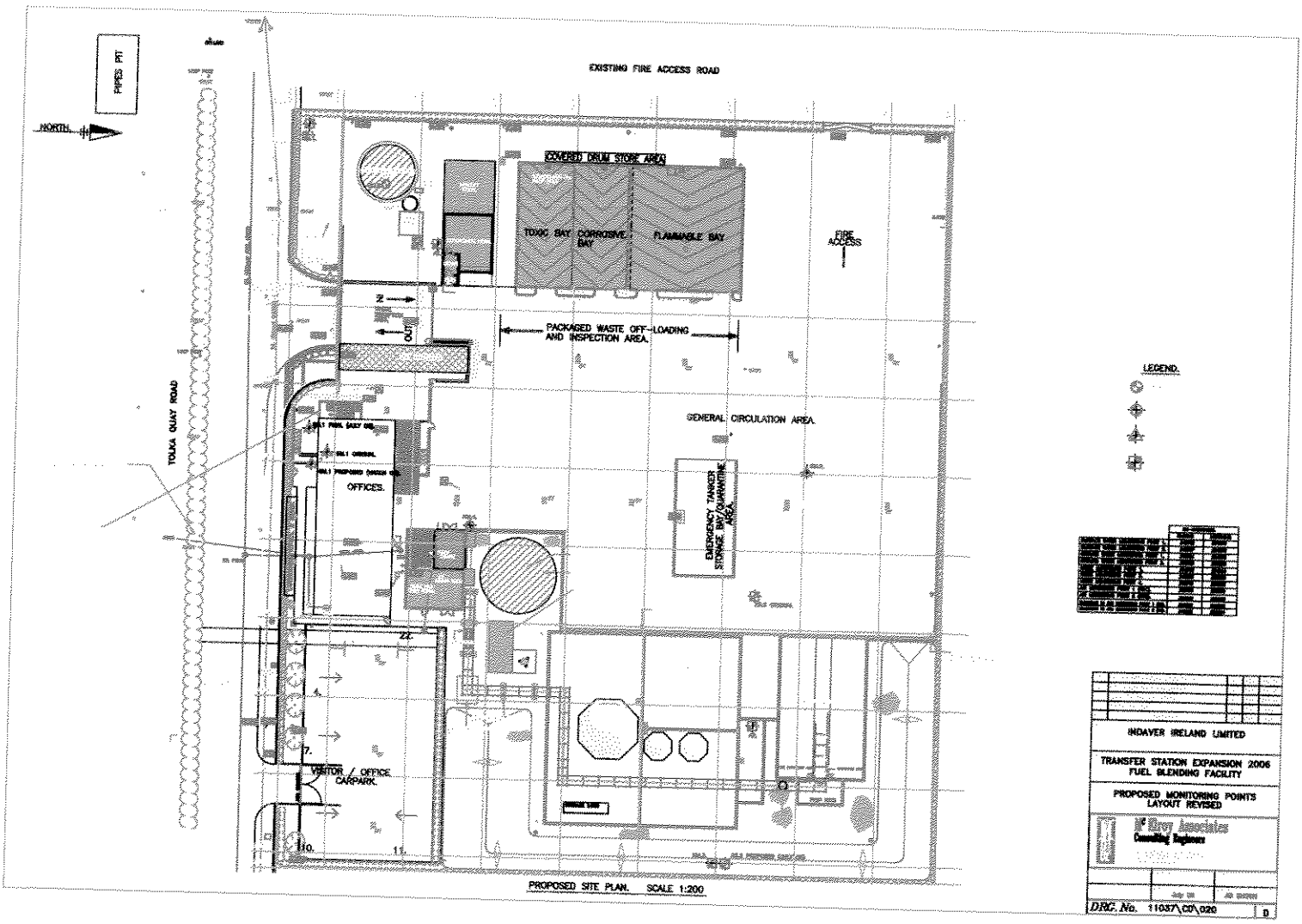
Appendix 6: Hazardous Waste Data

Waste quantities exported from the transfer station between the 1st Jan 08 and the 31st Dec 08 by final disposal/recovery site

Appendix 6: Waste quantities exported from the transfer station between the 1st Jan 08 and the 31st Dec 08 by final disposal/recovery site

Disposer	Country	Disposal/ Recovery Code	Location Code	Quantity (MT)
ATM	The Netherlands	R13, R9, R2, D13	c	1451.48
AVG	Germany	D8	c	8037.51
Chemogas N.V.	Belgium	R13, R9	c	5.38
Ecosafe Systems Ltd	Ireland	D7	b	0.01
Enva (Portlaoise)	Ireland	R8	b	0.15
Enva (Shannon)	Ireland	D7	b	108.82
Envio Germany GMBH & Co KG	Germany	R4	c	2.58
Hammond Lane Metal Co (Dublin)	Ireland	R13	b	1.20
IAG	Germany	D5	c	40.59
Immark Ireland Ltd	Ireland	R13	b	0.40
Indaver Ireland Limited	Ireland	R1	b	1385.61
Indaver NV	Belgium	D8, D7	c	4733.33
Indaver Relight NV	Belgium	R3	c	0.09
Irish Lamp Recycling	Ireland	R5	B	0.06
KMK Metals Recycling	Ireland	R3, R4, R13	b	22.70
Kommunekemi a/s	Denmark	D8	c	9245.95
Mr. Binman Killmallock	Ireland	R13	b	14.18
Mulberry Waste Ltd	England	R2	c	21.00
Nehlsen GmbH & Co. KG	Germany	R3	c	82.57
Pyros Environmental Limited	England	D8	c	0.01
Purton Carbons UK Ltd	England	R7	c	12.50
Rehab Recycling (Tallaght)	Ireland	R13, R3, R4	b	0.49
Remondis Industrie Service GMBH (Bramsche)	Germany	D10	c	73.37
Returnbatt Limited	Ireland	R13	b	1.29
Rilta	Ireland	R3, D7	b	86.29
S.J. Murphy (Waterford) Ltd	Ireland	R13	b	25.78
SRM Ltd. (Morecambe site)	England	R13, R9, R1	c	822.85
SRM Ltd. (Rye site)	England	R13, R9, R1	c	930.20
SRM Ltd. (Sunderland site)	England	R13, R9, R1	c	594.07
TechRec Ireland ltd	Ireland	R13	b	2.43
TRV Thermische Ruckstandsverwertung	Germany	D8	c	347.82
Veolia Environmental Services plc (Preston)	England	R1	c	203.3
			Total	**28254.01**

Appendix 7: Drawing number 11037\CD\020 Rev D showing the location of all monitoring points



INDAVER IRELAND LIMITED

TRANSFER STATION EXPANSION 2006
FUEL BLENDING FACILITY

PROPOSED MONITORING POINTS LAYOUT REVISED

M' Airey Associates
Consulting Engineers

DRG. No. 11037\CD\020 D

Appendix 8: Residuals Management Plan (RMP)

Residuals Management Plan

for

Indaver Ireland Limited

Dublin Port Blending Plant

Certified Final

Document No: 323-X014
Date: April 2008

Byrne Ó Cléirigh, 30a Westland Square, Pearse Street, Dublin 2, Ireland.
Telephone: + 353 – 1 – **6770733**. Facsimile: + 353 – 1 – **6770729**. Email: Admin@boc.ie. Web: **www.boc.ie**

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.

Table of Contents

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 m³, 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^3.

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

In total there is approximately 1,400 m^3 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^3).

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^3 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^3 and two 75 m^3 tanks for the storage and blending of solvents[1].

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

[1] 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
Disposal Activities		
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)
Recovery Activities		
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[1]	3
Groundwater Protection[2]	0
Sensitivity of Receiving Waters[3]	2
Air Quality[4]	0
Protected Ecological Sites[5]	1
Sensitive Agricultural Receptors	0
Total	**6**

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
Risk Category		*Category 3*

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

Item	Cost Estimate
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[1]
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	-[2]
Test programme/Environmental Monitoring Final soil and groundwater sampling and analysis	€20,800
Verification audit/certification	€10,400
Report to EPA	€5,200
Total estimated closure cost	€426,640

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 31st December 2006 was €336,846. The corresponding figure in the 31st 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

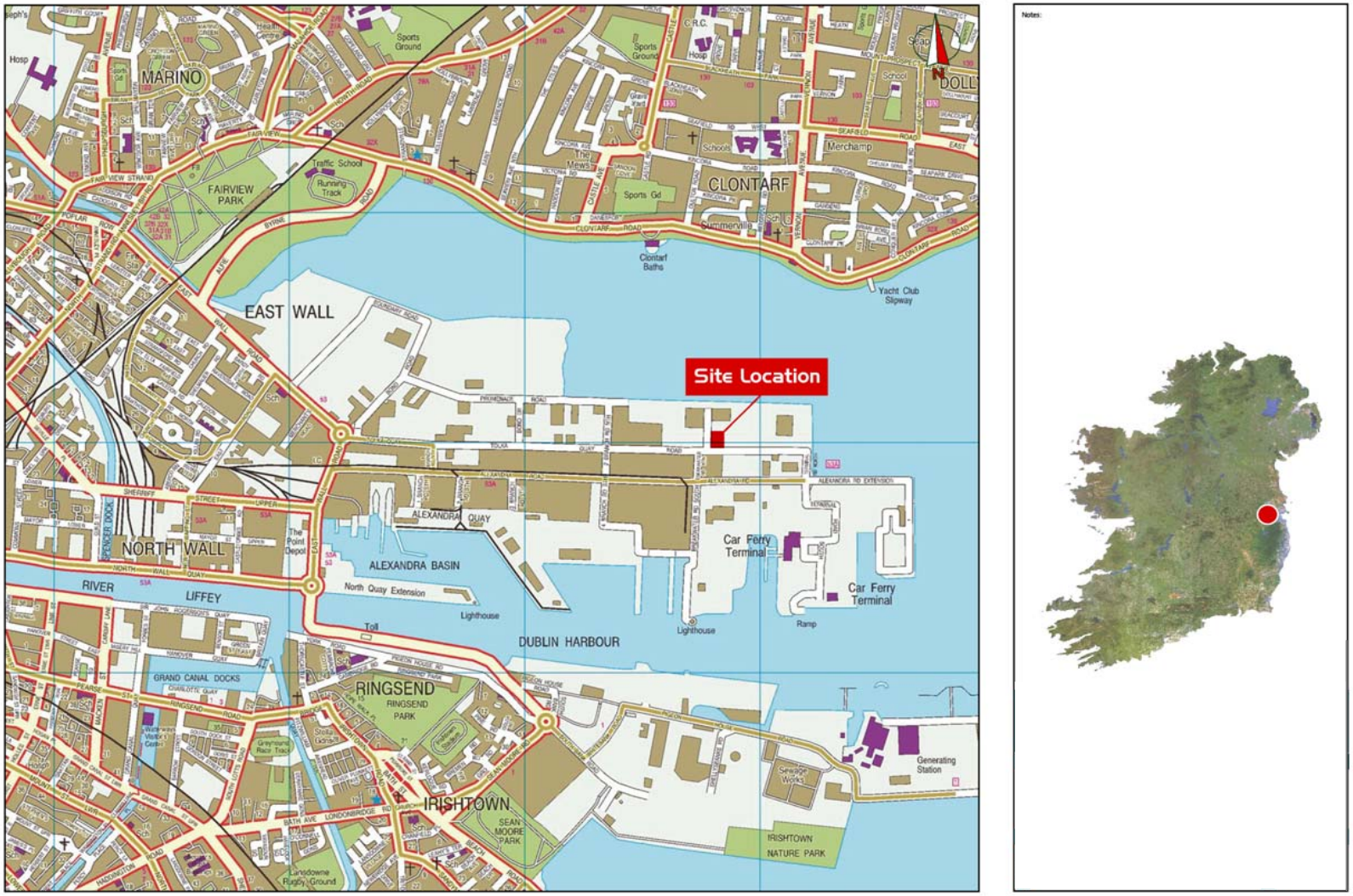
The investment in the solvent blending facility in 2006 came to just over €4 million. The closure combined cost estimates set out in section 5.0 for all items except the waste on site is €166,500. As this is less than 4.2% of the total investment, Indaver is confident that the sale proceeds from the 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 1st January 1999. The total policy limit is €12.5 million. The current policy period runs until 31st December 2009.

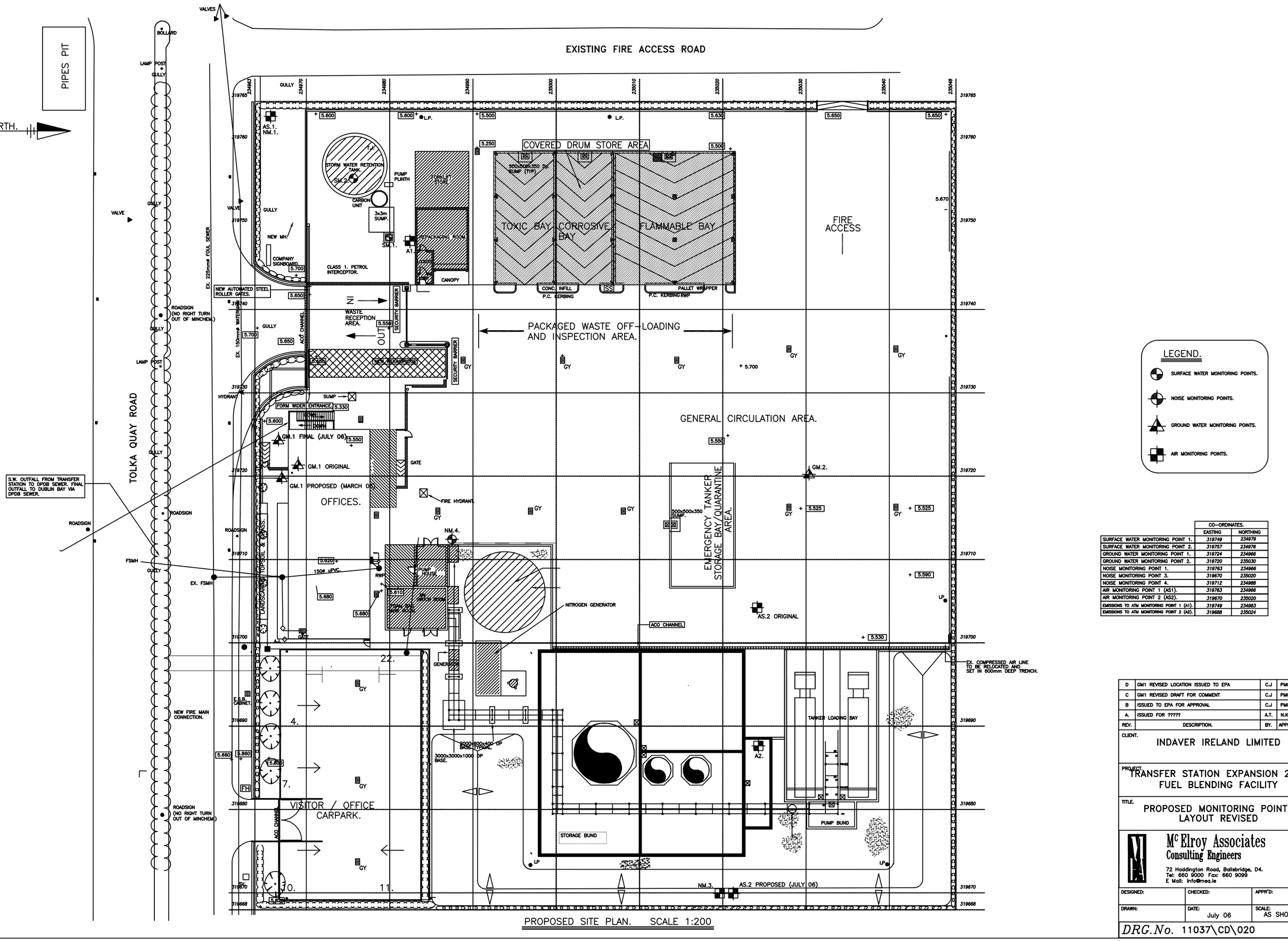
Appendix 1

Location Map of Indaver's Dublin Port Site


MARINO
FAIRVIEW PARK
Traffic School
Running Track
Sports Ground
CLONTARF
Merchamp
Clontarf Baths
Yacht Club Slipway
EAST WALL
Site Location
NORTH WALL
ALEXANDRA QUAY
ALEXANDRA BASIN
North Quay Extension
Lighthouse
Car Ferry Terminal
Ramp
RIVER LIFFEY
DUBLIN HARBOUR
Toll
GRAND CANAL DOCKS
RINGSEND
RINGSEND PARK
IRISHTOWN
SEAN MOORE PARK
IRISHTOWN NATURE PARK
Generating Station
Lansdowne Rugby Ground
Notes:

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.	319783	234966
NOISE MONITORING POINT 3.	319670	235020
NOISE MONITORING POINT 4.	319712	234988
AIR MONITORING POINT 1 (AS1).	319783	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

REV.	DESCRIPTION.	BY.	APPR.	DATE.
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.	????

CLIENT.
INDAVER IRELAND LIMITED

PROJECT.
TRANSFER STATION EXPANSION 2006
FUEL BLENDING FACILITY

TITLE.
PROPOSED MONITORING POINTS LAYOUT REVISED

Mc Elroy Associates
Consulting Engineers
72 Haddington Road, Ballsbridge, D4.
Tel: 660 9000 Fax: 660 9099
E Mail: info@mea.ie

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

DRG.No. 11037\CD\020 REV. 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.

TABLE OF CONTENTS

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^3. 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^3 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^3.
- Contaminated water retention tank (the current storm water retention tank) with a capacity of 177 m^3.
- The yard will act as an effective containment area of approximately 400 m^3.

In total, there are approximately 1,400 m^3 of firewater storage capacity onsite. This quantity is significantly greater than the 600 m^3 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:

<u>Emissions to air from either a fire on-site or a spillage of a volatile toxic material.</u>
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.

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

<u>Discharge of toxic substances to the marine environment</u>
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^3 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^3 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^3. The solvent recovery plant includes one 300 m^3 tank and two 75 m^3 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^3 per tanker/truck, the maximum quantity stored in this area would be approximately 200m^3. The total, maximum, inventory of waste at the site is therefore 850m^3.

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^2 area (800 m^3 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 m³, 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^3.

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^3. 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^3 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^3. 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^3;
- The yard will act as an effective containment area of approximately 400 m^3.

In total there is approximately 1,400 m^3 of firewater storage capacity onsite. This is significantly greater than the 600 m^3 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[1]	3
Groundwater Protection[2]	0
Sensitivity of Receiving Waters[3]	2
Air Quality[4]	0
Protected Ecological Sites[5]	1
Sensitive Agricultural Receptors	0
Total	**6**

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. Firewate.r 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. • Overfilling of tank • Rupture of transfer line • Discharge during sampling/draining	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 • Overfilling, ignition and flashback into tank. • Static and flashback into tank 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 • Overfilling of tank • Rupture of transfer line • Discharge during sampling/draining	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. • Puncture of container • Corrosion • Pump leak • Rupture of flexible hose 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. • Puncture of container • Corrosion • Pump leak • Rupture of flexible hose	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. • Collision or • Valve failure *and* • Failure of automatic surface water monitoring *and* • Failure of personnel to use E-Stop.	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_{50} 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.

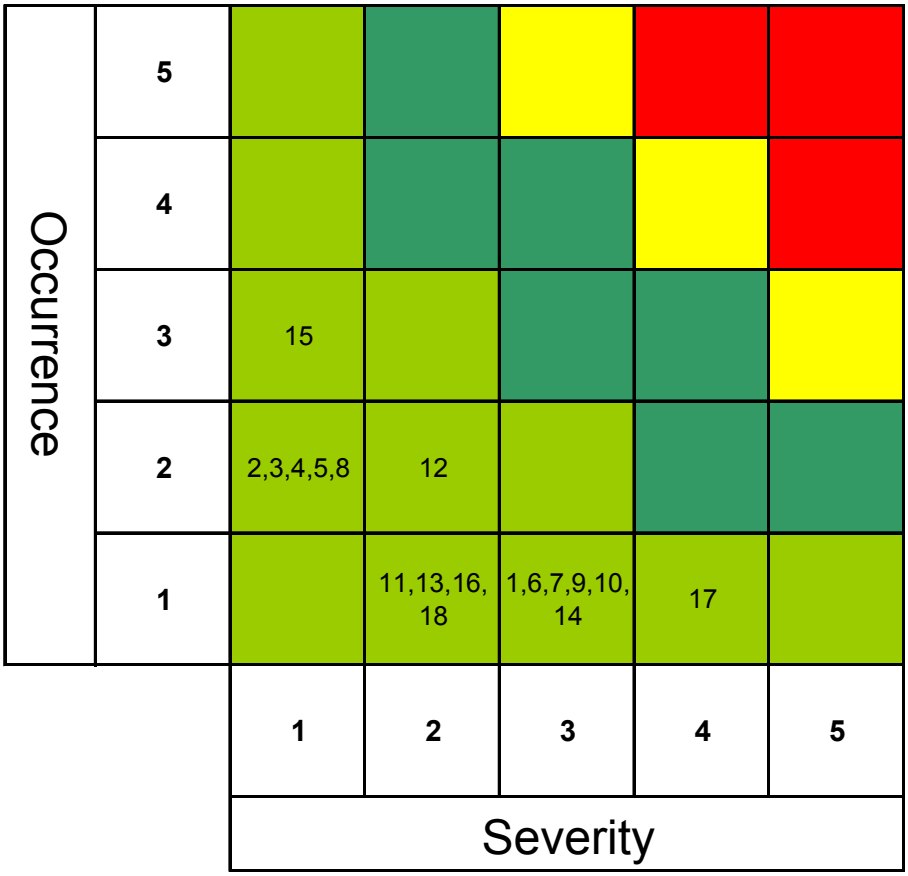
7.4 Risk Register & Risk Matrix

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



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 m3 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^3
- 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[1,2] 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^3 of toxic substances (e.g. Aznalcóllar Mine).

The USEPA[3] 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[4] 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^3 of contaminated firewater could be contained on-site. Assuming removal and disposal costs of between €75 and €125 per m^3, 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^3 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.

[1] Corporate Crimes: The need for an international instrument on corporate accountability and liability. Greenpeace International, June 2002.

2 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

3 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

[4] 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[1]	2.5%	€100,000	€2,500
12	2	5 % - 10%	2	-[2]	7.5%	€0	€0
1	1	0% - 5%	3	€45,000 – 75,000[3]	2.5%	€60,000	€1,500
6	1	0% - 5%	3	€105,000 – 175,000[3]	2.5%	€140,000	€3,500
7	1	0% - 5%	3	€105,000 – 175,000[3]	2.5%	€140,000	€3,500
9	1	0% - 5%	3	€105,000 – 175,000[3]	2.5%	€140,000	€3,500
10	1	0% - 5%	3	€105,000 – 175,000[3]	2.5%	€140,000	€3,500
14	1	0% - 5%	3	€45,000 – 75,000[3]	2.5%	€60,000	€1,500
15	3	10% - 20%	1	-[2]	15.0%	€0	€0
Total							**€19,500**

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^3.

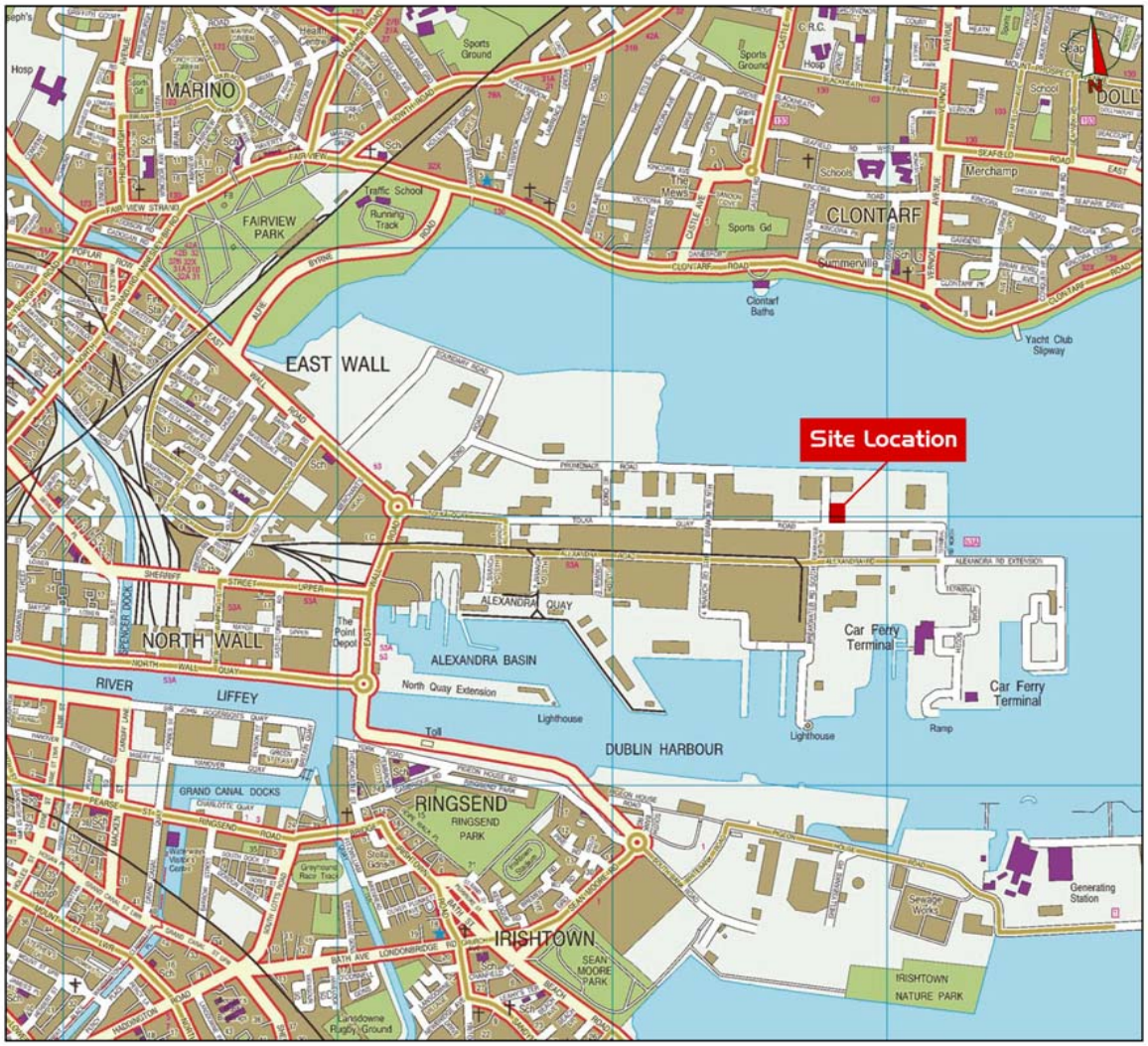
10 CURRENT FINANCIAL PROVISIONS AND INSURANCE STRUCTURE

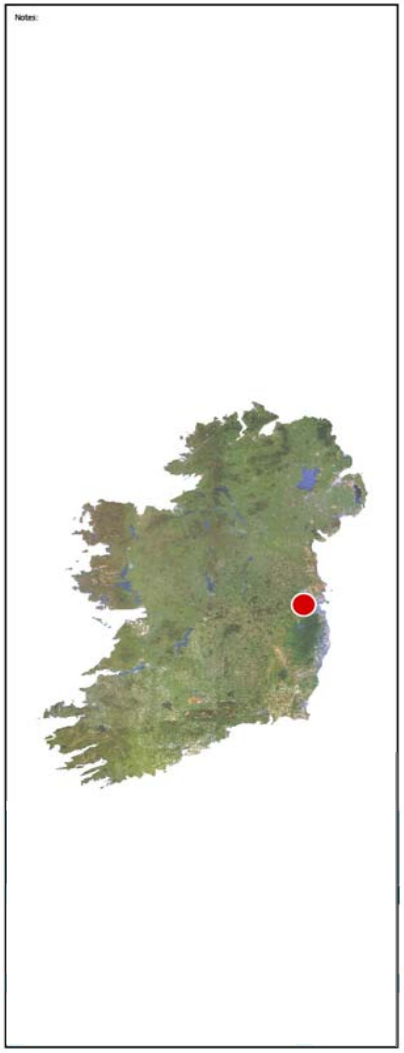
At present Indaver have not made financial provisions to cover environmental liabilities. Indaver are in the process of investigating their options in this regard and will submit a proposed package of financial provisions to the Agency for agreement.

* * * * *

Appendix 1

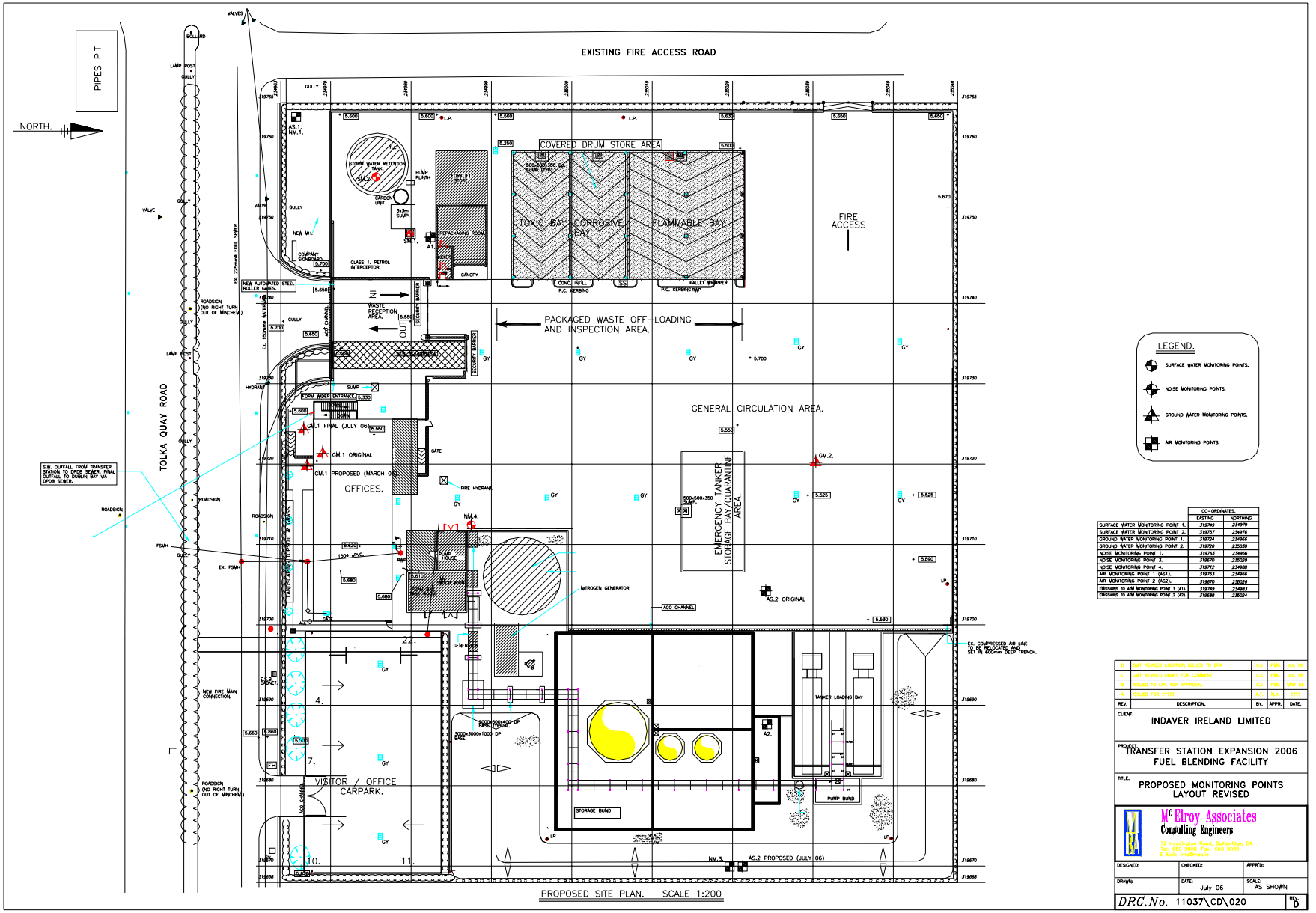
Location Map of Indaver's Dublin Port Site


MARINO
FAIRVIEW PARK
Traffic School
Running Track
Sports Ground
CLONTARF
Clontarf Baths
Yacht Club Slipway
EAST WALL
Site Location
NORTH WALL
ALEXANDRA BASIN
ALEXANDRA QUAY
North Quay Extension
Lighthouse
Car Ferry Terminal
Ramp
RIVER LIFFEY
DUBLIN HARBOUR
Toll
GRAND CANAL DOCKS
RINGSEND
RINGSEND PARK
IRISHTOWN
SEAN MOORE PARK
IRISHTOWN NATURE PARK
Generating Station
Lansdowne Rugby Ground


Notes:

Appendix 2

Site Plan



PROPOSED SITE PLAN. SCALE 1:200

	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 A/M MONITORING POINT 1 (A1).	319749	234983
EMISSIONS TO A/M MONITORING POINT 2 (A2).	319688	235024

REV.	DESCRIPTION.	BY.	APPR.	DATE.
D	GM1 REVISED LOCATION ISSUED TO EPA	SJT	PMC	JUL 06
C	GM1 REVISED DRAFT FOR COMMENT	SJT	PMC	JUL 06
B	ISSUED TO EPA FOR APPROVAL	SJT	PMC	MAY 06
A	ISSUED FOR ????	SJT	N.K.	????

CLIENT: INDAVER IRELAND LIMITED

PROJECT: TRANSFER STATION EXPANSION 2006 FUEL BLENDING FACILITY

TITLE: PROPOSED MONITORING POINTS LAYOUT REVISED

McElroy Associates
Consulting Engineers
72 Hazelington Road, Rathcoldge, D4.
Tel: 660 9000. Fax: 660 9099.
E-Mail: info@mea.ie

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

DRG.No. 11037\CD\020 REV. D

Appendix 3

Risk Reduction and Mitigation Measures

Master List of Risk Reduction and Consequence Mitigation Measures

Ref	Area		Measure
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 bunded 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

Ref	Area		Measure
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

Ref	Area		Measure
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^3 into 300 m^3
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

Ref	Area		Measure
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[5] standards.
M-050	05	Solvent Blending Module - Road Tanker Loading / Unloading	Visual inspection of truck prior to loading / unloading

[5] 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.

Ref	Area		Measure
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

Ref	Area		Measure
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

Ref	Area		Measure
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

Ref	Area		Measure
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

Ref	Area		Measure
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: Energy Audit

Indaver Ireland
Energy Audit

Tolka Quay Rd, Dublin Port, Co Dublin

EURO environmental services
Boyne Business Park, Drogheda, Co Louth

24 August 2007

Report No: 1360/M08 Rev 1

1.0 Objective

Denise Daunt of Indaver Ireland requested EURO environmental services to carry out an energy audit of their site activities at their Tolka Quay site. Geoff Fitzpatrick B Sc PgD (Env Prot) of EURO environmental services carried out a site assessment and interviews with key personnel on site on the 13 June and 6 July 2007. Oliver Kelly Project Engineer, was available throughout the site visit.

The energy audit for this site assesses electrical energy only. A small amount of fuel is utilised for the standby generator. This has been excluded for the purposes of assessing day to day power usage. The site is supplied by a 90kVa power supply recently upgraded from a 29 kVa supply.

2.0 Site Activities

Indaver Ireland operate a hazardous waste transfer station at their Tolka Quay site. In March 2006 the site commenced receiving bulk liquid waste on the site. Prior to this the site operated as a storage facility and had minimum energy requirements. For the purposes of this audit we have assessed the site activities since March 2006. Indaver Ireland have 2 main operations on the site:

1. Hazardous waste materials are received from industrial activities in Ireland. These are transported to the Indaver site. Materials are weighed on the on site weighbridge. They are then separated into liquid waste bulk materials and smaller non bulk deliveries.

2. The liquid waste bulk materials are transferred to an unloading station. Here bulk liquids are pumped from a container into one of three large tanks.

The site is an ATEX site, and where possible intrinsically safe site equipment is used. Some pumps and valves on site are operated using compressed air. Electrical forklifts are used on site. The company receive in volatile combustible liquids and the risk of ignition is kept to a minimum.

The company employ 22 people on site, working in operations and administration. Currently the site operates from 06.00 to 19.00 each weekday.

3.0 Site Operations

3.1 Materials Repackaging Area

Here materials are repacked in the event of leakage. The room is ventilated with an air extraction system venting to activated carbon filter. The room is fitted with 12 florescent tube lights and 1 small florescent light fitting with two lights. The air extraction system is operated using a 2.2 kW motor. This is operated for approximately 12 hours per week.

There are 3 storage bays, each with 8 florescent lights.

There is a submersible pump located on the site. This is rated at 1kW and is operating for 15 minutes every hour – 6 hours per day. The site are in discussions with the EPA to reduce this to level switching only.

3.2 Bulk Liquid Pumping Stations

All pumping operations are operated from a SCADA system. This ensures efficient operation and the minimisation of accidental spillages, all operations and running times are recorded.

Loads of bulk liquid are received. These are pumped using 5.5kW rated pumps. Load volumes vary from 22,000 to 27,000 litres.

Station 1 – from road tanker to on site tank. It takes approximately 45 minutes to unload a tanker into 1 of the site tanks.

3.3 Heating Operations

There are no heating operations on the site, other than a heater unit in the foam house. This was installed to maintain the temperature in the room at above 20 degrees C. This unit is controlled by a thermostat. The unit is powered by a 2 kW electric heater. The thermostat was set at 30 deg C and the room was poorly insulated, with two doors and a ventilation vent.

3.4 Office Operations

Administration and laboratory offices are located in a new building which has an approximate total floor area of 700 square metres on two levels. The office facilities at the site have been extended as the site activities have increased. This has involved adding activities such as laboratory operations to the building.

3.4.1 Air Conditioning Systems

Most office areas have been fitted with small air conditioning units. These units heat or cool the air in the office. This is highly inefficient and with 14 units operating with a running power requirement of 4.16 amps for an average working day of 8 hours. For both the indoor and outdoor units, the power usage for cooling is 1.30 kWh. At a current day rate of 14.5c per kWh this equates to €5,500 per annum for all units. Each time the air conditioning is left on over night this usage increases three fold. The heating power requirement is 8% more than the cooling requirement.

3.4.2 Lighting Systems

The offices areas are overlit. During the audit we counted a total of 294 lights for a floor lighting area of approximately 700 square metres.

Most offices are fitted with low energy 36 or 18 watt florescent tubing. The lighting requirement utilises approximately 77 kWh per day based on an 8 hour lighting day. There are 6 water heaters installed in the bathrooms, laboratory, canteen and first aid area. Water is also heated on two water boilers for tea / coffee in the canteen and the office area upstairs.

3.4.3 Computer Systems

The offices also operate approximately 22 computers, using approximately 350 watts including printers. Based on an 8 hour working day, this equates to 7.7 kWh per day.

3.5 Laboratory Operations

A number of units in the laboratory operate over 24 hours 7 days per week. These are vacuum pumps, and ventilation of the laboratory area.

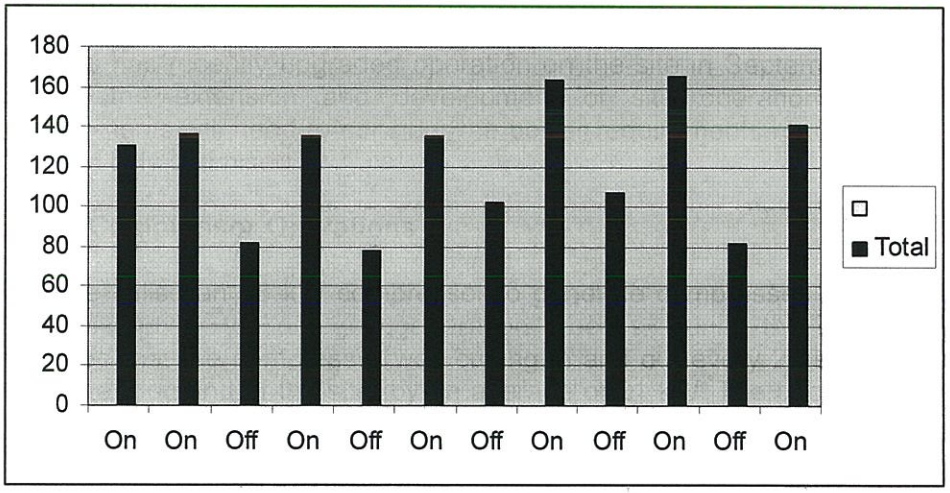
3.6 Future Developments

The site has recently upgraded operation on the site in September 2006. Future plans include the extension and development of site operations further. Any future developments will need to consider the power requirements required and ensure power usage is fully optimised.

3.7 Compressor Operations

The site utilise an 18 kW compressor to generate compressed air to operate pumping systems and for the nitrogen generation process. During the site assessment it was observed that the compressor was cutting in and out every 20 seconds and increasing the power demand of the site, by an average of 21 kW. The background demand of the site was 36 kW, and with the generator operating, this increased to 57 kW. The operation of the compressor should be investigated to ensure it is efficiently operating.

Graph 1.0



Total energy consumption of the site (amps) 9:30 am – 10:40 am Friday 6 July 2007. The on / off operation of the compressor needs to be investigated.

3.8 Forklift Chargers

There are 3 forklift chargers, two of which are used on a daily basis. They have the following power requirements:

Table 1.0

	Charger 1	Charger 2
Power Input	26 Amps 230V	34 Amps 230 V
Power Output (Charging)	60 Amps 72V	80 Amps 72V
Power Usage	6.0kW	7.8kW

The power usage when the units are turned off was tested and no power requirement was detected when turned off.

4.0 Electricity Supplier

The company changed electrical energy supplier in 2006 from Energia to Bord Gais. This was due to a better rate on kWh charge. Also Energia had been overcharging the company. This overcharge has since been resolved. In 2006 the ESB upgraded the power supply to the site from 29 kVa to 90 kVa max demand. This is suitable for the operations on the site currently. Dependent on power factor, the site is currently utilising up to 67% of available capacity. In the event of any future power requirements, a full assessment should be carried out of electrical max demand to ensure sufficient capacity.

During the period from October 2006 to April 2007, Bord Gais energy prices increased as follows:

Rate	Price Oct 06 (Cents)	Price Apr 07 (Cents)	% Change
Day 1	12.79	14.57	13.9
Day 2	9.52	10.6	11.3
Night	6.11	6.8	11.3

5.0 Electrical Power Usage Data

Because of the change in supplier exact data with regard to site electrical power usage has only been available since 26 March 2006. Prior to this the site received only non bulk materials and only had storage and administration operations on site.

6.0 Electrical Usage on Site

6.1 Actual Usage

From the 29 October 2006 to 13 June 2007, the site utilised 245,000 kWh of electrical energy on the site. This equates to an approximate spend of €50,000 per annum on

electrical usage, or an average of 11 cents per kWh. The main electrical power usage on the site can be made up as follows:

- Nitrogen Gas Generator for nitrogen blanket on tanks
- Compressed air generation to operating pumping systems and valves
- Office operations – Laboratory activities, administration

The supplier of the nitrogen generator has quoted a power usage of 190 KVa. This is significantly higher than the power input of the site, and much higher than the recorded max dement of the site. For the purposes of the Energy Mass Balance we have used an energy requirement of 30kW.

Table 2.0

Indaver Dublin - Estimated Assumed Power Usage per Day

	Power Rating	Units	Usage hours per Day	Power Usage %	kWh	Price cent	Cost per Day euro
Compressor	18	kW	8		144		
Nitrogen Generator	0.6	kW	5		3		
Pump 1 - Input	5.5	kW	0.5		3		
Pump 2 - Mixing	5.5	kW	1		6		
Pump 3 - Output	5.5	kW	0.5		3		
Heater Foam Room2		kW	24	0.5	24		
Forklift Power Up 1	6	kW	5		30		
Forklift Power Up 2	7.8	kW	5		39		
Submersible Pump	1	kW	6		6		
Office Operations	29	kW	10		290		
Other	48.4	kW	8		387		
Total	**129.3**	**kwh**			**934**		
Current Usage							
Day	66%				617	0.145	89.40
Night	34%				318	0.068	21.60

Based on data provided for the nitrogen generator of 0.19KVa power requirement, this is equivalent to 0.57kWh not adjusting for power factor correction.

6.2 Power Usage by Dormant Equipment

On electrical equipment it is estimated that equipment will utilise 30% of total energy requirement while in stand by mode. This varies for different equipment types. In the case of transformers and power adapters/converters such as laptop connectors, phone chargers and battery chargers this is significantly higher.

6.3 Electrical Usage Since March 2006

Allowing for weekends and based on the data available, electrical energy usage has dropped from 1,434 kWh per day in October 2007 to 952 kWh per day in April 2007 – a 50% reduction. It is difficult to determine whether this is a long term saving as the only available data relates to the period from October 2006 to June 2007.

A large part of this saving is attributable to the compressor usage required for the nitrogen generator. Before the review was carried out, the site was utilising 2 compressors; an 18 kW and an 11 kW compressor. This was reduced to just the 18 kW compressor. In June 2007 a malfunction in an electrical control box was determined. It was suspected that this was also contributing to higher energy usage on the site.

Table 3.0

Energy Usage - Indaver Dublin 2006/2007

Meter Reading Date	**13/06/2007**	**29/04/2007**	**27/02/2007**	**30/12/2006**	**29/10/2006**	**19/09/2006**
Day	401	681	756	841	544	-
Night	211	358	364	429	327	-
Multiplier	50					
Day – kWh	20,050	34,050	37,800	42,050	27,200	-
Night – kWh	10,550	17,900	18,200	21,450	16,350	-
Total – kWh	**30,600**	**51,950**	**56,000**	**63,500**	**43,550**	-
Night % of Total	34%	34%	33%	34%	38%	
Day 1st block		25,906	28,184	26,860	16,182	
Day 2nd block		8,144	8,975	15,190	11,018	
Night units		17,900	17,892	21,450	16,350	
Rate						
Day 1st (cent)		14.57	14.22	14.22	12.79	
Day 2nd (cent)		10.6	10.82	10.82	9.52	
Night (cent)		6.8	6.11	6.11	6.11	
Total Cost						
Day 1st		€3,774.50	€4,007.76	€3,819.49	€2,069.68	
Day 2nd		€863.26	€971.10	€1,643.56	€1,048.91	
Night		€1,217.20	€1,093.20	€1,310.60	€998.99	
Total		€5,854.97	€6,072.06	€6,773.65	€4,117.58	
Cost per kWh (cent)		0.11	0.11	0.11	0.09	0.11
Days		61.00	59.00	62.00	40.00	
Less Weekends		17.43	16.86	17.71	11.43	
Operating Days		**43.57**	**42.14**	**44.29**	**28.57**	
Per Day kWh		1,192	1,329	1,434	1,524	
Per hr Average		49.68	55.37	59.74	63.51	
Cost per Operating Day		**€134.38**	**€144.08**	**€152.95**	**€144.12**	

7.0 General Recommendations

7.1 Energy Mass Balances

It is important to determine what processes are utilising power and how these areas contribute to the efficient operation of Indaver's activities on the site.

The main process of transferring liquid materials from road tankers to site tanks appears to be efficient. There does not appear to be any wastage of energy.

The other processes on site need to be quantified. We have completed a energy mass balance in order to determine where power is being used. This is a very rough estimate of power usage, but it provides an indicative assessment of where savings can be made.

The administrative function, using light, air conditioning and computers is using approximately 19 kW per hour. We have added a further 10 kW for printers, TVs, water heaters and other appliances. If these devices are not turned off, when not in use, the energy consumption will triple.

An energy mass balance should be calculated every 6 months.

7.2 Lighting Systems

The implementation of time and / or daylight controlled switching can achieve 20 to 40% savings, with a payback period of 2-3 years.

7.3 Monitoring and Reporting

Improve electrical usage measurement and monitoring systems. We would recommend the following:

- An energy management system should be implemented as attached.
- We would recommend splitting the overall energy consumption of the site into operational and administrative activities. Focus could then be placed on the administrative activities in reducing its overall power consumption.
- In future developments the provision of task lighting, combined with local switching can achieve up to 20% savings, with a 3 year payback.
- The installation of motion detectors in shared areas such as corridors, meeting rooms, toilets etc, can contribute up to 20% savings in these areas.
- The storage and pumping operations have a number of key processes which should be monitored on a weekly or monthly basis
- The site should develop a key performance indicator, eg pumped litres, or product delivered to site and measure this on a weekly basis to monitor ongoing energy performance.

- Energy requirements of future office developments should be considered. Individual water heating and air conditioning systems are not efficient.

7.4 Specific Recommendations

1. The main power usage systems on the site need to be reviewed, these include the nitrogen generator and the compressor systems. Based on the assessment on the day further efficiencies can be made in this area. The on / off operation of the compressor needs to be investigated urgently. This will result in significant daily savings.

2. Night time power usage needs to be addressed. It should be possible to make significant savings in this area. Current night time usage is 34% of total usage. The site should be able to reduce this to 27% of total usage.

3. Reduce usage of submersible pump to level switching only.

Geoff N Fitzpatrick
Director

Aadil Khan
Environmental Technical Manager

Appendix 1 - Energy Management System – Monitoring & Reporting

For Indaver Dublin to implement an energy management system in line with I.S. 393 there are a certain number of methods that need to be in place.

Energy consumption should be presented in tables and graph as in Table 3.0, this data should come from monthly meter readings, bills, estimations, hours run etc.

The main purpose of this is to identify areas having significant energy usage and substantiate why the energy usage is regarded as significant. Possible technical issues to take into account when determining the significance of energy aspects, include:

- Energy aspects that use the most energy
- Energy aspects that determine energy use or the core energy requirement
- Energy aspects that offer the most potential for saving.

The standard gives examples of typical areas to consider in identifying significant energy aspects, include:

- Processes
- Plant, equipment, fixtures, fittings
- Building and building services
- Raw materials
- Other services, such as transport

A non-exhaustive list of possible 'top-down' and 'bottom-up' techniques that could be used in approaching this step include the following, or combinations thereof:

Top-down

- Process maps
- Graphs and charts, e.g. pie charts
- Spreadsheets or tables.
- Sankey diagrams
- Energy Balances, mapping of energy use etc.

Bottom-up

- Surveys of end-use technologies e.g. a lighting survey
- Master lists of energy use equipment on site, with there rated loads recorded. Actual loads may also be recorded. For example, organisations may begin with a master list of motors and more equipment surveys could be done over time.

The graph on the following page, shows how to review energy aspects.

*SEU = significant energy usage

A2. Setting Objectives and targets

General approaches to setting energy consumption reduction targets include:

- Past performance, i.e analysing past performance and setting appropriate targets.
- Best practice, e.g. benchmarks or best practice performance of plant
- Internal benchmarks, i.e. comparing performance with other similar energy aspects.
- Theoretical limit.
- Predictive maintenance techniques.

Target setting is a cyclical process and in some cases may be regarded as continuous, if short time scales are used.
Targets should be SMART (simple, measurable, achievable, realistic and time-based).
Possible techniques for helping set objectives and targets include the following:

- Regression analysis
- CUSUM analysis
- Statistical process control
- Base load analysis
- Data mining
- League tables
- Register of opportunities.

Each significant energy usage should have an associated objective or target. This may be in the form of an energy performance indicator (EPI).
EPIs for energy consumption can be set at management and operational levels. Management level EPIs will generally relate to the overall control of significant energy usage. Operational level EPIs may relate to particular items of plant, equipment etc., and focus on specific energy savings opportunities.

Examples of EPIs include:

- ***Overall*** – energy intensity of a site

- ***Management*** – energy performance of a production line, energy performance per m^2 for buildings.
- ***Operational*** – operational efficiency of a chiller unit, operational efficiency of a boiler.

The Indaver Dublin should designate responsibility for the achievement of objectives and targets. Progress on objectives and targets should be monitored and measured and corrective action taken as appropriate.

Energy management programme

The energy management programme should be based on the Register of Opportunities identified in the review. It should also take into account the organisation's business plan for the period.

A3. Implementation and operation

Structure and responsibility

The organisation should consider developing a matrix, organisation chart or similar, outlining the roles and responsibilities of individuals in relation to the energy management system.

Whilst the successful implementation of the energy management system will require a commitment from relevant personnel and awareness from all persons working for, or on behalf of the organisation, the establishment of an 'energy team' should also be considered. In the case of Indaver Dublin this will be a single energy manager.

As energy consumption data monitoring becomes more sophisticated through more comprehensive metering, organisations may consider devolving the responsibility for energy management across the organisation through developing:

- Cost control centres controlled by the business unit management teams,
- EPIs for specific business units, with responsibility for achieving set targets

allocated to the business unit's management team.

A5. Operational control

The following information refers to the specification, design, procurement, installation, operation and maintenance of significant energy utilising plant, facilities, equipment and raw materials.

Design

- For significant projects, an energy representative should be part of the design team, and the team should work in an integrated manner. For major projects and interdisciplinary team should be established.
- Where appropriate, energy performance targets and performance measures should be set.
- Whole-system design of the project should be addressed.
- Life-cycle costing should be applied, where appropriate.

Specification and Procurement

Procurement policy should include a requirement to take into account the energy implications of procurement decisions and all procurement decisions that affect significant energy use should start with an evaluation of needs. Procurement specifications, tender and contract documentation should include energy consumption criteria and a requirement to analyse the life-cycle costs of purchases.

Organisations should consider energy efficient products and services (including those carrying a recognised eco-label) as the first choice in all applicable procurements, unless there are reasons not to do so such as health, safety, performance, or cost considerations.

- Staff should be aware of the investment criteria used in procurement decisions.
- Specific procurement guidelines may be established for certain items of plant, equipment or other items. For example, a motor purchasing guideline specifying that only high efficiency motors (EFF1) be purchased.

- The organisation may also wish to consider using energy from renewable sources.

There are opportunities for reducing costs in purchasing electricity and fuels through competitive purchasing. Tariff analysis and load management may also lead to reductions in electricity costs. Questions to consider include:

- Are you on the most appropriate tariff for your energy usage profile?
- Are you incurring penalty charges, and if so why?

Installation

Proper commissioning should be carried out by suitably qualified personnel for new facilities, plant, equipment, fixtures and fittings, and records maintained.

Sufficient information should be provided on the operation of the plant, facilities or equipment on completion of the installation and any necessary training delivered for operational and/or management staff.

Operation and maintenance

Each significant energy user should have an associated operation and maintenance procedure(s). For some organisations, the correct operation of significant energy using plant, equipment or other users, may account for the majority the energy saving potential. Personnel who operate such plant, equipment etc. should be competent on the basis of appropriate education, training and/or experience as specified in section 4.4.2 *Awareness, training and competence*, of the I.S. 393:2005 standard.

Possible maintenance techniques include:

- Preventative Maintenance
- Predictive maintenance
- Reliability centred maintenance (will require equipment specific maintenance routines).
- Overall equipment effectiveness.
- Totally productive maintenance.
- Other principles may be applied, such as 'right first time'.

A6. Checking and corrective action

Monitoring and measurement

Significant energy usage should be metered as appropriate. This will depend on the feasibility and cost-effectiveness of the metering.

Factors to take into account in determining cost-effectiveness of metering, include the cost of:

- Design
- Purchase
- Installation
- Operation
- Data storage
- Analysis of the data output
- Maintenance

This must be weighed against the estimated energy cost savings. A metering strategy should be considered that identifies what needs to be metered and takes into account the factors determining cost-effectiveness. Metering can range from sophisticated permanent meters to simple low cost spot meters. Due consideration should be given to other instrumentation that is available from which energy consumption can be deduced/calculated, such as hours run meters, flow meters and temperature measurement.

An important principle of metering and its outputs, is that it should be increasingly integrated into the business management process.

In justifying the relevance of the measurement frequency applied in relation to the identified energy usage, simple risk analysis may be used.

Significant energy usage should be monitored in order to identify unnecessary or wasteful energy usage. Monitoring techniques may consist of meter readings, indirect measurements, estimations etc.

Nonconformity, corrective action and preventive action

Indaver Dublin should be able to quickly respond to deviations in energy use and make the necessary reactive (immediate or short term) adjustments in order to correct the situation.

Management review

In addition to the requirements of I.S. 393:2005, the review should also identify:

- the changes that will influence energy consumption in the coming year;
- the changes to the energy management system and constituent programmes, that will be necessary in the coming year;
- the activities to be carried out in the coming year,
- the resources to be allocated for the coming year.

Performance statement

Indaver Dublin shall produce an energy performance statement to be reviewed by the certification body. This is effectively an 'executive summary' of the organisation's performance.

The aim of the performance statement is to provide energy performance information and evidence on the continual improvement of the energy performance of the organisation.
The statement shall contain a summary of data on the performance of the organisation against its energy objectives and targets with respect to its significant energy usage. This should identify what has been done to improve energy efficiency and the energy savings achieved. The performance statement could also include a Register of Opportunities and/or an Energy Savings Register, in order to compare opportunities with achievements.

The data should allow for year-by-year comparison to assess the development of the energy performance of the organisation over time.
The organisation should use relevant energy performance indicators to demonstrate its energy performance.
Performance data can be presented in a number of ways, such as graphs, charts and tables.

The structure of the performance statement is a matter for the organisation to determine. However, it is important to include the same type of information as reported in previous years to help ensure comparability.

	Policy	Organising	Training	Performance measurement	Communicating	Investment
4	Energy Policy, action plan and regular review have active commitment of top management	Fully integrated into management structure with clear accountability for energy consumption	Appropriate and comprehensive staff training tailored to identified needs, with evaluation	Comprehensive performance measurement against targets with effective management reporting	Extensive communication of energy issues within and outside organisation	Resources routinely committed to energy efficiency in support of business objectives
3	Formal policy but no active commitment from top	Clear line management accountability for consumption and responsibility for improvement	Energy training targeted at major users following training needs analysis	Weekly performance measurement for each process, unit, or building	Regular staff briefings, performance reporting and energy promotion	Same appraisal criteria used as for other cost reduction projects
2	Unadopted policy	Some delegation of responsibility but line management and authority unclear	Ad-hoc internal training for selected people as required	Monthly monitoring by fuel type	Some use of company communication mechanisms to promote energy efficiency	Low or medium cost measures considered if short payback period
1	Unwritten set of guidelines	Informal mainly focused on energy supply	Technical staff occasionally attend specialist courses	Invoice checking only	Ad-hoc informal contacts used to promote energy efficiency	Only low or no cost measures taken
0	No explicit energy policy	No delegation of responsibility for managing energy	No energy related staff training provided	No measurement of energy costs or consumptions	No communication or promotion of energy issues	No investment in improving energy efficiency

Table A.1 The five levels of an energy management system.

Appendix 11: Integrity Testing Reports & Drainage & Pipework testing report

INDAVER IRELAND Ltd

TOLKA QUAY ROAD

DUBLIN PORT

DUBLIN 1

UNDERGROUND DRAINAGE TESTING

ACO CHANNEL SURFACE WATER DRAINAGE REPORT

McElroy Associates
Consulting Engineers
72 Haddington Road
Ballsbridge
Dublin 4

Tel: 6609000
Fax: 6609099
Email: info@mea.ie

Date: 25th August 2006

1.0 INTRODUCTION

This report provides an update on the testing works carried out on the drains Indaver Ireland. The report comments on the following;

- Testing of newly installed ACO Channel and drainage line to SW manhole 3

2.0 CONTENTS OF REPORT

This report consists of the following:

2.1 Surface Water line testing

As part of the Solvent Recovery project an ACO channel was installed to facilitate the drainage of the new yard slab. This channel was connected to the existing surface water manhole no 3.

2.2 MANHOLE INSPECTIONS

Visual inspections were carried out on the surface water manholes. The following points were collated.

SW3

- This is an existing gully. This gully is in good condition. No signs of infiltration or detoration of lining. The lining is to be made good around new line connection from the ACO Channel.

ACO Channel

This is newly constructed ACO Channel. The ACO channel is a cast iron galvanised drainage channel with a grating cover.

2.3 DRAINAGE TEST

Drainage ref No INDAVER /AT/ 001

This test was carried out in accordance with BS8301. Please see attached appendix for a copy of test results. The attached results show a drop of 0 mm in a ten minute duration which is compliant with the BS.

APPENDIX A

PIPEWORK QUALITY CONTROL

Balfour Beatty Ireland

AIR TEST RECORD SHEET

RECORD SHEET NO: INDAVER/A7/01

Date:	10 FEB '06	Weather/Temp	COLD / DRY
Pipe Run:	From: ACO DRAIN	To:	EX SURFACE WATER MH
Pipe Diameter:	100mm	Pipe Type:	uPVC

Apply Pressure to achieve a pressure of slightly more than 100mm water.

Allow 5 minutes for stabilisation of air temperature and re-adjust pressure to 100mm water.

Start Time:	10-30	Start Pressure:	100mm
Finish Time:	10-45	Finish Pressure:	100mm

The head of water should not fall by more than 25mm in a period of 5 minutes. (BS8301:1995, Section Five)

PASS	✓	FAIL	

Air Test Witnessed by:-

		Company:
1	SEAMUS MADDEN	Balfour Beatty Ireland
2	CONOR JONES	INDAVER
3		

Comments

LENGTH OF PIPE RUN = 5m.

25-AUG-2006 14:10 FROM BALFOUR BEATTY IRELAND TO 901660909 P.02

INDAVER IRELAND Ltd

TOLKA QUAY ROAD

DUBLIN PORT

DUBLIN 1

UNDERGROUND DRAINAGE TESTING

NEW FIRE PUMP COOLING WATER DRAINAGE REPORT

McElroy Associates
Consulting Engineers
72 Haddington Road
Ballsbridge
Dublin 4

Tel: 6609000
Fax: 6609099
Email: info@mea.ie

Date: 25th August 2006

1.0 INTRODUCTION

This report provides an update on the testing works carried out on the drains Indaver Ireland. The report comments on the following;

- Testing of newly installed fire pump cooling water drainage gully to existing gully.

2.0 CONTENTS OF REPORT

This report consists of the following:

2.1 Surface water drain line testing
2.2 Manhole Inspections.
2.3 Drainage Testing
2.4 Appendix

2.1 Surface Water line testing

As part of the Solvent Recovery project a fire pump was acquired to enable the Solvent Recovery plant deal with the prospect of a fire. The fire pump needs cooling water to run the system. It is the cooling water which prompted the requirement for a gully to be installed in the fire pump room. This 100mm gully was installed. It runs from the gully to an existing gully in the yard.

2.2 MANHOLE INSPECTIONS

Visual inspections were carried out on the surface water manholes. The following points were collated.

Gully 1

- This is an existing gully. This gully is in good condition. No signs of infiltration or detoration of lining. The lining is to be made good around new line connection from weighbridge.

Gully 2

- This is newly constructed gully. The gully is a 100mm UPVC gully.

2.3 DRAINAGE TEST

Drainage ref No INDAVER /AT/ 004

This test was carried out in accordance with BS8301. Please see attached appendix for a copy of test results. The attached results show a drop of 0 mm in a ten minute duration which is compliant with the BS.

APPENDIX A

TOTAL P.05

PIPEWORK QUALITY CONTROL

Balfour Beatty Ireland

AIR TEST RECORD SHEET

RECORD SHEET NO: INDAVER /AT/04

Date:	17 Aug '06	Weather/Temp	DRY MILD
Pipe Run:	From: NEW DRAIN IN PUMPHOUSE FLOOR	To:	EX SURFACE WATER GULLY
Pipe Diameter:	100 mm	Pipe Type:	UPVC

Apply Pressure to achieve a pressure of slightly more than 100mm water.

Allow 5 minutes for stabilisation of air temperature and re-adjust pressure to 100mm water.

Start Time:	15-10	Start Pressure:	100 mm
Finish Time:	15-25	Finish Pressure:	100 mm

The head of water should not fall by more than 25mm in a period of 5 minutes. (BS8301:1995, Section Five)

PASS	✓	FAIL	

Air Test Witnessed by:-		Company:
1	RICHARD MADDEN	Balfour Beatty Ireland
2	MARK O' NEILL	McELROY
3		

Comments

- LENGTH OF PIPE RUN = 5m
- PIPE RUN CONTAINS 2 x 90° BENDS FOR LOWERING OF PIPE COMING OUT OF BDG.

P.05 TO 901660909 FROM BALFOUR BEATTY IRELAND 25-AUG-2006 14:11

McELROY ASSOCIATES			
Project:	SOLVENT RECOVERY TANK BUND	Client:	INDAVER IRELAND
Document:	BUND TEST SHEET	Date:	23RD AUGUST 06
Ref:	16 008 / F1.2		

1.0 INTRODUCTION

1.1 This report provides an update on the testing of the newly constructed bund at Indaver Ireland, Tolka Quay Road, Dublin Port, Dublin 1. The report consist of the following;

2.0 BUND TESTING

2.1 A control barrel is to be set up in a location, which has a similar environment to the bund to be tested. Particular attention should be paid to draughts, evaporation, amounts of direct sunlight, susceptibility to rainfall collection etc.

Each bund shall be water tested in accordance with the requirements of BS 8007 Section 9.

The bunds are to be filled with water and allowed to stabilize for seven days prior to being tested on a 24 hourly basis over a period of seven day. The variations in water level are to be compared in each instance with the levels measured in a control barrel set within the bund. The test results for each of the bunds are to be recorded for interpretation on the attached sheets.

McELROY ASSOCIATES			
Project:	SOLVENT RECOVERY TANK BUND	Client:	INDAVER IRELAND
Document:	BUND TEST SHEET	Date:	23RD AUGUST 06
Ref:	16 008 / F1.2		

Project No.: 16 008

Project: Indaver Ireland – Bund Testing

Bund Name	Solvent Recovery Tank Bund
Location	Indaver Ireland, Tolka Quay Road
Tester	Mark O'Neill
Start Date	8th August 2006

	Control Barrel Reading	Bund Reading	Weather Conditions / Observations
Initial Reading	46	1065	
DAY 1	46	1066	Warm dry / breezy
DAY 2	48	1070	Dry
DAY 3	53	1078	Light drizzle
DAY 4	55	1079	Light drizzle
DAY 5	56	1080	Dry / breezy
DAY 6	59	1081	Cold and dry
DAY 7	61	1082	Cold and dry
LEVEL DROP	15	17	

Remarks:

The bund was tested over a period of 2 weeks to fully check if any loss could be detected through the horizontal joint in the bund wall.

On the basis of the above test results the bund has passed the integrity test for containment.

3.0 RESULTS

3.1 The above tests were carried out to BS 8007 Section 9. We confirm that the Solvent Recovery Tank Bund test results were satisfactory and the bund was deemed to be watertight.

Signed: ____Mark O Neill_____ (Engineer)
for McElroy Associates

INDAVER IRELAND Ltd

TOLKA QUAY ROAD

DUBLIN PORT

DUBLIN 1

UNDERGROUND DRAINAGE TESTING

NEW WEIGHBRIDGE DRAINAGE REPORT

McElroy Associates
Consulting Engineers
72 Haddington Road
Ballsbridge
Dublin 4

Tel: 6609000
Fax: 6609099
Email: info@mea.ie

Date: 25th August 2006

1.0 INTRODUCTION

This report provides an update on the testing works carried out on the drains Indaver Ireland. The report comments on the following;

- Testing of newly installed manholes and drains.

2.0 CONTENTS OF REPORT

This report consists of the following:

2.1 Surface water drain line testing
2.2 Manhole Inspections.
2.3 Drainage Testing
2.4 Appendix

2.1 Surface Water line testing

As part of the Solvent Recovery project a weighbridge was installed at the front entrance of the site. The consequences of the weighbridge construction and installation lead to some minor adjustment to the existing surface water line. These adjustment included the addition of two no 100mm UPVC lines and gullies. One of these lines is from the weighbridge base to a sump on the west side of the offices. The other two lines and gullies are located in the yard. These gullies collect water from low lying areas which were generated by the levels of the weighbridge.

2.2 MANHOLE INSPECTIONS

Visual inspections were carried out on the surface water manholes. The following points were collated.

SW1

- This is a lined manhole from previous work. This manhole is in good condition. No signs of infiltration or detoration of lining. The lining is to be made good around new line connection from weighbridge.

SW2

- This is newly constructed manhole. The manhole is constructed from Concrete block work. The manhole is in good condition. No sign of Infiltration.

2.3 DRAINAGE TEST

Drainage ref No INDAVER /AT/ 002

This test was carried out in accordance with BS8301. Please see attached appendix for a copy of test results. The attached results show a drop of 5 mm in a ten minute duration which is compliant with the BS.

Drainage ref No INDAVER /AT/ 003

This test was carried out in accordance with BS8301. Please see attached appendix for a copy of test results. The attached results show a drop of 5 mm in a ten minute duration which is compliant with the BS.

APPENDIX A

PIPEWORK QUALITY CONTROL

Balfour Beatty Ireland

AIR TEST RECORD SHEET

RECORD SHEET NO: INDAVER/A7/02.

Date:	27 JUNE 06	Weather/Temp	RAIN A.M, DRY P.M
Pipe Run:	From: NEW Gully A7 ENTRANCE To weighbridge	To:	Ex SURFACE WATER MH
Pipe Diameter:	100mm	Pipe Type:	uPVC

Apply Pressure to achieve a pressure of slightly more than 100mm water.

Allow 5 minutes for stabilisation of air temperature and re-adjust pressure to 100mm water.

Start Time:	13-45	Start Pressure:	100mm
Finish Time:	13-55	Finish Pressure:	95mm

The head of water should not fall by more than 25mm in a period of 5 minutes. (BS8301:1995, Section Five)

PASS ☑ FAIL ☐

Air Test Witnessed by:- Company:

1	RICHARD MADDEN	Balfour Beatty Ireland
2	MARK O' NEILL	MC ILROYS
3		

Comments

LENGTH OF PIPE RUN = 3m.

25-AUG-2006 14:10 FROM BALFOUR BEATTY IRELAND TO 901660909 P.03

APPENDIX B

PIPEWORK QUALITY CONTROL

Balfour Beatty Ireland

AIR TEST RECORD SHEET

RECORD SHEET NO: INDAVER/AT/03

Date:	27 JUNE '06	Weather/Temp	RAIN A.M, DRY P.M
Pipe Run:	From: NEW GULLY TO OFFICE SIDE OF weighbridge	To:	EX. SURFACE WATER MH
Pipe Diameter:	100mm	Pipe Type:	UPVC

Apply Pressure to achieve a pressure of slightly more than 100mm water.

Allow 5 minutes for stabilisation of air temperature and re-adjust pressure to 100mm water.

Start Time:	14-10	Start Pressure:	100 mm
Finish Time:	14-20	Finish Pressure:	95 mm

The head of water should not fall by more than 25mm in a period of 5 minutes. (BS8301:1995, Section Five)

PASS ☑ FAIL ☐

Air Test Witnessed by:		Company:
1	RICHARD MADDEN	Balfour Beatty Ireland
2	MARK O'NEILL	MC ILROYS
3		

Comments

LENGTH OF PIPE RUN = 3m.

25-AUG-2006 14:11 FROM BALFOUR BEATTY IRELAND TO 901660909 P.04

Attention of:
Mr. Peter O'Brien,
Indaver Ireland,
Tolka Quay road,
Dublin Port,
Dublin 1,

Date: 23th December 2008
Ref: USSR –W1146/LGH/02

RE: Exfiltration Tests on Relined Manholes at Tolka Quay Road, Dublin 1

Dear Mr. O'Brien,

Further to the rehabilitation work and exfiltration tests that were carried out by USSR Limited on manholes and gullies at your facility, at the above address, we submit this report.

It was established that the following manholes and gullies required rehabilitation:

- G5
- G6
- G6A
- SWMH6
- SWMH6A
- New SWMH
- SWMH1

After arriving on site our personnel inspected these manholes, and with agreement of the Site Manager confirmed that these manholes and gullies required rehabilitation. The walls in each manhole and gully were cleaned down with a power washer and all debris removed. All leaks in the chambers were sealed using Sika 4A waterproofer and cement and damage to the walls or benching repaired.

Where any pipes were flush with the walls of the manhole, the surrounding area was ground or broken back so that a groove is produced around the pipe. This included the main pipe entering and exiting the manhole. This provided an anchor point into the concrete and ensured the PolySpray/substrate interface is behind the liquid entry point into the manhole. The groove is at least 10mm deep and 10mm wide so that the lining is not protruding beyond the pipe end. Pipes that had been lined with CIPP were checked for any shrinkage. Any gaps were filled with Sika 4A waterproofer and cement. Any pipes that protruded into the manhole were channeled, as described above, and the protruding pipe masked off, so that any excess lining could be cut back off the barrel of the pipe. A groove was also cut in to the edges of the gully to allow the PolySpray to "key" into the original gully material. This groove is again, at least 10mm deep and 10mm wide. Prior to commencing spraying in any chamber, the chamber was dried. Heaters were used to remove any excess moisture. The PolySpray lining thickness is at least 5mm.

The operation at each of the chambers was in our opinion a success. And subsequently we performed an exfiltration water test on a number of the chambers. This test was carried out to EPA standards, Appendix G-

In carrying out this test we drained out each chamber, cleaned off excess silt from the new liner and visually inspected it. In all chambers the integrity of the liner was complete. Following this we performed the exfiltration test. This involved installing stoppers to each inlet and outlet and filling the chamber with water to the top of the PolySpray Liner. The water was left to "settle" for 10 to 15 minutes and the water level was marked. The chamber was monitored for 30 minutes and any drop in level measured. As the standard states a drop of <5mm in the 30 minute period is acceptably. The chambers that passed were:

- G5
- G6
- G6A

- SWMH6
- SWMH6A

The results of the test are shown on the attached sheet.

We were unable to test two chambers, these were:

- New SWMH
- SWMH1

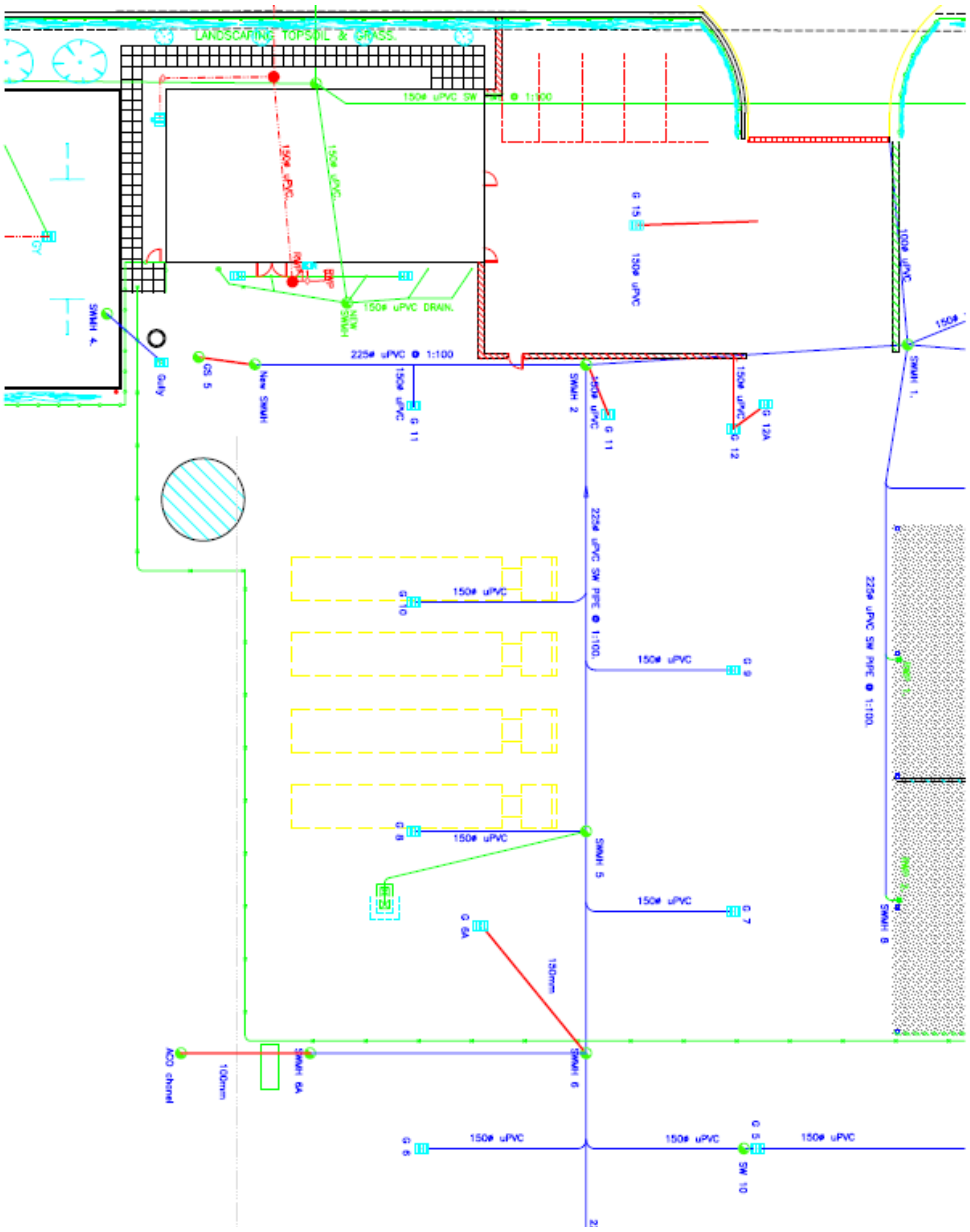
This was because the outlet pipe of each chamber is not circular and there was a foreign material lying in the pipe which meant they could not be sealed completely. Any leakage from stoppers positioned in these pipes would give a false reading. As much as possible of this material was removed but because of bends in the pipe on the downstream lines it is not possible to seal the manholes completely to provide a satisfactory exfiltration test. However, we are completely confident in the liners integrity in these manholes having cleaned and visually inspected them.

If you have any queries regarding the above please do not hesitate in contacting me on 087 2077520

Yours faithfully,

Lorcan Heffernan

Project Supervisor



Indaver (Ireland) at Tolka Quay Rd, Dublin

Appendix 12: E-PRTR

Environmental Protection Agency

AER Returns Worksheet

REFERENCE YEAR	2008

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.
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.
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.

Address 1	Dublin Port
Address 2	Dublin 1
Address 3	
Address 4	
Country	Ireland
Coordinates of Location	0,000
River Basin District	IEEA
NACE Code	382
Main Economic Activity	Waste treatment and disposal
AER Returns Contact Name	Denise Cunningham
AER Returns Contact Email Address	denise.cunningham@indaver.ie
AER Returns Contact Position	Technical Manager
AER Returns Contact Telephone Number	021 4637106
AER Returns Contact Mobile Phone Number	087 7999237
AER Returns Contact Fax Number	021 4704250
Production Volume	0.0
Production Volume Units	0
Number of Installations	2
Number of Operating Hours in Year	3240
Number of Employees	130
User Feedback/Comments	Although we think the webform is a great idea and it is great to be able to send electronically, we feel there is a lot of duplication with information already sent in our paper AER. Also the fact that the cells are locked and we cannot copy and paste in the information from our own system is very time consuming. This is particularly felt for the waste transfer data because as a waste transfer station this is our core business. The fact that we have to continually add rows and manually select the EWC codes is frustrating and time consuming. It would be great if we could add in our data in one go into this spreadsheet.
Web Address	www.indaver.ie

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5.2	Installations for the disposal of non-hazardous waste
5.3	Installations for the recovery or disposal of hazardous waste

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 ?	

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

Transfer Destination	European Waste Code	Hazardous	Quantity T/Year	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Name and Licence / Permit No. of Recoverer / Disposer / Broker	Address of Recoverer / Disposer / Broker	Name and Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)	Licence / Permit No. of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
To Other Countries	02 02 01	No	24.92	Sludges from washing & Cleaning	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	02 07 04	No	724.93	Materials unsuitable for consumption or processing	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	02 07 05	No	14.36	Sludges from on-site effluent	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	03 02 05	Yes	2.45	Other wood preservatives containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	03 02 05	Yes	21.66	Other wood preservatives containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd 21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 01 01	Yes	5.1	Sulphuric acid waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 01 01	Yes	0.02	Sulphuric acid waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd 21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 01 02	Yes	6.25	Hydrochloric acid waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 01 02	Yes	1.56	Hydrochloric acid waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	06 01 02	Yes	0.97	Hydrochloric acid waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3, DK-5800 Nyborg, Denmark	8-76-1-449-49-2005 21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 01 03	Yes	0.08	Hydrofluoric acid waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 01 04	Yes	10.99	Phosphoric acid waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd 21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 01 04	Yes	0.01	Phosphoric acid waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 01 05	Yes	13.56	Nitric acid waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd 21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 01 05	Yes	0.49	Nitric acid waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 01 06	Yes	116.63	Other acid waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd 21/10/1970 Ref. 62.40-4 G.O. 10/70
Within the Country	06 01 06	Yes	0.01	Other acid waste	D15	M	Weighed	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 01 06	Yes	2.39	Other acid waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver Ireland Limited, Tolka Quay Road, Dublin Port, Dublin 1	W0036-02
To Other Countries	06 01 06	Yes	23.27	Other acid waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	06 02 01	Yes	2.15	Lime (Calcium oxide)	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3, DK-5800 Nyborg, Denmark	8-76-1-449-49-2005 21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 02 03	Yes	0.04	Ammonium Hydroxide	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
Within the Country	06 02 04	Yes	0.01	Sodium and potassium hydroxide	D15	M	Weighed	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver Ireland Limited, Tolka Quay Road, Dublin Port, Dublin 1	W0036-02

Transfer Destination	European Waste Code	Hazardous	Quantity T/Year	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Name and Licence / Permit No. of Recoverer / Disposer / Broker	Address of Recoverer / Disposer / Broker	Name and Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)	Licence / Permit No. of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
To Other Countries	06 02 04	Yes	42.95	Sodium and potassium hydroxide	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
Within the Country	06 02 04	Yes	8.34	Sodium and potassium hydroxide	R6	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Enva (Shannon), Smithstown Industrial Estate, Shannon, Co Clare	W0041-01
To Other Countries	06 02 04	Yes	1.08	Sodium and potassium hydroxide	D9	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	06 02 04	Yes	0.6	Sodium and potassium hydroxide	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3. DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	06 02 05	Yes	37.3	Basic waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 02 05	Yes	0.03	Basic waste	D9	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	06 02 05	Yes	5.63	Basic waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3. DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	06 03 13	Yes	0.01	Solid salts and solutions containing heavy metals	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 04 04	Yes	1.01	Waste containing mercury	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 04 04	Yes	0.03	Waste containing mercury	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	06 04 04	Yes	0.17	Waste containing mercury	R4	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver Relight NV, Haven 1940 - Molenweg, B-9130 Doel-Beveren, Belgium	46003/233/M/1/CH/av
To Other Countries	06 04 04	Yes	0.01	Waste containing mercury	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3. DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	06 04 05	Yes	12.41	Waste containing other heavy metals	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 04 05	Yes	0.42	Waste containing other heavy metals	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	06 05 02	Yes	0.01	Sludges from on-site effluent	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 06 02	Yes	4.51	Waste containing dangerous silicones	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	06 06 99	No	0.06	Other silicone waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	07 01 03	Yes	1.04	Organic halogenated solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 39, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	07 02 04	Yes	0.66	Organic solvents	R13	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	07 02 04	Yes	2.93	Organic solvents	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	SRM Ltd (Mor), Middleton Road, Morecambe, Lancs, LA3 3JW	BL73021D, LAN/494011/CB
To Other Countries	07 02 04	Yes	33.21	Organic solvents	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 39, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	07 02 16	Yes	0.52	Waste containing dangerous silicones	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1		

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						M/C/E	Method Used					
To Other Countries	07 05 01	Yes	371.09	Aqueous washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	07 05 01	Yes	329.84	Aqueous washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	07 05 01	Yes	1172.77	Aqueous washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3, DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	07 05 03	Yes	0.65	Organic halogenated solvents, washing liquids and mother liquors	D15	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, Nl-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	07 05 03	Yes	1933.51	Organic halogenated solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
Within the Country	07 05 03	Yes	65.54	Organic halogenated solvents, washing liquids and mother liquors	R13	M	Weighed	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver Ireland Limited, Tolka Quay Road, Dublin Port, Dublin 1	W0036-02
To Other Countries	07 05 03	Yes	872.54	Organic halogenated solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	07 05 03	Yes	2866.56	Organic halogenated solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3, DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	07 05 03	Yes	16.3	Organic halogenated solvents, washing liquids and mother liquors	R13	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	SRM Ltd (Mor), Middleton Road, Morecambe, Lancs, LA3 3JW	BL73021D, LAN/494011/CB
To Other Countries	07 05 03	Yes	259.86	Organic halogenated solvents, washing liquids and mother liquors	R2	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	SRM Ltd, (Rye), Rye Harbour, Sussex TN31 7TE, England	GB3437PL
To Other Countries	07 05 03	Yes	203.3	Organic halogenated solvents, washing liquids and mother liquors	R2	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Veolia Environmental Services plc (Preston), D4 & D5 Red Scar Industrial Estate, Longridge Road, Preston, PR2 5NQ Lancashire	AG8225, WD100/36 BU 5500IC
To Other Countries	07 05 04	Yes	5.22	Other organic solvents, washing liquids and mother liquors	R1	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, Nl-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	07 05 04	Yes	1382.4	Other organic solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	07 05 04	Yes	0.06	Other organic solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Chemogas NV, Brinkbergen, Belgium	Brabant Licence D/PMVC/05F06/039
Within the Country	07 05 04	Yes	0.72	Other organic solvents, washing liquids and mother liquors	R13	M	Weighed	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver Ireland Limited, Tolka Quay Road, Dublin Port, Dublin 1	W0036-02
To Other Countries	07 05 04	Yes	2157.8	Other organic solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	07 05 04	Yes	3510.53	Other organic solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3, DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	07 05 04	Yes	1.07	Other organic solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Remondis Industrie Service GMBH (Bramsche), Niederlassung Bransche, Am Kanal 9, 49565 Bramsche, Germany	08HR003001

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						M/C/E	Method Used					
To Other Countries	07 05 04	Yes	726.42	Other organic solvents, washing liquids and mother liquors	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	SRM Ltd (Mor), Middleton Road, Morecambe, Lancs, LA3 3JW	BL73021D, LAN/494011/CB
To Other Countries	07 05 04	Yes	715.62	Other organic solvents, washing liquids and mother liquors	R2	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	SRM Ltd. (Rye), Rye Harbour, Sussex TN31 7TE, England	GB3437PL
To Other Countries	07 05 04	Yes	568.85	Other organic solvents, washing liquids and mother liquors	R2	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	SRM Ltd. (Sund), Hendon Dock, Sunderland,Co. Durham, SR1 2ES, England	BV 4673IM
To Other Countries	07 05 08	Yes	0.64	Still Bottoms and reaction residues	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	07 05 09	Yes	0.09	Halogenated filter cakes and spent absorbents	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	07 05 10	Yes	50.07	Other filter cakes and spent absorbents	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	07 05 10	Yes	5.2	Other filter cakes and spent absorbents	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	07 05 10	Yes	12.5	Other filter cakes and spent absorbents	R7	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Purton Carbons UK Ltd. Purton Water Treatment Works,Riddle Street, Purton Nr Berkeley, Gloucestershire, GL13 9HN	PP 3232SB
To Other Countries	07 05 11	Yes	71.02	Sludges containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	07 05 11	Yes	6.12	Sludges containing dangerous substances	D5	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	IAG, Ihlenberg, D-23923 Selmsdorf, Germany	M58SAD001
To Other Countries	07 05 11	Yes	231.61	Sludges containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	07 05 12	No	0.95	Non hazardous sludges	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	07 05 13	Yes	986.35	Solid pharmaceutical waste containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	07 05 13	Yes	27.88	Solid pharmaceutical waste containing dangerous substances	D5	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	IAG, Ihlenberg, D-23923 Selmsdorf, Germany	M58SAD001
To Other Countries	07 05 13	Yes	584.75	Solid pharmaceutical waste containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	07 05 13	Yes	77.87	Solid pharmaceutical waste containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3, DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	07 05 13	Yes	58.97	Solid pharmaceutical waste containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Remondis Industrie Service GMBH (Bramsche), Niederlassund Bramsche, Am Kanal 9, 49565 Bramsche, Germany	08HR003001
Within the Country	07 05 13	Yes	0.01	Solid pharmaceutical waste containing dangerous substances	R3	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Rilta, Block 402, Greenogue Business Park, Rathcoole, Co. Dublin	W0192-02
To Other Countries	07 05 13	Yes	343.94	Solid pharmaceutical waste containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	TRV Thermische Ruckstandsverwertung, Rodenkirchener strasse, D-50389 Wesseling, Germany	55.8851.8.1-73/94 Koln
To Other Countries	07 05 14	No	14.84	Solid pharmaceutical waste - non hazardous	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70

Transfer Destination	European Waste Code	Hazardous	Quantity T/Year	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Name and Licence / Permit No. of Recoverer / Disposer / Broker	Address of Recoverer / Disposer / Broker	Name and Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)	Licence / Permit No. of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
To Other Countries	07 05 14	No	0.3	Solid pharmaceutical waste - non hazardous	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd 21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	07 05 99	No	94.81	Other Pharmacetical waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	
To Other Countries	07 05 99	No	45.69	Other Pharmacetical waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd 21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	07 06 01	Yes	37.31	Aqueous washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	
To Other Countries	07 06 01	Yes	1.9	Aqueous washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd 21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	07 06 04	Yes	0.14	Other organic solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	
To Other Countries	07 06 04	Yes	1.01	Other organic solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	07 06 99	No	2.71	Other waste from MFSU fats,greases, soaps, detergents, disinfectans and cosmetics	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	07 07 03	Yes	0.21	Organic halogenated solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	07 07 04	Yes	66.22	Other organic solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	07 07 10	Yes	69.6	Other filter cakes and spent absorbents	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3764
To Other Countries	07 07 11	Yes	20.78	Sludges from on site effluent treatment containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	08 01 11	Yes	128.98	Waste paint and varnish containing dangerous substances	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3764
To Other Countries	08 01 11	Yes	21.58	Waste paint and varnish containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	08 01 11	Yes	0.06	Waste paint and varnish containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	08 01 11	Yes	0.42	Waste paint and varnish containing dangerous substances	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Nehlsen GmbH & Co. KG, Louis-Krages-Strasse 10, 28237 Bremen, Germany	No reference number
To Other Countries	08 01 11	Yes	0.08	Waste paint and varnish containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Remondis Industrie Service GMBH (Bramsche), Niederlassund Bransche, Am Kanal 9, 49565 Bramsche, Germany	08HR003001
To Other Countries	08 01 13	Yes	1.61	Sludges from paint and varnish containing dangerous substances	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3764
To Other Countries	08 01 17	Yes	0.89	Waste from paint or varnish removal containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70

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						M/C/E	Method Used					
To Other Countries	08 01 19	Yes	0.44	Aqueous suspensions containing paint or varnish containing organic solvents or other dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	08 01 19	Yes	0.34	Aqueous suspensions containing paint or varnish containing organic solvents or other dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	MLAV1/9800000485/MV/bd
To Other Countries	08 01 20	No	113.8	Non hazardous aqueous suspensions	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	08 01 21	Yes	2.8	Waste paint or varnish remover	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	08 01 21	Yes	0.2	Waste paint or varnish remover	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	08 01 99	No	0.13	Other paint or varnish waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	08 02 01	No	3.32	Waste Coating powders	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	08 03 08	No	12.61	Aqueous liquid waste containing ink	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	08 03 08	No	31.64	Aqueous liquid waste containing ink	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3, DK-9600 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	08 03 08	No	329.64	Aqueous liquid waste containing ink	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	08 03 12	Yes	44.05	Waste ink containing dangerous substances	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	08 03 12	Yes	9.06	Waste ink containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	08 03 12	Yes	0.28	Waste ink containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Nehlsen GmbH & Co. KG, Louis-Krages-Strasse 10, 28237 Bremen, Germany	No reference number
To Other Countries	08 03 12	Yes	11.46	Waste ink containing dangerous substances	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Remondis Industrie Service GMBH (Bramsche), Niederlassung Bransche, Am Kanal 9, 49565 Bramsche, Germany	05HR003001
To Other Countries	08 03 12	Yes	0.1	Waste ink containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	08 03 17	Yes	2.19	Waste printing toner containg dangerous substances	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	08 03 17	Yes	2.1	Waste printing toner containg dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver Ireland Limited, Tolka Quay Road, Dublin Port, Dublin 1	W0036-02
Within the Country	08 03 17	Yes	0.03	Waste printing toner containg dangerous substances	R13	M	Weighed	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	08 03 17	Yes	0.14	Waste printing toner containg dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1		

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						M/C/E	Method Used					
To Other Countries	08 04 09	Yes	319.53	Waste adhesives and sealants containing dangerous substances	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	08 04 09	Yes	33.56	Waste adhesives and sealants containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	08 04 09	Yes	5.25	Waste adhesives and sealants containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	08 04 09	Yes	1.36	Waste adhesives and sealants containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3, DK-5600 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	08 04 09	Yes	18.42	Waste adhesives and sealants containing dangerous substances	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Nehlsen GmbH & Co. KG, Louis-Krages-Strasse 10, 28237 Bremen, Germany	No reference number
To Other Countries	08 04 13	Yes	5.2	Aqueous sludges containing adhesives and sealants	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	08 04 13	Yes	3.1	Aqueous sludges containing adhesives and sealants	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	08 04 99	No	8.36	Other waste from MFSU of adhesives and sealants	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	08 04 99	No	3.68	Other waste from MFSU of adhesives and sealants	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	08 04 99	No	2.13	Other waste from MFSU of adhesives and sealants	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Nehlsen GmbH & Co. KG, Louis-Krages-Strasse 10, 28237 Bremen, Germany	No reference number
To Other Countries	09 01 04	Yes	0.1	Fixed solutions	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
Within the Country	10 10 08	No	25.78	Non-hazardous casting cores and moulds that have undergone pouring	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	S.J. Murphy (Waterford) LTD, Belview Port, Gorteens, Slieverue, via Waterford	WMP 031/2007
To Other Countries	11 01 05	Yes	5.95	Pickling acids	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	11 01 06	Yes	21.55	Other acid waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	11 01 06	Yes	14.5	Other acid waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	11 01 08	Yes	7.41	Phosphatising sludges	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	11 01 11	Yes	83.64	Aqueous rinsing liquids containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	11 01 98	Yes	2.83	Other wastes from the chemical surface treatment and coating of metals	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	12 01 07	Yes	0.07	Mineral based machine oils free of halogens	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	12 01 09	Yes	2.17	Machining emulsions and solutions free of halogens	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	12 01 09	Yes	0.32	Machining emulsions and solutions free of halogens	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	12 01 12	Yes	0.07	Waste grease	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70

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						M/C/E	Method Used					
To Other Countries	12 03 01	Yes	0.9	Aqueous washing liquids from degreasing process	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	13 01 10	Yes	3.31	Mineral based non chlorinated hydraulic oils	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	13 01 10	Yes	0.05	Mineral based non chlorinated hydraulic oils	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	13 01 11	Yes	0.02	Synthetic hydraulic oils	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	13 01 13	Yes	2.16	Hydraulic oil	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	13 01 13	Yes	6.15	Hydraulic oil	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	13 01 13	Yes	1.71	Hydraulic oil	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
Within the Country	13 01 13	Yes	0.55	Hydraulic oil	R3	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Rilta, Block 402, Greenogue Business Park, Rathcoole, Co. Dublin	W0192-02
To Other Countries	13 02 04	Yes	0.03	mineral based chlorinated engine, gear and lubricating oils	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	13 02 05	Yes	0.85	mineral based non- chlorinated engine, gear and lubricating oils	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	13 02 06	Yes	3.12	Synthetic engine, gear and lubricating oils	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	13 02 06	Yes	0.06	Synthetic engine, gear and lubricating oils	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	13 02 08	Yes	0.02	Other engine, gear and lubricating oils	R12	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	13 02 08	Yes	12.05	Other engine, gear and lubricating oils	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
Within the Country	13 02 08	Yes	0.15	Other engine, gear and lubricating oils	R3	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Enva (Portlaoise), Clonminan Industrial Estate, Portlaoise, Co Laois	W0084-01
To Other Countries	13 02 08	Yes	1.04	Other engine, gear and lubricating oils	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
Within the Country	13 02 08	Yes	1.57	Other engine, gear and lubricating oils	R3	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Rilta, Block 402, Greenogue Business Park, Rathcoole, Co. Dublin	W0192-02
To Other Countries	13 03 07	Yes	1.67	Mineral bases non-chlorinated insulating and heat transmission oils	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	13 03 07	Yes	1.03	Mineral bases non-chlorinated insulating and heat transmission oils	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	13 03 08	Yes	1.08	Synthetic insulating and heat transmission oils	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	13 03 09	Yes	0.54	Readily Biodegradable insulating and heat tranmission oils	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784

Transfer Destination	European Waste Code	Hazardous	Quantity T/Year	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Name and Licence / Permit No. of Recoverer / Disposer / Broker	Address of Recoverer / Disposer / Broker	Name and Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)	Licence / Permit No. of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
To Other Countries	13 03 10	Yes	3.98	Other insulating and heat transmission oils	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	13 03 10	Yes	1.73	Other insulating and heat transmission oils	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	13 07 01	Yes	3.04	Fuel oil and diesel	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	13 07 01	Yes	1.29	Fuel oil and diesel	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	13 07 01	Yes	0.6	Fuel oil and diesel	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3, DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	13 07 03	Yes	2.4	Other fuels, including mixtures	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
Within the Country	13 08 99	Yes	15.29	Other oil wastes not otherwise specified	R3	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Rilta, Block 402, Greenogue Business Park, Rathcoole, Co. Dublin	W0192-02
To Other Countries	13 08 99	Yes	15.25	Other oil wastes not otherwise specified	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	13 08 99	Yes	0.04	Other oil wastes not otherwise specified	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	13 08 99	Yes	0.85	Other oil wastes not otherwise specified	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3, DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	13 08 99	Yes	13.4	Other oil wastes not otherwise specified	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	SRM Ltd (Mor), Middleton Road, Morecambe, Lancs, LA3 3JW	BL73021D, LAN/494011/CB
To Other Countries	14 06 01	Yes	0.12	Chlorofluorocarbons, HCFC, HFC	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Chemogas NV, Brimbergen, Belgium	Brabant Licence D/PMVC/05F06/039
To Other Countries	14 06 02	Yes	46.7	Other halogenated solvents and solvent mixtures	D15	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	14 06 02	Yes	52.54	Other halogenated solvents and solvent mixtures	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
Within the Country	14 06 02	Yes	1007.22	Other halogenated solvents and solvent mixtures	R13	M	Weighed	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver Ireland Limited, Tolka Quay Road, Dublin Port, Dublin 1	W0036-02
To Other Countries	14 06 02	Yes	27.92	Other halogenated solvents and solvent mixtures	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	14 06 02	Yes	79.71	Other halogenated solvents and solvent mixtures	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3, DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	14 06 03	Yes	15.21	Other solvents and solvent mixtures	R13	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
Within the Country	14 06 03	Yes	311.96	Other solvents and solvent mixtures	R13	M	Weighed	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver Ireland Limited, Tolka Quay Road, Dublin Port, Dublin 1	W0036-02
To Other Countries	14 06 03	Yes	39.25	Other solvents and solvent mixtures	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd

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						M/C/E	Method Used					
To Other Countries	14 06 03	Yes	145.96	Other solvents and solvent mixtures	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3, DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	14 06 03	Yes	8.33	Other solvents and solvent mixtures	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	SRM Ltd (Mor), Middleton Road, Morecambe, Lancs. LA3 3JW	BL7302ID, LAN/494011/CB
To Other Countries	14 06 03	Yes	25.22	Other solvents and solvent mixtures	R2	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	SRM Ltd. (Sund), Hendon Dock, Sunderland,Co. Durham, SR1 2ES, England	BV 4673IM
To Other Countries	15 01 01	No	0.68	Paper & Cardboard Packaging	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
Within the Country	15 01 02	No	4.14	Plastic Packaging	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Mr Binman (Kilmallock), Luddenmore, Grange, Kilmallock, Co. Limerick	W0061-2
Within the Country	15 01 04	No	1.2	Metallic Packaging	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Hammond Lane Metal Co. (Dublin), Pigeon House Road, Dublin 4	WP98107
To Other Countries	15 01 06	No	0.5	Mixed Packaging	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
Within the Country	15 01 06	No	10.04	Mixed Packaging	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Mr Binman (Kilmallock), Luddenmore, Grange, Kilmallock, Co. Limerick	W0061-2
To Other Countries	15 01 07	No	6.3	Glass Packaging	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	15 01 10	Yes	43.29	Packaging contaminated with dangerous substances	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4760 AA Moerdijk, Vlasweg 12. 4782PW Moerdijk, The Netherlands	821760, 02/3762, AWE/2002.3784
To Other Countries	15 01 10	Yes	199.08	Packaging contaminated with dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	15 01 10	Yes	0.07	Packaging contaminated with dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Chemogas NV, Brimbergen, Belgium	Brabant Licence D/PMVC/05F06/039
Within the Country	15 01 10	Yes	0.22	Packaging contaminated with dangerous substances	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Enva (Shannon), Smithstown Industrial Estate, Shannon, Co Clare	W0041-01
Within the Country	15 01 10	Yes	0.4	Packaging contaminated with dangerous substances	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Immark Ireland Ltd, Cedar House, Greenogue Business Park, Rathcoole, Co. Dublin	W0185-01
To Other Countries	15 01 10	Yes	86.95	Packaging contaminated with dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	15 01 10	Yes	12.39	Packaging contaminated with dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3, DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	15 01 10	Yes	1.48	Packaging contaminated with dangerous substances	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Nehlsen GmbH & Co. KG, Louis-Krages-Strasse 10, 28237 Bremen, Germany	No reference number
To Other Countries	15 01 10	Yes	0.25	Packaging contaminated with dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Remondis Industrie Service GMBH (Bramsche), Niederlassung Bransche, Am Kanal 9, 49565 Bramsche, Germany	08HR003001
Within the Country	15 01 10	Yes	14.4	Packaging contaminated with dangerous substances	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Rilta, Block 402, Greenogue Business Park, Rathcoole, Co. Dublin	W0192-02

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						M/C/E	Method Used					
Within the Country	15 01 10	Yes	0.01	Packaging contaminated with dangerous substances	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Rehab Recycling (Tallaght), 77 Broomhill Road, Tallaght Industrial Estate, Dublin 24	WPR 033/2
To Other Countries	15 02 02	Yes	14.72	Absorbents, filter material, PPE etc contaminated with dangerous substances	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	15 02 02	Yes	288.9	Absorbents, filter material, PPE etc contaminated with dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
Within the Country	15 02 02	Yes	0.07	Absorbents, filter material, PPE etc contaminated with dangerous substances	D15	M	Weighed	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver Ireland Limited, Tolka Quay Road, Dublin Port, Dublin 1	W0036-02
To Other Countries	15 02 02	Yes	64.37	Absorbents, filter material, PPE etc contaminated with dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	15 02 02	Yes	11.5	Absorbents, filter material, PPE etc contaminated with dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3. DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	15 02 02	Yes	0.8	Absorbents, filter material, PPE etc contaminated with dangerous substances	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Nehlsen GmbH & Co. KG, Louis-Krages-Strasse 10, 28237 Bremen, Germany	No reference number
To Other Countries	15 02 02	Yes	7.19	Absorbents, filter material, PPE etc contaminated with dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Remondis Industrie Service GMBH (Bramsche), Niederlassung Bramsche, Am Kanal 9, 49565 Bramsche, Germany	08HR003001
To Other Countries	15 02 02	Yes	3.88	Absorbents, filter material, PPE etc contaminated with dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	TRV Thermische Ruckstandsverwertung, Rodenkirchener strasse, D-50389 Wesseling, Germany	55.8851.8.1-73/94 Koln
To Other Countries	16 02 09	Yes	2.58	Transformers & Capacitors containing PCB's	R4	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Envio Germany GmbH & Co. KG, Kanalstrasse 25, 44147 Dortmund, Germany	E91395225, E9DO3
To Other Countries	16 02 10	Yes	0.07	Discarded equipment containing PCB's	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	064485 EV 21/10/1970 Ref. 62.40-4 G.O. 10/70
Within the Country	16 02 13	Yes	0.22	Discarded equipment containing hazardous components	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Rehab Recycling (Tallaght), 77 Broomhill Road, Tallaght Industrial Estate, Dublin 24	WPR 033/2
To Other Countries	16 03 03	Yes	0.11	Inoganic offspec batches and unused products	R13	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	16 03 03	Yes	19.73	Inoganic offspec batches and unused products	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	16 03 03	Yes	0.29	Inoganic offspec batches and unused products	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	16 03 03	Yes	7.97	Inoganic offspec batches and unused products	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3. DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	16 03 05	Yes	6.8	Organic offspec batches and unused products	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	16 03 05	Yes	72.82	Organic offspec batches and unused products	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70

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						M/C/E	Method Used					
To Other Countries	16 03 05	Yes	138.55	Organic offspec batches and unused products	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	16 03 05	Yes	1.47	Organic offspec batches and unused products	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3. DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	16 03 05	Yes	3.2	Organic offspec batches and unused products	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Remondis Industrie Service GMBH (Bramsche), Niederlassund Bransche, Am Kanal 9, 49565 Bramsche, Germany	08HR003091
Within the Country	16 03 05	Yes	2.11	Organic offspec batches and unused products	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	TechRec Ireland Ltd, Unit 51 Park West Business Park, Nangor Road, Dublin 12	W0233-01
To Other Countries	16 03 06	No	2.36	non hazradous organic offspec batches and unused products	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	16 05 04	Yes	40.6	Aerosols	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	16 05 04	Yes	5.11	Cylinders	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Chemogas NV, Brimbergen, Belgium	Brabant Licence D/PMVC/05F06/039
Within the Country	16 05 04	Yes	0.05	Cylinders	D15	M	Weighed	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver Ireland Limited, Tolka Quay Road, Dublin Port, Dublin 1	W0036-02
To Other Countries	16 05 04	Yes	0.01	Cylinders	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Pyros Environmental Limited, Charleston Road, Hardley, Hythe, Southampton, Hants, SO45 3ZA, England	HP3836UZ
To Other Countries	16 05 06	Yes	136.59	Lab chemicals including mixtures of lab chemicals	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	16 05 06	Yes	8.09	Lab chemicals including mixtures of lab chemicals	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	16 05 06	Yes	0.41	Lab chemicals including mixtures of lab chemicals	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3. DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	16 05 07	Yes	0.08	Discarded inorganic chemicals	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	16 05 07	Yes	167.33	Discarded inorganic chemicals	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
Within the Country	16 05 07	Yes	7.14	Discarded inorganic chemicals	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Enva (Shannon), Smithstown Industrial Estate, Shannon, Co Clare	W0041-01
To Other Countries	16 05 07	Yes	8.94	Discarded inorganic chemicals	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	16 05 07	Yes	0.02	Discarded inorganic chemicals	R5	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver Relight NV, Haven 1940 - Molenweg, B-9130 Doel-Beveren, Belgium	46003/233/M/1/CH/av
To Other Countries	16 05 07	Yes	0.15	Discarded inorganic chemicals	R13	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Rehab Recycling (Tallaght), 77 Broomhill Road, Tallaght Industrial Estate, Dublin 24	WPR 033/2
To Other Countries	16 05 08	Yes	21.89	Discarded organic chemicals	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784

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						M/C/E	Method Used					
To Other Countries	16 05 08	Yes	314.73	Discarded organic chemicals	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	16 05 08	Yes	15.12	Discarded organic chemicals	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	16 05 08	Yes	26.92	Discarded organic chemicals	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3, DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	16 05 08	Yes	0.42	Discarded organic chemicals	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Nehlsen GmbH & Co. KG, Louis-Krages-Strasse 16, 28237 Bremen, Germany	No reference number
To Other Countries	16 05 08	Yes	2.51	Discarded organic chemicals	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Remondis Industrie Service GMBH (Bramsche), Niederlassund Bransche, Am Kanal 9, 49565 Bramsche, Germany	08HR003001
Within the Country	16 05 08	Yes	1.35	Discarded organic chemicals	R3	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Rilta, Block 402, Greenogue Business Park, Rathcoole, Co. Dublin	W0192-02
Within the Country	16 06 01	Yes	0.9	Lead Batteries	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	KMK Metals Recycling, Cappincur Ind. Estate, Daingean Road, Tullamore, Co. Offaly	W0113-02
Within the Country	16 06 01	Yes	0.04	Lead Batteries	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Returnbatt Limited, Unit A Oldmill Ind. Estate, Oldmillown, Kill, Co. Kildare	97/2002A
Within the Country	16 06 04	No	0.07	Alkaline batteries	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	KMK Metals Recycling, Cappincur Ind. Estate, Daingean Road, Tullamore, Co. Offaly	W0113-02
To Other Countries	16 09 01	Yes	0.16	Waste permanganates	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	16 09 02	Yes	0.07	Waste Chromates	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	16 09 03	Yes	2.15	Waste Peroxides	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	16 09 04	Yes	3.59	Other oxidising wastes	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
Within the Country	16 09 04	Yes	0.01	Other oxidising wastes	D15	M	Weighed	Onsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver Ireland Limited, Tolka Quay Road, Dublin Port, Dublin 1	W0036-02
To Other Countries	16 09 04	Yes	0.04	Other oxidising wastes	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	16 09 04	Yes	0.07	Other oxidising wastes	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3, DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	16 10 01	Yes	0.54	Aqueous liquid wastes containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
Within the Country	16 10 01	Yes	0.2	Aqueous liquid wastes containing dangerous substances	R3	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Enva (Shannon), Smithstown Industrial Estate, Shannon, Co Clare	W0041-01
To Other Countries	16 11 05	Yes	6.59	Linings and refractories from non-metallurgical processes containing dangerous substances	D5	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	IAG, Ihlenberg, D-23923 Selmsdorf, Germany	M58SAD001
To Other Countries	17 05 03	Yes	3.62	Soil and stones containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	17 09 03	Yes	7.47	Other construction and demolition wastes containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70

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						M/C/E	Method Used					
To Other Countries	18 01 01	No	0.08	Sharps	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	18 01 03	Yes	4.17	Reagent Kits	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	18 01 03	Yes	0.4	Reagent Kits	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	18 01 06	Yes	28.76	Chemicals consisting of or containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	18 02 05	Yes	0.15	Chemicals consisting of or containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	19 02 05	Yes	21.74	Sludges from physio/chemical treatment containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	19 02 05	Yes	0.11	Sludges from physio/chemical treatment containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	19 02 08	Yes	0.12	Liquid combustible wastes containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	19 02 08	Yes	959.9	Liquid combustible wastes containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Kommunekemi a/s, Lindholmvej 3, DK-5800 Nyborg, Denmark	8-76-1-449-49-2005
To Other Countries	19 09 04	No	0.49	Spent Activated Carbon	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	19 09 05	No	1.82	saturated or spent ion exchange resins	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	20 01 01	No	0.01	Paper & Cardboard	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	20 01 02	No	1.28	Glass	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	20 01 13	Yes	0.42	Solvents	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	20 01 13	Yes	1.24	Solvents	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	20 01 14	Yes	31.38	Acids	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	20 01 14	Yes	0.19	Acids	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	20 01 15	Yes	0.23	Alkaline	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	20 01 19	Yes	3.31	Pesticides	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	20 01 19	Yes	0.12	Pesticides	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	20 01 21	Yes	0.06	Fluorescent tubes and other mercury containing waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	20 01 21	Yes	0.01	Fluorescent tubes and other mercury containing waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd

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						M/C/E	Method Used					
Within the Country	20 01 21	Yes	0.06	Fluorescent tubes and other mercury containing waste	R5	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Irish Lamp Recycling Ltd, Blackpark, Kilkenny Road, Athy, Co. Kildare	COE-KE-08-0004-01
Within the Country	20 01 21	Yes	1.76	Fluorescent tubes and other mercury containing waste	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	KMK Metals Recycling, Cappincur Ind. Estate, Daingean Road, Tullamore, Co. Offaly	W0113-02
To Other Countries	20 01 25	No	23.52	Edible oil & Fat	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	20 01 26	Yes	11.43	Oil and fats	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	20 01 26	Yes	1.06	Oil and fats	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
Within the Country	20 01 26	Yes	0.62	Oil and fats	R3	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Rilta, Block 402, Greenogue Business Park, Rathcoole, Co. Dublin	W0192-02
To Other Countries	20 01 27	Yes	590.78	Paints, inks, adhesives and resins containing dangerous substances	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	ATM, PO Box 30, NI-4780 AA Moerdijk, Vlasweg 12, 4782PW Moerdijk, The Netherlands	821780, 02/3762, AWE/2002.3784
To Other Countries	20 01 27	Yes	17.83	Paints, inks, adhesives and resins containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
Within the Country	20 01 27	Yes	92.91	Paints, inks, adhesives and resins containing dangerous substances	R3	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Enva (Shannon), Smithstown Industrial Estate, Shannon, Co Clare	W0041-01
To Other Countries	20 01 27	Yes	7.18	Paints, inks, adhesives and resins containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	20 01 27	Yes	47.44	Paints, inks, adhesives and resins containing dangerous substances	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Nehlsen GmbH & Co. KG, Louis-Krages-Strasse 10, 28237 Bremen, Germany	No reference number
Within the Country	20 01 27	Yes	28.6	Paints, inks, adhesives and resins containing dangerous substances	R3	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Rilta, Block 402, Greenogue Business Park, Rathcoole, Co. Dublin	W0192-02
To Other Countries	20 01 27	Yes	11.85	Paints, inks, adhesives and resins containing dangerous substances	R3	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	SRM Ltd (Mor), Middleton Road, Morecambe, Lancs, LA3 3JW	BL73021D, LAN/494011/CB
To Other Countries	20 01 29	Yes	10.96	Detergents containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	20 01 29	Yes	0.1	Detergents containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	20 01 30	No	0.51	Detergents	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	20 01 31	Yes	19.0	Cytotoxic and Cytostatic medicines	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	20 01 32	No	2.09	Non-hazardous medicines	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Indaver NV , Industriele Afvalverwerking, Poldervlietweg, B-2030 Antwerpen 3, BELGIUM	MLAV1/9800000485/MV/bd
To Other Countries	20 01 32	No	0.03	Non-hazardous medicines	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	20 01 33	Yes	0.01	Batteries & Accumulators	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1		

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						M/C/E	Method Used					
Within the Country	20 01 33	Yes	16.83	Batteries & Accumulators	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	KMK Metals Recycling, Cappincur Ind. Estate, Daingean Road, Tullamore, Co. Offaly	W0113-02
Within the Country	20 01 33	Yes	0.34	Batteries & Accumulators	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Returnbatt Limited, Unit A Oldmill Ind. Estate, Oldmillown, Kill, Co. Kildare	97/2002A
Within the Country	20 01 33	Yes	0.25	Batteries & Accumulators	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	TechRec Ireland Ltd, Unit 51 Park West Business Park, Nangor Road, Dublin 12	W0233-01
Within the Country	20 01 34	No	3.52	Batteries & Accumulators	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	KMK Metals Recycling, Cappincur Ind. Estate, Daingean Road, Tullamore, Co. Offaly	W0113-02
Within the Country	20 01 34	No	0.06	Batteries & Accumulators	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Returnbatt Limited, Unit A Oldmill Ind. Estate, Oldmillown, Kill, Co. Kildare	97/2002A
Within the Country	20 01 39	No	0.01	Plastics	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Glyntown Enterprises Ltd, 7 Glyntown Heights, Glanmire, Co. Cork	CK(S) 167/04
To Other Countries	20 01 40	No	0.17	Metals	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
Within the Country	20 01 40	No	0.01	Metals	D1	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	Ecosafe Systems Ltd, Unit 1A Allied Industrial Park,Kylemore Road, Dublin 10	W0054-02
Within the Country	20 01 40	No	0.14	Metals	R13	M	Weighed	Offsite in Ireland	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	TechRec Ireland Ltd, Unit 51 Park West Business Park, Nangor Road, Dublin 12	W0233-01
To Other Countries	20 03 01	No	0.1	Mixed Municipal Waste	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	20 01 25	No	8.55	Edible oil & Fat	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70
To Other Countries	14 06 03	Yes	216.83	Other solvents and solvent mixtures	D10	M	Weighed	Abroad	Indaver Ireland Limited, W0036-02	Tolka Quay Road, Dublin Port, Dublin 1	AVG, Borsigstrasse 2, D-22113, Hamburg, Germany	21/10/1970 Ref. 62.40-4 G.O. 10/70