EPA Application Form

9.1 - Environmental Management Techniques - Attachment

Organisation Name: *	Indaver Ireland Ltd.
Application I.D.: *	LA001689

Amendments to this Application Form Attachment

Version No.	Date	Amendment since previous version	Reason
V.1.0	July 2017	N/A	Online application form attachment
As above	Mar 2018	Identification of required fields	Assist correct completion of attachment

9 Environmental Management Techniques [1]

9.1. Accident Prevention Measures

Measures to prevent accidental emissions and liabilities

Incidents and accidents are unplanned events. Emissions from incidents and (major) accidents usually occur within a relatively short time frame but with greater intensity than under normal operating conditions. Incidents such as fire or fuel spillages can result in liabilities such as contaminated soil and groundwater. Proactive risk management reduces the potential for an incident.

Abnormal operating conditions must be managed without endangering human health and harming the environment, and in particular without risk to water, air, soil, plants or animals, without causing a nuisance through noise or odours, and without adversely affecting the countryside or places of special interest.

The applicant must firstly undertake a risk assessment in accordance with EPA guidance on assessing and costing environmental liabilities. Having identified the key risks, the applicant should populate the following table with the measures to be taken to treat the key risks, e.g., bunding, integrity testing, fire prevention, etc.

The range of measures is dependent on the complexity of the site. Pollution prevention measures may, inter alia, include the following information:

- Conclusions on BAT set out in the EU Reference document on BAT on emissions from storage such as a safety management system; corrosion prevention measures on tanks, etc.
- Details of storage of all raw materials, products and wastes such as segregation, labelling, designation and impervious surface;
- Details of spill or emergency containment measures and structures such as bunds, high level alarms, absorbent materials;
- Details of fire detection and fire-water retention facilities in the event of emergencies or other measures to contain fire-water;
- Details of transport of material within the site, solid, liquid or sludge transported by pipe, vehicle or conveyor; etc.,
- The Agency has published a guidance document on Fire-Water Retention Facilities and on the Storage and transfer of materials.

[1] This part of the form collects information on environmental management at the installation/ facility. It seeks to understand the maturity of the management system in terms of knowledge of abnormal operating conditions, prevention and early detection measures and emergency response procedures. The level of detail required in this part of form relates to the environmental risk posed.

Describe in the table below existing and/or proposed measures, including emergency procedures, to minimise the impact on the environment of an accidental emission or spillage. (This table should include the measures to be taken under abnormal operating conditions, including start-up, shutdown, leaks, malfunctions, breakdowns and momentary stoppages that will demonstrate that any emission arising will not cause significant environmental pollution)[2].

Measure*	Surveillance Measures		
	Description *	Frequency of Surveillance *	Method / Standard *
Leak prevention on tanks	Tanks are double-skinned, where appropriate, with interstitial leak detection	Constant	Ammonia detectors will detect any ammonia releases which will alarm back to Control Room
Level alarms in tanks	Tanks fitted with level monitoring and overfill protection. High level alarm interlocked to unloading pump/valve.	Constant	Detectors will automatically report any high levels to the control room.
Overpressure prevention in tanks	Conservation vents on bulk tanks to prevent overpressure	Constant	Incorporated in design
Collision prevention with tanks	Tanks elevated on concrete plinths to prevent potential vehicle collision	Constant	Incorporated in design
Regular visual inspections of aboveground pipework	Pipework from tanks is located over-ground over paved areas and undergoes regular visual inspection.	Regular	Visual inspections
Designated areas for tanker unloading	Designated bulk tanker unloading area which is graded towards an ACO channel which drains to Full Retention Forecourt Separator upon diversion of drainage valve	Constant	Incorporated in design
Spill Containment Measures	The facility is hard paved, and all drainage is contained within the site's stormwater network. Spill containment measures incorporated into the stormwater drainage system will include a forecourt separator, 2 no. Class 1 full retention	Constant	Use of spill response materials (absorbent materials, spill mats, pH testing paper etc.) for spill containment and clean-up

[2] Information relating to the integrity, impermeability and recent testing or pipes, tanks and bund areas should be included.

* indicates required field

Measure*	Surveillance Measures		
	Description *	**Frequency of Surveillance ***	**Method / Standard ***
	interceptors, and 2 no. continuous monitoring chambers (fire water and surface water attenuation tank). In case of a small spillage, spill kits are provided throughout the site. Kits are checked periodically to ensure availability. A spill response procedure will be in place for the facility (in the Site Emergency Plan) outlining the required actions and training.		Site Emergency Plan
Transfer of materials	Specific procedures will be implemented for the transport of raw materials and wastes to and from the main waste building and staff carrying out the task will be trained to reduce the likelihood of spillage or accidents.	Constant	Procedure in place. Procedures and workers are audited regularly.
Training of staff and procedures in place	Various procedures in place. Personnel will be adequately trained. Staff with receive training on chemical awareness and spill response.	Constant	Training tracking system (ITS) in place.
Controlled Delivery of Fuel and Raw Materials to Site	Deliveries are supervised so any spillage will be detected quickly. Employees are trained to deal with spills and spill kits are readily available on site. A spillage during delivery would be of low consequence as the delivery areas are contained. There is no direct pathway to soil or groundwater. A forecourt separator will be on the drainage line from the fuel delivery area and Class 1 full retention interceptors are also in place.	Constant	Procedure in place. Procedures and workers are audited regularly.

Measure*	Surveillance Measures		
	Description *	**Frequency of Surveillance ***	**Method / Standard ***
Contractor approval process	Contractor approval process for tanker drivers in place; site induction of tanker drivers; site operative accompanies driver during unloading process	Constant	Procedure in place. Procedures and workers are audited regularly.
Ammonia tank alarm	Ammonia gas detector located at ammonia tank which alarms back to Control Room	Constant	Detectors will automatically report any high levels to the control room.
Maintenance Management System in place	All equipment and pipework containing hazardous materials undergoes appropriate maintenance and inspection as part of maintenance management system.	Constant	Procedure in place. Procedures and workers are audited regularly.
Labelling of storage containers and vessels	Labelling of all storage containers and vessels as to identify contents and hazards.	Constant	Procedure in place. Procedures and workers are audited regularly.
Storage in small quantities	Other than bulk tanks, all other hazardous materials on site are stored in smaller quantities (e.g. IBCs, 200L drums, 25L containers etc.).	Constant	Procedure in place. Procedures and workers are audited regularly.
Inspection of underground pipelines and bunds	Bunds and pipelines will be regularly inspected and will be integrity tested every 3 years in accordance with the IE licence conditions, when issued.	Every 3 years	Procedure in place. Procedures and workers are audited regularly.
Bunding	All hazardous materials are stored in individually bunded areas (other than bulk tanks). All single skinned tanks are also bunded for 110% of their capacity.	Constant	Incorporated in design
Waste Handling	Waste handling procedures in place for all operational activities.	Constant	Procedure in place. Procedures and workers are audited regularly.

Measure*	Surveillance Measures		
	Description *	**Frequency of Surveillance ***	**Method / Standard ***
Permit system in operation	All works on site is controlled by a permit system which ensures that a valid method statement and risk assessment is carried out to prevent any damage and, therefore, leakage / spills.	Constant	Procedure in place. Procedures and workers are audited regularly.
Surface water drainage system to control analyse water before discharge	All spills will drain to and be retained in site surface water drainage system. The surface water attenuation tank is constantly monitored, and discharging is only allowed if parameters match requirements. This is an automated step. In the event that stormwater is retained due to an exceedance recorded by the automated monitoring system, the stormwater will be re-sampled and either disposed of as waste (if non-compliant) or discharged to the storm sewer (if compliant). Further details are supplied with Section 7 of this application.	Constant	Incorporated in design
Analysis of aqueous waste before unloading	Samples are taken and a chemical analysis is carried out before aqueous waste is unloaded into tank to prevent any chemical reactions that can cause overpressure in the tanks etc.	Constant	Procedure in place. Procedures and workers are audited regularly.
Waste acceptance procedure in place	Waste acceptance procedure is in place and is adhered to in order to prevent non-approved waste entering the facility	Constant	Procedure in place. Procedures and workers are audited regularly.
Prevention of release of hazardous gaseous materials due to falling cylinder	Gas Cylinders secured in upright position	Constant	Procedure in place. Procedures and workers are audited regularly.
Prevention of release of hazardous gaseous materials due to leak	Periodical checks of pressure gages on all cylinders by operators	Periodical	Procedure in place. Procedures and workers are audited regularly.

Measure*	Surveillance Measures		
	Description *	Frequency of Surveillance *	Method / Standard *
Fire prevention system in place	Dry deluge sprinkler system around the plant; wet sprinkler system on burners; hose reels, fire extinguishers and fixed fire hoses located throughout the plant; fire hydrants located outside tipping hall; water cannons in bunker area which can be operated remotely from control room or manually locally	Constant	Dry Deluge Sprinkler System
Firewater Management	All contaminated firewater would be retained in the firewater retention tank which is equipped with an automated monitoring station and shut off valve to close off the firewater tank from the stormwater tank.	Constant	Online monitoring is continuous, and any exceedance will alarm back to the Control Room. Monitoring stations and shut off valves undergo regular preventative maintenance in accordance with site procedures.
Negative pressure in tipping hall	Negative pressure in tipping hall draws odours / smoke (in the event of fire) into bunker	Constant	Incorporated in design
Noise Emission Control	The majority of the noise generating equipment will be house internal to the main building. Practicable noise control measures will be employed, and acoustic attenuators will be employed where practical. Further details are supplied in Section 7 of this application.	Constant	Incorporated in design
Air emission control	Constant monitoring of air emissions from stack. List of items monitored outlined in Section 7 of this application. If outside limits an alarm is raised and highlighted in daily report. The EPA will need to be informed for any non-compliances.	Constant	Incorporated in design

Outline what provisions have been made to ensure an adequate response to emergency situations outside of normal working hours, i.e., during night-time, weekends and holiday periods (attach additional pages to this document if required): *

An Emergency Response Plan has been developed. This document can be found attached.

The ERT-team is on site during normal operating hours. Outside these hours the production team will, depending on the type of emergency, self-investigate or inform the fire brigade. Procedures are in place for outside of hours emergencies. Procedures and staff are audited regularly.

Soil Monitoring Points

Periodic monitoring of soil and groundwater is required having regard to the possibility of soil and groundwater contamination of the site[3].

Complete the table below with details of soil monitoring locations and in particular where a baseline report has been/is required in accordance with Section 86B of the EPA Act 1992 as amended.

Is periodic soil monitoring proposed at the installation/facility? (**Yes/No**): * **YES**

Soil Monitoring Point Code	**Monitoring Point Grid Ref.**	
	Easting [4]	Northing [5]
To be agreed with agency		

*add rows to the table as necessary

3 Inherent in the monitoring of soil and groundwater is accepting the possible necessity for remediation of the soil / groundwater. Regular monitoring of soil and groundwater provides an early detection of any contaminations.

4 Irish Transverse Mercator (ITM) Coordinates

5 Irish Transverse Mercator (ITM) Coordinates

Soil Parameters

Complete the table below with details of soil monitoring parameters (where a baseline report is required in accordance with Section 86B of the EPA Act 1992 as amended). (If different parameters are associated with different monitoring points this should also be identified in the table below.)

Parameter	Unit	Trigger Level	How was the trigger level determined?	Proposed Monitoring Frequency	Sample Method	Analysis Method / Technique
Any relevant hazardous substances (as per baseline report submitted with application or otherwise agreed with the agency)	N/A	To be agreed with agency	N/A	Every 10 years	N/A	Standard Method

*add rows to the table as necessary

Groundwater Monitoring Points

Based on the assessment(s) carried out previously or as part of this licence application, complete the table below with summary details of the groundwater monitoring points.

Is groundwater monitoring proposed at the installation/facility? (**Yes/No**): * **YES**

Monitoring Point Code	Monitoring Point Grid Ref.	
	Easting [6]	Northing [7]
MW-1	579004.9993	564201.4971
MW-2	579151.8827	564328.3624
MW-3	579158.0639	564310.6783

[6] Irish Transverse Mercator (ITM) Coordinates.
[7] Irish Transverse Mercator (ITM) Coordinates.

Groundwater Parameters

Complete the table below with summary details of the groundwater parameters. (If different parameters are associated with different monitoring points this should be identified in the table below.)

Parameter	Unit	Trigger Level	How was the trigger level determined?	Proposed Monitoring Frequency	Sample Method	Analysis Method / Technique
Ammonia	ug/L	To be agreed with agency	N/A	Monthly	Grab Sample	Standard Method
TOC	mg/L	To be agreed with agency	N/A	Monthly	Grab Sample	Standard Method
Conductivity	us/cm	To be agreed with agency	N/A	Monthly	Grab Sample	Standard Method
pH	pH units	To be agreed with agency	N/A	Biannually	Field reading	Ph electrode or similar
Nitrate	mg/L	To be agreed with agency	N/A	Biannually	Grab Sample	Standard Method
Nitrite	mg/L	To be agreed with agency	N/A	Biannually	Grab Sample	Standard Method
Chloride	mg/L	To be agreed with agency	N/A	Biannually	Grab Sample	Standard Method
Fluoride	mg/L	To be agreed with agency	N/A	Biannually	Grab Sample	Standard Method
Metals (CD, Tl, Hg, Pb, Cr, Cu, Mn, Ni, As, Co, V, Sn) and other compounds	ug/L	To be agreed with agency	N/A	Biannually	Grab Sample	Standard Method
Organohalogens (Note 1)		To be agreed with agency	N/A	Biannually	Grab Sample	GC-MS or similar
Total coliforms	cfu/ 100mL	To be agreed with agency	N/A	Biannually	Grab Sample	Standard Method
Faecal coliforms	cfu 100mL	To be agreed with agency	N/A	Biannually	Grab Sample	Standard Method

*add rows to the table as necessary

Note 1: Screening for priority pollutant list substances

Costed Environmental Liabilities Risk Assessment (ELRA)

Indicate if the activity, through pre-application meeting with the Agency or other means, is required to submit a costed ELRA[8] as part of the licence, or licence review application.

Costed Environmental Liabilities Risk Assessment (ELRA) required to be submitted? (**Yes/No**): *	**Yes**

If '**Yes**', upload a costed Environmental Liabilities Risk Assessment (ELRA), prepared in accordance with the *Environmental Protection Agency's Guidance on Assessing and Costing Environmental Liabilities* (2014) (select Document Type: '**ELRA**' in the application form).

Costed **ELRA** document filename:	Attachment-9-2-1-ELRA

Indicate your preferred form of financial provision instrument to meet ELRA costings have regard to the Environmental Protection Agency's Guidance on Financial Provision (2015), e.g., Environmental Liability Insurance:

Environmental Liability Insurance held by the Indaver Group

Upload a financial provision proposal have regard to the Environmental Protection Agency's Guidance on Financial Provision (2015) (where required at application /review application stage) (select Document Type: '**Financial Provision Proposal**' in the application form)

Financial Provision Proposal filename:	To be agreed with Agency following licence approval

[8] There is an explicit requirement in EU and Irish law for financial provision for certain activities. The following categories of activities have an ELRA/CRAMP/FP requirement:

1. Landfills (excl. closed L.A. Landfills closed before 16th July 2009)
2. CAT A Extractive Waste Facilities
3. High Risk Contaminated Land Facilities
4. All Haz-Waste Transfer Stations
5. Non-Haz WTS (Accepting >50,000 tons/annum)
6. Incineration (incl. co-incineration of hazardous waste)
7. Upper & Lower Tier Seveso Sites
8. Exceptional circumstances associated with the site, e.g., significant ground/groundwater contamination.

Regard should be had by applicants to relevant Agency guidance on these matters.

Closure, Restoration and Aftercare Management Plan (CRAMP)

A restoration/aftercare period will be required where there are on-going environmental liabilities following closure. Applicants are required to describe the existing or proposed measures to avoid any risk of environmental pollution and to return the site to a satisfactory state or the state established in the baseline report where applicable, after the activity or part of the activity ceases operation.

A key measure is the preparation of a Closure, Restoration and Aftercare Management Plan (CRAMP) by the operator, for certain activities[9]. Notwithstanding the requirements of the EC Environmental Objectives (Groundwater) Regulations 2010, S.I. No. 9 of 2010, the closure and restoration/ aftercare target is the site condition at the time of the original application or the baseline report. The applicant shall have regard to the Environmental Protection Agency's Guidance on Assessing and Costing Environmental Liabilities (2014) in the preparation of the CRAMP.

Upload a CRAMP, where applicable (select Document Type: '**Site Closure**' in the application form).

CRAMP filename:	Attachment-9-2-2-CRAMP

Costed CRAMP

Indicate if the activity, through pre-application meeting with the Agency or other means, is required to have a CRAMP [9] submitted as part of the licence, or licence review application.

CRAMP required to be submitted at application/licence review application stage? (**Yes/No**): *	**Yes**

[9] There is an explicit requirement in EU and Irish law for financial provision for certain activities. The applicant shall have regard to the Environmental Protection Agency's Guidance in determining CRAMP requirements and on Financial Provision (2015) in making financial provision to cover any liabilities.

The following categories of activities have an ELRA/CRAMP/FP requirement:
1. Landfills (excl. closed L.A. Landfills closed before 16th July 2009)
2. CAT A Extractive Waste Facilities
3. High Risk Contaminated Land Facilities
4. All Haz-Waste Transfer Stations
5. Non-Haz WTS (Accepting >50,000 tons/annum)
6. Incineration (incl. co-incineration of hazardous waste)
7. Upper & Lower Tier Seveso Sites
8. Exceptional circumstances associated with the site e.g. significant ground/groundwater contamination.

Indicate your preferred form of financial provision instrument to meet CRAMP costings (where appropriate), e.g., Secured fund, On-demand performance Bond, Parent Company Guarantee, Charge on Property (have regard to the Environmental Protection Agency's Guidance on Financial Provision (2015) on the Agency's website):

State preferred form of financial provision instrument?	It is anticipated that discussions with the Agency regarding the type and nature of financial provision provided once the CRAMP report has been agreed by the EPA.

Upload a financial provision proposal (where required) having regard to the Environmental Protection Agency's Guidance on Financial Provision (2015) in making financial provision to cover any liabilities (select Document Type: '**Financial Provision Proposal**' in the application form)

Financial Provision Proposal filename:	To be agreed with Agency following licence approval

Cessation of Activity

Where a CRAMP is not required, describe the measures to be taken on and following the permanent cessation of the activity or part of the activity to avoid any risk of environmental pollution and to return the site of the activity to a satisfactory state. (Input your response in the text box below or attach the information in to this attachment).

Not Applicable

Emergency Response Procedure

Do you have an emergency response procedure (ERP)? (**Yes/No**) *	**Yes**
Is the ERP compliant with the EPA guidance? (**Yes/No**) *	**Yes**

9.2. Nuisance

Complete the table below in relation to each potential nuisance. Identify if the activity may cause or contribute to the type of nuisance in the area of the installation/facility and, where applicable, identify the techniques used to prevent/minimise the nuisance.

Type of Nuisance	**Applicable to the activity? *** (Yes/No/ Not Applicable)	**Techniques to prevent nuisances ***	**Where nuisances cannot be prevented, techniques to be used to minimise and reduce nuisances**
Odour	Yes	Negative pressure in tipping hall; tipping hall is an enclosed building; procedures in place to, focus on scheduling to minimise waiting time for trucks; activated carbon unit for odour management	N/A
Fire Control	Yes	Dry deluge sprinkler system around the plant; wet sprinkler system on burners; hose reels, fire extinguishers and fixed fire hoses located throughout the plant; fire hydrants located outside tipping hall; water cannons in bunker area which can be operated remotely from control room or manually locally	N/A
Dust	Yes	Negative pressure in tipping hall, strong focus on housekeeping, policy to keep all doors closed when possible	N/A
Litter	Yes	All vehicles onsite are covered during movements; negative pressure in tipping hall; tipping hall is an enclosed building. Bins are also to be closed. Awareness training for staff and contractors.	Periodical litter pickups by staff and road sweeper due to bird picking on trucks
Birds	Yes	Periodical litter pickups by staff and road sweeper due to bird picking on trucks	Monitoring of bird activities on weekly walks
Mud	No	Paved, tarmacked roads; periodical cleaning by road sweeper	N/A
Vermin	Yes	All wastes are stored within the enclosed building, vehicles will be covered, wastes not stored external to building	External contractors to be engaged for pest control
Other	No	N/A	N/A

If '**Other**' is selected define the other nuisance(s):	N/A

Note: Odour must also be addressed in the fugitive emissions section of the '*7.4 Emissions to Atmosphere – Main and Fugitive*' template, where applicable.

9.3. Environmental Management System (EMS)

Do you have an environmental management system? (**Yes/No**) *	**YES**
If '**Yes**', is the environmental management system accredited? (**Yes/No**) *	**YES**
State the date accreditation was achieved **or** is expected to be achieved, where applicable:	**Accreditation Expected to be achieved**
State the standard of accreditation achieved:	**I.S. EN ISO 9001:2015,** **I.S. EN ISO 14001:2015** **OHSAS 18001:2007**

Energy Efficiency

Outline the measures taken to ensure that energy is used efficiently having regard to the relevant decision on BAT conclusions and/or BAT guidance and where appropriate, an energy audit with reference to the EPA Guidance document on Energy Audit should be carried out. *	Energy efficiency in considered during the design phase and in particular to ensure that the R1 status of the facility can be guaranteed. The choice of flue gas cleaning technologies deployed in the facility have also taken energy consumption into consideration. This is outlined in the BAT assessment in section 4.7 of this application. The steam parameters for the boiler have also been chosen to optimise the recovery of heat for conversion into electrical energy whilst considering any adverse corrosion effects in the boiler. The usage of variable speed drives for pumps and other equipment is favoured (where applicable) in order to reduce energy consumption. Indaver Ireland Ltd. is committed to the Energy Efficiency Directive to help the EU to reach its 2020 energy efficiency targets.
Has an energy audit been carried out? (**Yes/No**) *	**No. The facility has not yet been constructed.**
Do you have an energy efficiency management system? (**Yes/No**) *	**No, ISO 14001 will be followed. For electrical equipment rules are set in standards set by Indaver Group.**

If '**Yes**', is the energy efficiency management system accredited? (**Yes/No**)	**No**
State the date accreditation was achieved **or** is expected to be achieved, where applicable:	**Not Applicable**
State the standard of accreditation achieved:	**Not Applicable**

9.4. Hours of Operation

Provide details of the hours of operation for the installation/facility * (hours and days per week, etc.), including:

(a) Proposed hours of operation.

Proposed hours of operation will be 24h a day, seven days a week for an average of approximately 8,000h per year.

(b) Proposed hours of construction and development works and timeframes.

The hours of construction will be agreed with Cork County Council in advance of the submission of a commencement notice and fully in line with the relevant planning conditions of ABP 04.PA0045. In particular, condition 7 requires that a Construction Management Plan be submitted and agreed in writing with Cork Co. Co. prior to the commencement of the development.

(c) For waste activities, the proposed hours of waste acceptance.

As set out in Section 7.7.11 of the EIAR accompanying this application, waste deliveries to and from the facility will be managed to avoid the existing traffic peaks on the surrounding road network.

Waste acceptance will be limited to the hours 06:00 to 20:00 on weekdays and 09:00 to 14:00 on Saturdays. During weekdays, deliveries will be restricted between the hours of 07:00 and 09:00 in the morning and 16:00 to 18:00 in the evening. There will be no waste accepted on Sundays.

The restriction of deliveries during these times will be detailed in the HGV Mobility Management Plan required under condition 8 of the existing planning permission 04.PA0045.

(d) Any other relevant hours of operation expected (e.g., waste handling, etc.).

N/A

9.5. Review of a Licence

Where the Office of Environmental Enforcement (OEE) has agreed any variations or adjustments to the conditions or schedules of the existing licence, the licensee must provide details of these agreed variations and adjustments to the existing licence conditions in the table that follows.

An updated, scaled drawing of the site layout (no larger than A3) providing visual information on such adjustments or variations where appropriate should be uploaded in the **site tab** – 'site plan(s)' upload.

In the case of once-off assessments/reports required under conditions/schedules of the existing licence the licensee must provide details of those assessments/reports that have been completed and agreed with the OEE or as otherwise agreed, in the table below.

Condition/ Schedule No.	Existing Condition	OEE Agreement Reference	Description
N.A.	N.A.	N.A.	N.A.

9.6 Environmental Management Techniques – Upload Files

State the number of 'upload files' referred to and named in this attachment document? * **2**