Headquarters
P.O. Box 3000
Johnstown Castle Estate
County Wexford
Ireland

INDUSTRIAL EMISSIONS LICENCE
Recommended Determination

Licence Register Number:	**W0281-01**
Applicant	**Bord Gais Eireann**
Location of Installation:	**Dock Road, Limerick**

INTRODUCTION

This introduction is not part of the licence and does not purport to be a legal interpretation of the licence.

This licence is for activities involving the remediation of a contaminated site at an installation at the former Limerick Gasworks in Limerick City. The 1.4 Ha site is derelict and vacant.

Coal gas manufacturing was carried out at the site from the 1830's to 1974. Gas manufacturing results in the production hazardous materials such as coal tar. Coal tar was stored in underground tanks some of which leaked into the ground over many decades. This has resulted in the contamination of soils and groundwater at the site.

Groundwater will be pumped above ground for treatment and recharge. Approximately 100,000 tonnes of soil will be excavated and stabilised prior to its reuse at the site. The licence requires measures to be taken to prevent impact due to air emissions, noise, dust and odour. There will be on-going monitoring of groundwater and soil quality to confirm the effectiveness of the remediation works.

The licence sets out in detail the conditions under which Bord Gais Eireann will operate and manage this installation.

Table of Contents

Page No

Glossary of Terms

All terms in this licence should be interpreted in accordance with the definitions in the Environmental Protection Agency Acts 1992 to 2013 unless otherwise defined in the section.

Adequate lighting	20 lux measured at ground level.
AER	Annual Environmental Report.
Aerosol	A suspension of solid or liquid particles in a gaseous medium.
Agreement	Agreement in writing.
Annually	At approximately twelve-monthly intervals.
Application	The application by the licensee for this licence.
Appropriate Facility	A waste management facility, duly authorised under relevant law and technically suitable.
Attachment	Any reference to Attachments in this licence refers to attachments submitted as part of this licence application.
BAT	Best Available Techniques.
BAT conclusions	A document containing the parts of a BAT reference document laying down the conclusions on best available techniques, their description, information to assess their applicability, the emission levels associated with the best available techniques, associated monitoring, associated consumption levels and, where appropriate, relevant site remediation measures.
BAT reference document	A document drawn up by the Commission of the European Union in accordance with Article 13 of the Industrial Emissions Directive, resulting from the exchange of information in accordance with that Article of that Directive and describing, in particular, applied techniques, present emissions and consumption levels, techniques considered for the determination of best available techniques as well as BAT conclusions and any emerging techniques.
Biannually	At approximately six – monthly intervals.
Biennially	Once every two years.
BOD	5 day Biochemical Oxygen Demand (without nitrification suppression).
CBOD	5 day Carbonaceous Biochemical Oxygen Demand (with nitrification suppression).
CEN	Comité Européen De Normalisation – European Committee for Standardisation.

COD	Chemical Oxygen Demand.
Compliance Point	The point (location, depth) at which a compliance value should be met. Generally it is represented by a borehole or monitoring well from which representative groundwater samples can be obtained.
Compliance Value	The concentration of a substance and associated compliance regime that, when not exceeded at the compliance point, will prevent pollution and/or achieve water quality objectives at the receptor.
Construction and demolition (C&D) waste	Wastes that arise from construction, renovation and demolition activities: Chapter 17 of the EWC or as otherwise may be agreed.
Containment boom	A boom that can contain spillages and prevent them from entering drains or watercourses or from further contaminating watercourses.
Daily	During all days of plant operation and, in the case of emissions, when emissions are taking place; with at least one measurement on any one day.
Day	Any 24 hour period.
Daytime	0700 hrs to 1900 hrs
dB(A)	Decibels (A weighted).
DNAPL	**Dense non-aqueous phase liquids.**
DO	Dissolved oxygen.
Documentation	Any report, record, results, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.
Drawing	Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this licence.
Emission limits	Those limits, including concentration limits and deposition rates, established in *Schedule B: Emission Limits,* of this licence.
EMP	Environmental Management Programme.
Environmental damage	As defined in Directive 2004/35/EC.
EPA	Environmental Protection Agency.
European Waste Catalogue (EWC)	A harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 2000/532/EC and any subsequent amendment published in the Official Journal of the European Community.

Evening Time	1900hrs to 2300hrs
Facility	Any site or premises used for the purpose of the recovery or disposal of waste.
Fortnightly	A minimum of 24 times per year, at approximately two week intervals.
Gas Oil	Gas Oil as defined in Council Directive 1999/32/EC and meeting the requirements of S.I. No. 119 of 2008.
GC/MS	Gas chromatography/mass spectroscopy.
Groundwater	Has the meaning assigned to it by Regulation 3 of the European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No. 9 of 2010).
Ha	Hectare.
Heavy metals	This term is to be interpreted as set out in "Parameters of Water Quality, Interpretation and Standards" published by the Agency in 2001. ISBN 1-84095-015-3.
Hours of operation	The hours during which the Installation is authorised to be operational.
Hours of waste acceptance	The hours during which the Installation is authorised to accept waste.
IE	Industrial Emissions
ICP	Inductively coupled plasma spectroscopy.
Incident	The following shall constitute as incident for the purposes of this licence: (i) an emergency; (ii) any emission which does not comply with the requirements of this licence; (iii) any exceedance of the daily duty capacity of the waste handling equipment; (iv) any trigger level specified in this licence which is attained or exceeded; (v) any compliance value specified in this licence which is attained or exceeded; and, (vi) any indication that environmental pollution has, or may have, taken place.
Industrial Emissions Directive	Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (Recast).

Industrial waste	As defined in Section 5(1) of the Waste Management Acts 1996 to 2012.
Installation	A stationary technical unit or plant where the activity concerned referred to in the First Schedule of EPA Acts 1992 to 2013 is or will be carried on, and shall be deemed to include any directly associated activity, which has a technical connection with the activity and is carried out on the site of the activity.
Irish Water	Irish Water, Colvill House, 24/26 Talbot Street, Dublin 1.
K	Kelvin.
kPa	Kilopascals.
$L_{Aeq,T}$	This is the equivalent continuous sound level. It is a type of average and is used to describe a fluctuating noise in terms of a single noise level over the sample period (T).
Landfill Directive	Council Directive 1999/31/EC.
$L_{Ar,T}$	The Rated Noise Level, equal to the L_{Aeq} during a specified time interval (T), plus specified adjustments for tonal character and/or impulsiveness of the sound.
Licensee	**Bod Gais Eireann, PO Box 51, Gasworks Road, Cork.**
Liquid waste	Any waste in liquid form and containing less than 2% dry matter.
List I	As listed in the EC Directives 2006/11/EC and 80/68/EEC and amendments.
List II	As listed in the EC Directives 2006/11/EC and 80/68/EEC and amendments.
Local Authority	**Limerick City Council.**
Maintain	Keep in a fit state, including such regular inspection, servicing, calibration and repair as may be necessary to perform its function adequately.
Mass flow limit	An emission limit value expressed as the maximum mass of a substance that can be emitted per unit time.
Mass flow threshold	A mass flow rate above which a concentration limit applies.
Monthly	A minimum of 12 times per year, at intervals of approximately one month.
Night-time	2300 hrs to 0700 hrs.

Noise-sensitive location (NSL)	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
Oil separator	Device installed according to the International Standard I.S. EN 858-2:2003 (Separator system for light liquids, (e.g. oil and petrol) – Part 2: Selection of normal size, installation, operation and maintenance).
PRTR	Pollutant Release and Transfer Register.
Quarterly	At approximately three – monthly intervals.
Sample(s)	Unless the context of this licence indicates to the contrary, the term samples shall include measurements taken by electronic instruments.
Sanitary effluent	Wastewater from Installation toilet, washroom and canteen facilities.
Soil	The top layer of the Earth's crust situated between the bedrock and the surface. The soil is composed of mineral particles, organic matter, water, air and living organisms.
SOP	Standard operating procedure.
Soil	The top layer of the Earth's crust situated between the bedrock and the surface and the soil is composed of mineral particles, organic matter, water, air and living organisms.
Specified emissions	Those emissions listed in *Schedule B: Emission Limits*, of this licence.
Standard method	A National, European or internationally recognised procedure (e.g. I.S. EN, ISO, CEN, BS or equivalent); or an in-house documented procedure based on the above references; a procedure as detailed in the current edition of "Standard Methods for the Examination of Water and Wastewater" (prepared and published jointly by A.P.H.A., A.W.W.A. & W.E.F.), American Public Health Association, 1015 Fifteenth Street, N.W., Washington DC 20005, USA; or an alternative method as may be agreed by the Agency.
Storm water	Rain water run-off from roof and non-process areas.
The Agency	Environmental Protection Agency.
TOC	Total organic carbon.
Trade effluent	Trade effluent has the meaning given in the Water Services Act, 2007.
Trigger level	A parameter value, the achievement or exceedance of which requires certain actions to be taken by the licensee.
Water Services Authority	**Irish Water.**

Waste	Any substance or object which the holder discards or intends or is required to discard.
Weekly	During all weeks of plant operation and, in the case of emissions, when emissions are taking place; with at least one measurement in any one week.
WWTP	Waste water treatment plant.

Decision & Reasons for the Decision

The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of this licence, any emissions from the activity will comply with and will not contravene any of the requirements of Section 83(5) of the Environmental Protection Agency Acts 1992 as amended.

In reaching this decision the Environmental Protection Agency has considered the documentation relating to the licence application (Register Number: W0281-01). This includes supporting documentation received from the applicant, all submissions received from other parties, the report of the Licensing Inspector and the Environmental Impact Assessment (EIA) report contained therein.

It is considered that the Environmental Impact Assessment Report (as included in the Inspectors Report dated 12th June 2014) contains a fair and reasonable assessment of the likely significant effects of the licensed activity on the environment. The assessment as reported is adopted as the assessment of the Agency. Having regard to this assessment, it is considered that the proposed activity, if managed, operated and controlled in accordance with the licence will not result in the contravention of any relevant environmental quality standards or cause environmental pollution.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the proposed activity, individually or in combination with other plans or projects is likely to have a significant effect on a European Site. In this context, particular attention was paid to the European sites at the River Shannon Special Area of Conservation (SAC – site code 002165) and the River Shannon and River Fergus Special Protection Area (SPA – site code 004077) and the Agency considered, for the reasons set out below, that the proposed activity is not directly connected with or necessary to the management of those sites as European Sites and that it can be excluded on the basis of objective scientific information, that the proposed activity, individually or in combination with other plans or projects, will have a significant effect on a European site, and accordingly the Agency determined that an Appropriate Assessment of the proposed activity is not required for those European Sites for the following reasons:

- The installation is not located within a European Site.
- The activity will not result in damage to, or loss of, habitat in a European Site.
- There will be no process discharge from the installation to a European Site.
- The activity will result in the improvement of the quality of the groundwater that flows from the installation to the European Sites.

Part I Schedule of Activities Licensed

In pursuance of the powers conferred on it by the Environmental Protection Agency Acts 1992 as amended, the Agency proposes to grant this Industrial Emissions licence to:

Bord Gais Eireann, PO Box 51, Gas Works Road, Cork

under Section 83(1) of the said Acts to carry on the following activities:

- Class 11.2(b) - The disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day.

- Class 11.1 - The recovery or disposal of waste in a facility, within the meaning of the Act of 1996, which facility is connected or associated with another activity specified in this Schedule in respect of which a licence or revised licence under Part IV is in force or in respect of which a licence under the said Part is or will be required.

at Dock Road, Limerick subject to the following twelve conditions, with the reasons therefor and associated schedules attached thereto.

Part II Schedule of Activities Refused

None of the proposed activities as set out in the licence application have been refused.

Part III Conditions

Condition 1. Scope

1.1 Industrial Emissions Directive activities at this Installation shall be restricted to those listed and described in *Part I Schedule of Activities Licensed*, and shall be as set out in the licence application or as modified under Condition 1.4 of this licence and subject to the conditions of this licence.

1.2 Activities at this Installation shall be limited as set out in *Schedule A: Limitations*, of this licence.

1.3 For the purposes of this licence, the Installation authorised by this licence is the area of land outlined in red on Drawing No. 1021927/WL/002 (Version A) entitled 'Site Plan' of the application. Any reference in this licence to "Installation" shall mean the area thus outlined in red. The licensed activity shall be carried on only within the area outlined.

1.4 No alteration to, or reconstruction in respect of, the activity, or any part thereof, that would, or is likely to, result in

(i) a material change or increase in:

- the nature or quantity of any emission;
- the abatement/treatment or recovery systems;
- the range of processes to be carried out;
- the fuels, raw materials, intermediates, products or wastes generated, or

(ii) any changes in:

- site management, infrastructure or control with adverse environmental significance;

shall be carried out or commenced without prior notice to, and without the agreement of, the Agency.

1.5 The installation shall be controlled, operated and maintained, and emissions shall take place as set out in the licence. All programmes required to be carried out under the terms of this licence become part of this licence

1.6 This licence is for the purpose of IE licensing under the EPA Acts 1992 as amended only and nothing in this licence shall be construed as negating the licensee's statutory obligations or requirements under any other enactments or regulations.

Reason: To clarify the scope of this licence.

Condition 2. Management of the Installation

2.1 Installation Management

2.1.1 The licensee shall employ a suitably qualified and experienced Installation manager who shall be designated as the person in charge. The Installation manager or a nominated, suitably qualified and experienced deputy shall be present at the Installation at all times during its operation or as otherwise required by the Agency.

2.1.2 The licensee shall ensure that personnel performing specifically assigned tasks shall be qualified on the basis of appropriate education, training and experience as required and shall be aware of the requirements of this licence.

2.2 Environmental Management System (EMS)

2.2.1 The licensee shall establish and maintain an Environmental Management System (EMS) in advance of the commencement of the activity. The EMS shall be updated on an annual basis.

2.2.2 The EMS shall include, as a minimum, the following elements:

2.2.2.1 Management and Reporting Structure.

2.2.2.2 Schedule of Environmental Objectives and Targets.

The licensee shall prepare and maintain a Schedule of Environmental Objectives and Targets. The schedule shall, as a minimum, provide for a review of all operations and processes, including an evaluation of practicable options, for energy and resource efficiency, the use of cleaner technology, cleaner production and the prevention, reduction and minimisation of waste and shall include waste reduction targets. The schedule shall include time frames for the achievement of set targets and shall address a five-year period as a minimum. The schedule shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER).

2.2.2.3 Environmental Management Programme (EMP)

The licensee shall, not later than six months from the date of grant of this licence, submit to the Agency for agreement an EMP, including a time schedule, for achieving the Environmental Objectives and Targets prepared under Condition 2.2.2.2. Once agreed the EMP shall be established and maintained by the licensee. It shall include:

- designation of responsibility for targets;
- the means by which they may be achieved;
- the time within which they may be achieved.

The EMP shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER).

A report on the programme, including the success in meeting agreed targets, shall be prepared and submitted to the Agency as part of the AER. Such reports shall be retained on-site for a period of not less than seven years and shall be available for inspection by authorised persons of the Agency.

2.2.2.4 Documentation

(i) The licensee shall establish and maintain an environmental management documentation system which shall be to the satisfaction of the Agency.

(ii) The licensee shall issue a copy of this licence to all relevant personnel whose duties relate to any condition of this licence.

2.2.2.5 Corrective Action

(i) The licensee shall establish procedures to ensure that corrective action is taken should the specified requirements of this licence not be fulfilled. The responsibility and authority for persons initiating further investigation and corrective action in the event of a reported non-conformity with this licence shall be defined.

(ii) Where a breach of one or more of the conditions of this licence occurs, the licensee shall without delay take measures to restore compliance with the conditions of this licence in the shortest possible time.

2.2.2.6 Awareness and Training

The licensee shall establish and maintain procedures for identifying training needs, and for providing appropriate training, for all personnel whose work

can have a significant effect upon the environment. Appropriate records of training shall be maintained.

2.2.2.7 Communications Programme

The licensee shall establish and maintain a Public Awareness and Communications Programme to ensure that members of the public are informed, and can obtain information at the Installation, at all reasonable times, concerning the environmental performance of the Installation.

2.2.2.8 Maintenance Programme

The licensee shall establish and maintain a programme for maintenance of all plant and equipment based on the instructions issued by the manufacturer/supplier or installer of the equipment. Appropriate record keeping and diagnostic testing shall support this maintenance programme. The licensee shall clearly allocate responsibility for the planning, management and execution of all aspects of this programme to appropriate personnel (see Condition 2.1 above).

2.2.2.9 Efficient Process Control

The licensee shall establish and maintain a programme to ensure there is adequate control of processes under all modes of operation. The programme shall identify the key indicator parameters for process control performance, as well as identifying methods for measuring and controlling these parameters. Abnormal process operating conditions shall be documented, and analysed to identify any necessary corrective action.

Reason: ***To make provision for management of the activity on a planned basis having regard to the desirability of ongoing assessment, recording and reporting of matters affecting the environment.***

Condition 3. Infrastructure and Operation

3.1 The licensee shall establish and maintain, for each component of the Installation, all infrastructure referred to in this licence in advance of the commencement of the licensed activities in that component, or as required by the conditions of this licence. Infrastructure specified in the application that relates to the environmental performance of the installation and is not specified in the licence, shall be installed in accordance with the schedule submitted in the application.

3.2 Installation Notice Board

3.2.1 The licensee shall, within one month of the date of grant of this licence, provide an Installation Notice Board on the installation so that it is legible to persons outside the main entrance to the installation. The minimum dimensions of the board shall be 1200 mm by 750 mm. The notice board shall be maintained thereafter.

3.2.2 The board shall clearly show:

(i) the name and telephone number of the installation;

(ii) the normal hours of operation;

(iii) the name of the licence holder;

(iv) an emergency out of hours contact telephone number;

(v) the licence reference number; and

(vi) where environmental information relating to the installation can be obtained.

3.2.3 A plan of the installation clearly identifying the location of each storage and treatment area shall be displayed as close as is possible to the entrance to the installation. The plan shall be displayed on a durable material such that is legible at all times. The plan shall be replaced as material changes to the installation are made.

3.3 Facility Security

3.3.1 Adequate security shall be maintained at the facility.

3.3.2 There shall be no unauthorised public access to the facility.

3.3.3 Gates shall be locked shut when the facility is unsupervised.

3.3 Installation Roads

Effective site roads shall be provided and maintained to ensure the safe movement of vehicles within the Installation.

3.4 Wheel Cleaning

3.4.1 The licensee shall provide and maintain a wheel cleaner at the Installation.

3.4.2 The wheel cleaner shall be used by all vehicles leaving the Installation as required to ensure that no wastewater, waste or storm water is carried off-site. All water from the wheel cleaning area shall be directed to a vehicle wash water interceptor sump.

3.4.3 Vehicle wash water in the interceptor sump shall be treated on-site prior to discharge to sewer or sent off-site for treatment at an authorised facility.

3.4.4 The wheel cleaner **interceptor sump** shall be inspected on a **weekly** basis. **Silt, stones and other accumulated material shall be removed as required and sent off-site for disposal.**

3.5 Remediation Infrastructure

3.5.1 The licensee shall install and maintain adequate infrastructure for the treatment of groundwater and soil.

3.5.2 The licensee shall have regard to the following when choosing and/or designing remediation infrastructure:

(i) the energy efficiency of the infrastructure; and,
(ii) the environmental impact of eventual decommissioning.

3.6 DNAPL recovery and water treatment units shall be operated in designated areas protected against spillage and leachate run-off.

3.7 The licensee shall install on all emission points such sampling points or equipment, including any data-logging or other electronic communication equipment, as may be required by the Agency. All such equipment shall be consistent with the safe operation of all sampling and monitoring systems.

3.8 In the case of composite sampling of aqueous emissions from the operation of the Installation, a separate composite sample or homogeneous sub-sample (of sufficient volume as advised) shall be retained as required for use by the EPA **or the Water Services Authority.**

3.9 The licensee shall clearly label and provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency. The requirement with regard to off-site points is subject to the prior agreement of the landowner(s) concerned.

3.10 Tank, Container and Drum Storage Areas

3.10.1 All tank, container and drum storage areas shall be rendered impervious to the materials stored therein. Bunds shall be designed having regard to Agency guidelines 'Storage and Transfer of Materials for Scheduled Activities' (2004).

3.10.2 All tank and drum storage areas shall, as a minimum, be bunded, either locally or remotely, to a volume not less than the greater of the following:

(i) 110% of the capacity of the largest tank or drum within the bunded area; or

(ii) 25% of the total volume of substance that could be stored within the bunded area.

3.10.3 All drainage from bunded areas shall be treated as contaminated unless it can be demonstrated to be otherwise. All drainage from bunded areas shall be diverted for collection and safe disposal, unless it can be deemed uncontaminated and does not

exceed the trigger levels established for storm water emissions under Condition 6.16.2.

3.10.4 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.

3.10.5 All tanks, containers and drums shall be labelled to clearly indicate their contents.

3.11 The licensee shall have in storage an adequate supply of containment booms and/or suitable absorbent material to contain and absorb any spillage at the Installation. Once used, the absorbent material shall be disposed of at an appropriate facility.

3.12 Storm-water Run-off

The licensee shall, **prior to commencement of licensed activities,** install and maintain silt traps and oil separators at the Installation:

(i) Silt traps to ensure that all storm water discharges, other than from roofs, from the Installation pass through a silt trap in advance of discharge;

(ii) An oil separator on the storm water discharge from yard areas.

The silt traps and separator shall be in accordance with I.S. EN-858-2: 2003 (separator systems for light liquids) for Class I full retention.

3.13 Fire-water Retention

3.13.1 The licensee shall carry out a risk assessment to determine if the activity should have a fire-water retention facility. The licensee shall submit the assessment and a report to the Agency on the findings and recommendations of the assessment within six months of the date of grant of this licence.

3.13.2 In the event that a significant risk exists for the release of contaminated fire-water, the licensee shall, based on the findings of the risk assessment, prepare and implement, with the agreement of the Agency, a suitable risk management programme. The risk management programme shall be fully implemented within three months of date of notification by the Agency.

3.13.3 In the event of a fire or a spillage to storm water, the site storm water shall be diverted for collection. The licensee shall examine, as part of the response programme in Condition 3.12.2 above, the provision of automatic diversion of storm water for collection.

3.13.4 The licensee shall have regard to the Environmental Protection Agency Draft Guidance Note to Industry on the Requirements for Fire-Water Retention Facilities when implementing Conditions 3.12.1, 3.12.2 and 3.12.3 above.

3.14 All pump sumps, storage tanks or other treatment plant chambers from which spillage of environmentally significant materials might occur in such quantities as are likely to breach local or remote containment or separators, shall be fitted with high liquid level alarms (or oil detectors as appropriate) within six months from the date of grant of this licence.

3.15 Pipework

3.15.1 The provision of a catchment system to collect any leaks from flanges and valves of all over-ground pipes used to transport material other than water shall be examined. This shall be incorporated into a Schedule of Environmental Objectives and Targets set out in Condition 2. of this licence for the reduction in fugitive emissions.

3.15.2 The licensee shall prior to the commencement of licensed activities at the installation label all pipework so as to differentiate between fuels, process water and waste water. The labelling shall include the direction of flow.

3.16 Groundwater Boreholes

Effective groundwater management infrastructure shall be provided and maintained at the Installation during construction, operation, restoration and aftercare at the Installation. As a minimum, the infrastructure shall be capable of the following:

(i) The protection of underlying bedrock aquifer from pollution by the waste activities; and,

(ii) The protection of buildings from any adverse effects caused by groundwater flow changes or groundwater contamination arising from the Installation.

3.17 The licensee shall, within three months of the date of grant of this licence, install in a prominent location on the site a wind sock, or other wind direction indicator, which shall be visible from the public roadway outside the site.

Reason: ***To provide for appropriate operation of the Installation to ensure protection of the environment.***

Condition 4. Interpretation

4.1 Emission limit values for emissions to sewer in this licence shall be interpreted in the following way:

4.1.1 Continuous Monitoring

(i) No flow value shall exceed the specific limit.

(ii) No pH value shall deviate from the specified range.

(iii) No temperature value shall exceed the limit value.

4.1.2 Composite Sampling

(i) No pH value shall deviate from the specified range.

(ii) For parameters other than pH and flow, eight out of ten consecutive composite results, based on flow proportional composite sampling, shall not exceed the emission limit value. No individual results similarly calculated shall exceed 1.2 times the emission limit value.

4.1.3 Discrete Sampling

For parameters other than pH and temperature, no grab sample value shall exceed 1.2 times the emission limit value.

4.2 Where the ability to measure a parameter is affected by mixing before emission, then, with agreement from the Agency, the parameter may be assessed before mixing takes place.

4.3 Noise

Noise from the Installation shall not give rise to sound pressure levels ($L_{Aeq,\ T}$) measured at the boundary of the Installation which exceed the limit value(s).

4.4 Dust and Particulate Matter

Dust and particulate matter from the activity shall not give rise to deposition levels which exceed the limit value(s).

Reason: ***To clarify the interpretation of limit values fixed under the licence.***

Condition 5. Emissions

5.1 No specified emission from the Installation shall exceed the emission limit values set out in *Schedule B: Emission Limits*, of this licence. There shall be no other emissions of environmental significance.

5.2 No emissions, including odours, from the activities carried on at the site shall result in an impairment of, or an interference with amenities or the environment beyond the Installation boundary or any other legitimate uses of the environment beyond the Installation boundary.

5.3 Treated groundwater that is not recharged to ground or discharged to sewer at the Installation shall be removed off-site for treatment at an authorised facility.

5.4 The licensee shall ensure that all or any of the following:

- Mud
- Dust
- Litter
- Vermin

associated with the activity do not result in an impairment of, or an interference with, amenities or the environment at the Installation or beyond the Installation boundary or any other legitimate uses of the environment beyond the Installation boundary. Any method used by the licensee to control or prevent any such impairment/interference shall not cause environmental pollution.

5.5 Emissions to Sewer

5.5.1 Prior to the commencement of the discharge to sewer the licensee shall carry out the following:

(i) Install a composite sampler on the discharge point. All samples thereafter shall be collected on a 24-hour flow proportional composite sampling basis.

(ii) Provide a map to the Water Services Authority detailing the locations of the discharge point and the sampling point on the discharge.

5.5.2 The licensee shall within one month of the appointment of a remediation contractor submit the following information to the Water Services Authority:

(i) A description of the measures that will be employed at the Installation to ensure that the volumetric limit on the discharge to sewer as set in *Schedule B.1 Emissions to Sewer* of this licence will not be exceeded.

(ii) A description of the analytical methods that will be used to monitor the discharge to sewer as required in *Schedule C.2.2 Monitoring of Emissions to Sewer* of this licence.

5.5.3 Unless otherwise agreed by the Agency there shall be no discharge to sewer of untreated waste water.

5.5.4 The licensee shall at no time discharge or permit to be discharged into the sewer any liquid matter or thing that is or may be liable to set or congeal at average sewer temperature or is capable of giving off any inflammable or explosive gas or any acid, alkali or other substance in sufficient concentration to cause corrosion to sewer pipes, penstock and sewer fittings or the general integrity of the sewer.

Reason: ***To provide for the protection of the environment by way of control and limitation of emissions and to provide for the requirements of the Water Services Authority in accordance with Section 99E of the EPA Acts 1992 as amended.***

Condition 6. Control and Monitoring

6.1 Test Programme

6.1.1 The licensee shall prepare to the satisfaction of the Agency, a test programme for abatement equipment installed to abate emissions to atmosphere. This programme shall be submitted to the Agency in advance of implementation.

6.1.2 The programme, following agreement with the Agency, shall be completed within three months of the commencement of operation of the abatement equipment.

6.1.3 The criteria for the operation of the abatement equipment as determined by the test programme, shall be incorporated into the standard operating procedures.

6.1.4 The test programme shall as a minimum:

(i) establish all criteria for operation, control and management of the abatement equipment to ensure compliance with the emission limit values specified in this licence; and

(ii) assess the performance of any monitors on the abatement system and establish a maintenance and calibration programme for each monitor.

6.1.5 A report on the test programme shall be submitted to the Agency within one month of completion.

6.2 The licensee shall carry out such sampling, analyses, measurements, examinations, maintenance and calibrations as set out below and as in accordance with *Schedule C: Control & Monitoring,* of this licence.

6.2.1 Analyses shall be undertaken by competent staff in accordance with documented operating procedures.

6.2.2 Such procedures shall be assessed for their suitability for the test matrix and performance characteristics shall be determined.

6.2.3 Such procedures shall be subject to a programme of Analytical Quality Control using control standards with evaluation of test responses.

6.2.4 Where any analysis is sub-contracted it shall be to a competent laboratory.

6.3 The licensee shall ensure that:

(i) sampling and analysis for all parameters listed in the Schedules to this licence; and

(ii) any reference measurements for the calibration of automated measurement systems;

shall be carried out in accordance with CEN-standards. If CEN standards are not available, ISO, national or international standards that will ensure the provision of data of an equivalent scientific quality shall apply.

6.4 All automatic monitors and samplers shall be functioning at all times (except during maintenance and calibration) when the activity is being carried on unless alternative sampling or monitoring has been agreed in writing by the Agency for a limited period. In the event of the malfunction of any continuous monitor, the licensee shall contact the Agency as soon as practicable, and alternative sampling and monitoring facilities shall be put in place. The use of alternative equipment, other than in emergency situations, shall be as agreed by the Agency.

6.5 Monitoring and analysis equipment shall be operated and maintained as necessary so that monitoring accurately reflects the emission/discharge (or ambient conditions where that is the monitoring objective).

6.6 The licensee shall ensure that groundwater monitoring well sampling equipment is available and/or installed on-site and is fit for purpose at all times. The sampling equipment shall be to Agency specifications.

6.7 All treatment/abatement and emission control equipment shall be calibrated and maintained in accordance with the instructions issued by the manufacturer/supplier or installer.

6.8 The frequency, methods and scope of monitoring, sampling and analyses, as set out in this licence, may be amended with the agreement of the Agency following evaluation of test results.

6.9 The licensee shall prepare a programme, to the satisfaction of the Agency, for the identification and reduction of fugitive emissions using an appropriate combination of best available techniques. This programme shall be included in the Environmental Management Programme.

6.10 The integrity and water tightness of all bunding structures and containers and their resistance to penetration by water or other materials carried or stored therein shall be tested and demonstrated by the licensee prior to use and within **three** months of the date of grant of this licence. This testing shall be carried out by the licensee at least once every three years thereafter and reported to the Agency on each occasion. This testing shall be carried out in

accordance with any guidance published by the Agency. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.

6.11 The drainage system (i.e., gullies, manholes, any visible drainage conduits and such other aspects as may be agreed) and bunds, silt traps and oil separators shall be inspected weekly and desludged as necessary. All sludge and drainage from these operations shall be collected for safe disposal. The drainage system, bunds, silt traps and oil interceptors shall be properly maintained at all times.

6.12 An inspection for leaks on all flanges and valves on over-ground pipes used to transport materials other than water shall be carried out weekly. A log of such inspections shall be maintained.

6.13 Noise, Odour and Dust Control

6.13.1 The licensee shall prior to the commencement of waste activities at the installation develop and maintain an Odour Management Plan. The Odour Management Plan shall include measures to prevent odour impact in the vicinity of the installation. The Odour Management Plan shall be to the satisfaction of the Agency.

6.13.2 The licensee shall provide and maintain adequate measures for the control of noise and dust, including fugitive dust emissions, from the installation.

6.14 Storm water run-off

6.14.1 A visual examination of the storm water discharges shall be carried out daily. A log of such inspections shall be maintained.

6.14.2 The licensee shall, prior to the commencement of licensed activities, establish suitable trigger levels for pH, **ammonia and organic compounds and** COD in storm water discharges, such that storm waters exceeding these levels will be diverted for retention and suitable disposal. The licensee shall have regard to the Environmental Protection Agency "Guidance on the setting of trigger values for storm water discharges to off-site surface waters at EPA IPPC and Waste licensed facilities" when establishing the suitable trigger levels.

6.15 Noise monitoring

The licensee shall carry out a noise survey of the site operations **every six months from the date of commencement of activities at the installation or at a frequency as may be required by the Agency**. The survey programme shall be undertaken in accordance with the methodology specified in the 'Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)' as published by the Agency.

6.16 Pollutant Release and Transfer Register (PRTR)

The licensee shall prepare and report a PRTR for the site. The substance and/or wastes to be included in the PRTR shall be as agreed by the Agency each year by reference to EC Regulations No. 166/2006 concerning the establishment of the European Pollutant Release and Transfer Register. The PRTR shall be prepared in accordance with any relevant guidelines issued by the Agency and shall be submitted electronically in specified format and as part of the AER.

6.17 The licensee shall, within six months of the date of grant of this licence, develop and establish a Data Management System for collation, archiving, assessing and graphically presenting the monitoring data generated as a result of this licence.

6.18 The licensee shall permit authorised persons of the Agency and the Water Services Authority, to inspect, examine and test, at all reasonable times, any works and apparatus installed in connection with the discharge to sewer and to take samples of the discharge to sewer.

Reason: ***To provide for the protection of the environment by way of treatment and monitoring of emissions and to provide for the requirements of the Water Services Authority in accordance with Section 99E of the EPA Acts 1992 to 2013.***

Condition 7. Resource Use and Energy Efficiency

7.1 The licensee shall carry out an audit of the energy efficiency of the site within one year of the date of grant of this licence. The audit shall be carried out in accordance with the guidance published by the Agency, "Guidance Note on Energy Efficiency Auditing". The energy efficiency audit shall be repeated at intervals as required by the Agency.

7.2 The audit shall identify all practicable opportunities for energy use reduction and efficiency and the recommendations of the audit will be incorporated into the Schedule of Environmental Objectives and Targets under Condition 2 above.

7.3 The licensee shall identify opportunities for reduction in the quantity of water used on site including recycling and reuse initiatives, wherever possible. Reductions in water usage shall be incorporated into Schedule of Environmental Objectives and Targets.

7.4 The licensee shall undertake an assessment of the efficiency of use of raw materials in all processes, having particular regard to the reduction in waste generated. The assessment should take account of best international practice for this type of activity. Where improvements are identified, these shall be incorporated into the Schedule of Environmental Objectives and Targets.

Reason: To provide for the efficient use of resources and energy in all site operations.

Condition 8. Materials Handling

8.1 The licensee shall ensure that waste generated in the carrying on of the activity shall be prepared for re-use, recycling or recovery or, where that is not technically or economically possible, disposed of in a manner which will prevent or minimise any impact on the environment.

8.2 Disposal or recovery of waste on-site shall only take place in accordance with the conditions of this licence and in accordance with the appropriate National and European legislation and protocols.

8.3 Waste sent off-site for recovery or disposal shall be transported only by an authorised waste contractor. The waste shall be transported from the site of the activity to the site of recovery/disposal only in a manner that will not adversely affect the environment and in accordance with the appropriate National and European legislation and protocols.

8.4 The licensee shall ensure that, in advance of transfer to another person, waste shall be classified, packaged and labelled in accordance with National, European and any other standards which are in force in relation to such labelling.

8.5 The loading and unloading of materials shall be carried out in designated areas protected against spillage and leachate run-off.

8.6 Waste shall be stored in designated areas, protected as may be appropriate against spillage and leachate run-off. The waste shall be clearly labelled and appropriately segregated.

8.7 The licensee shall **within one month of the appointment of a remediation contractor** develop and maintain detailed written procedures for the treatment and management of all wastes at the Installation.

8.8 No waste classified as green list waste in accordance with the EU Shipment of Waste Regulations (Council Regulation EEC No. 1013/2006, as may be amended) shall be consigned for recovery without the agreement of the Agency.

8.9 Unless approved in writing, in advance, by the Agency the licensee is prohibited from mixing a hazardous waste of one category with a hazardous waste of another category or with any other non-hazardous waste.

8.10 The licensee shall neither import waste into the State nor export waste out of the State except in accordance with the relevant provisions of Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14th June 2006 on shipments of waste and associated national regulations.

Reason: ***To provide for the appropriate handling of material and the protection of the environment.***

Condition 9. Accident Prevention and Emergency Response

9.1 The licensee shall, in advance of the commencement of the activity, ensure that a documented Accident Prevention Procedure is in place that addresses the hazards on-site, particularly in relation to the prevention of accidents with a possible impact on the environment. This procedure shall be reviewed annually and updated as necessary.

9.2 The licensee shall, in advance of the commencement of the activity, ensure that a documented Emergency Response Procedure is in place that addresses any emergency situation which may originate on-site. This procedure shall include provision for minimising the effects of any emergency on the environment. This procedure shall be reviewed annually and updated as necessary.

9.3 Incidents

9.3.1 In the event of an incident the licensee shall immediately:

(i) carry out an investigation to identify the nature, source and cause of the incident and any emission arising therefrom;

(ii) isolate the source of any such emission;

(iii) evaluate the environmental pollution, if any, caused by the incident;

(iv) identify and execute measures to minimise the emissions/malfunction and the effects thereof;

(v) identify the date, time and place of the incident;

(vi) notify the Agency and other relevant authorities.

9.3.2 Where an incident or accident that significantly affects the environment occurs, the licensee shall, without delay, take measures to limit the environmental consequences of the incident or accident and to prevent further incident or accident.

Reason: ***To provide for the protection of the environment.***

Condition 10. Closure, Restoration and Aftercare Management

10.1 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, decommission, render safe or remove for disposal/recovery any soil, subsoil, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may result in environmental pollution.

10.2 Closure, Restoration and Aftercare Management Plan (CRAMP)

10.2.1 The licensee shall, **prior to the commencement of licensed activities at the installation,** prepare a fully detailed and costed plan for the closure, restoration and

aftercare of the site or part thereof. The plan shall be to the satisfaction of the Agency.

10.2.2 The plan shall be reviewed annually and proposed amendments thereto notified to the Agency for agreement as part of the AER. No amendments may be implemented without the agreement of the Agency.

10.2.3 The licensee shall have regard to the Environmental Protection Agency's Guidance on Assessing and Costing Environmental Liabilities (2014) and, as appropriate, Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision (2006) and the baseline report when implementing Condition 10.2.1 above.

10.3 The Closure, Restoration and Aftercare Management Plan shall include, as a minimum, the following:

(i) a scope statement for the plan;

(ii) the criteria that define the **successful remediation of the installation and** decommissioning of the activity or part thereof, **and** which **will** ensure minimum impact on the environment;

(iii) a programme to achieve the stated criteria;

(iv) a test programme to demonstrate the successful implementation of the Plan; and

(v) details of the costings for the plan and the financial provisions to underwrite those costs.

10.4 Validation Report

A final validation report confirming the completion of the CRAMP for all or part of the site as necessary shall be submitted to the Agency within three months of execution of the plan. The licensee shall carry out such tests, investigations or submit certification, as requested by the Agency, to confirm that there is no continuing risk to the environment.

Reason: ***To make provision for the proper closure of the activity ensuring protection of the environment.***

Condition 11. Notification, Records and Reports

11.1 The licensee shall notify the Agency, in a format as may be specified by the Agency, one month in advance of the intended date of commencement of the Scheduled Activity.

11.2 The licensee shall notify the Agency, in a format as may be specified by the Agency, as soon as practicable after the occurrence of any of the following:

(i) an incident or accident that significantly affects the environment;

(ii) any release of environmental significance to atmosphere from any potential emissions point including bypasses;

(iii) any breach of one or more of the conditions attached to this licence;

(iv) any malfunction or breakdown of key control equipment or monitoring equipment set out in *Schedule C: Control and Monitoring*, of this licence which is likely to lead to loss of control of the abatement system; and

(v) any incident with the potential for environmental contamination of surface water or groundwater, or posing an environment threat to air or land, or requiring an emergency response by the Local Authority.

The licensee shall include as part of the notification, date and time of the incident, summary details of the occurrence, and where available, the steps taken to minimise any emissions.

11.3 In the event of any incident which relates to discharges to sewer having taken place, the licensee shall notify the Local and Water Services Authority as soon as practicable after such an incident.

11.4 The licensee shall make a record of any notification made under Condition 11.2. This record shall include details of the nature, extent, and impact of, and circumstances giving rise to, the incident or accident. The record shall include all corrective actions taken to manage the incident or accident, minimise wastes generated and the effect on the environment and to avoid recurrence. In the case of a breach of a condition, the licensee shall take measures to restore compliance. The licensee shall, as soon as practicable following notification, submit the incident record to the Agency.

11.5 The licensee shall record all complaints of an environmental nature related to the operation of the activity. Each such record shall give details of the date and time of the complaint, the name of the complainant (if provided), and give details of the nature of the complaint. A record shall also be kept of the response made in the case of each complaint.

11.6 The licensee shall record all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence and all other such monitoring which relates to the environmental performance of the Installation.

11.7 The licensee shall as a minimum keep the following documents at the site:

(i) the licence(s) relating to the Installation;

(ii) the current EMS for the Installation;

(iii) the previous year's AER for the Installation;

(iv) records of all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence and all other such monitoring which relates to the environmental performance of the Installation;

(v) relevant correspondence with the Agency;

(vi) up-to-date site drawings/plans showing the location of key process and environmental infrastructure, including monitoring locations and emission points;

(vii) up-to-date Standard Operational Procedures for all processes, plant and equipment necessary to give effect to this licence or otherwise to ensure that standard operation of such processes, plant or equipment does not result in unauthorised emissions to the environment;

(viii) any elements of the licence application referenced in this licence.

(ix) records of all training undertaken by Installation staff;

(x) results from all integrity tests of bunds and other structures and any maintenance or remedial work arising from them;

(xi) the names and qualifications of all persons who carry out all sampling and monitoring as required by this licence and who carry out the interpretation of the results of such sampling and monitoring;

This documentation shall be available to the Agency for inspection at all reasonable times.

11.8 The licensee shall submit to the Agency, by the 31st March of each year, an AER covering the previous calendar year. This report, which shall be to the satisfaction of the Agency, shall include as a minimum the information specified in *Schedule D: Annual Environmental Report*, of this licence and shall be prepared in accordance with any relevant guidelines issued by the Agency.

11.9 The licensee shall as part of the AER submit a report on the treatment efficiencies achieved in the DNAPL recovery/wastewater treatment units.

11.10 A full record, which shall be open to inspection by authorised persons of the Agency at all times, shall be kept by the licensee on matters relating to the waste management operations and practices at this site. This record shall be as a minimum contain details of the following:

(i) the tonnages and EWC Code for the waste sent off-site for disposal/recovery;

(ii) the names of the agent and carrier of the waste, and their waste collection permit details, if required (to include issuing authority and vehicle registration number);

(iii) details of the ultimate disposal/recovery destination facility for the waste and its appropriateness to accept the consigned waste stream, to include its permit/licence details and issuing authority, if required;

(iv) written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site;

(v) details of all waste consigned abroad for Recovery and classified as 'Green' in accordance with the EU Shipment of Waste Regulations (Council Regulation EEC No. 1013/2006, as may be amended). The rationale for the classification must form part of the record;

(vi) details of any rejected consignments;

(vii) details of any approved waste mixing; and,

(viii) the tonnage and EWC Code for the waste materials recovered/disposed on-site.

11.11 The licensee shall submit reports as required by the conditions of this licence to the Agency's Headquarters in Wexford, or to such other Agency office as may be specified by the Agency.

11.12 The licensee shall on a quarterly basis submit to the Water Services Authority a summary of the monitoring results for the discharge to sewer.

11.13 All reports shall be certified accurate and representative by the Installation manager or a nominated, suitably qualified and experienced deputy.

Reason: To provide for the collection and reporting of adequate information on the activity.

Condition 12. Financial Charges and Provisions

12.1 Agency Charges

12.1.1 The licensee shall pay to the Agency an annual contribution of **€13,366** or such sum as the Agency from time to time determines, having regard to variations in the extent of reporting, auditing, inspection, sampling and analysis or other functions carried out by the Agency, towards the cost of monitoring the activity as the Agency considers necessary for the performance of its functions under the Environmental Protection Agency Acts 1992 to 2013. The first payment shall be a pro-rata amount for the period from the date of commencement of enforcement to the 31st day of December, and shall be paid to the Agency within one month from the date of grant of the licence. In subsequent years the licensee shall pay to the Agency such revised annual contribution as the Agency shall from time to time consider necessary to enable performance by the Agency of its relevant functions under the Environmental Protection Agency Acts 1992 to 2013. and all such payments shall be made within one month of the date upon which demanded by the Agency.

12.1.2 In the event that the frequency or extent of monitoring or other functions carried out by the Agency needs to be increased, the licensee shall contribute such sums as determined by the Agency to defray its costs in regard to items not covered by the said annual contribution.

12.2 Water Services Charges

The licensee shall pay to Irish Water such sum as may be determined from time to time, having regard to the variations in the cost of providing drainage and the variation in effluent reception and treatment costs. Payment shall be made on demand.

12.3 Environmental Liabilities

12.3.1 The licensee shall as part of the AER, provide an annual statement as to the measures taken or adopted at the site in relation to the prevention of environmental damage, and the financial provisions in place in relation to the underwriting of costs for remedial actions following anticipated events (including closure, decommissioning and aftercare**)** or accidents/incidents, as may be associated with the carrying on of the activity.

12.3.2 The licensee shall arrange for the revision, by an independent and appropriate qualified consultant, of a comprehensive and fully costed Environmental Liabilities Risk Assessment (ELRA) which addresses the liabilities from past and present

activities. The assessment shall include those liabilities and costs identified in Condition 10 for execution of the CRAMP. A report on this assessment shall be agreed by the Agency in advance of the commencement of the activity. The ELRA shall be reviewed and updated as necessary to reflect any significant change on site, and in any case every three years following initial agreement. Review results are to be notified as part of the AER.

12.3.3 As part of the measures identified in Condition 12.3.1 the licensee shall, to the satisfaction of the Agency and prior to commencement of licensed activities at the installation, maintain financial provision to cover any liabilities associated with the operation (including closure, decommissioning and aftercare). The amount of indemnity held shall be reviewed and revised as necessary, but at least annually. Proof of renewal or revision of such financial indemnity shall be included in the annual 'Statement of Measures' report identified in Condition 12.3.1.

12.3.4 The licensee shall revise the cost of closure, decommissioning and aftercare annually and any adjustments shall be reflected in the financial provision made and under Conditions 12.3.3.

12.3.5 The licensee shall have regard to the Environmental Protection Agency's Guidance on Assessing and Costing Environmental Liabilities (2014) and, as appropriate, Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision (2006) and the baseline report when implementing Conditions 12.3.2, 12.3.3, 12.3.4 and 12.3.5 above.

Reason: ***To provide for adequate financing for monitoring and financial provisions for measures to protect the environment and to provide for the requirements of the Water Services Authority in accordance with Section 99E of the EPA Acts 1992 as amended.***

SCHEDULE A: Limitations

A.1 Waste Processes

The following waste related processes are authorised:

- Treatment of contaminated waste water.
- Storage of waste prior to transfer off-site for disposal or recovery.
- Recovery of waste soil and crushed concrete/bricks for backfill and capping at the installation.

No additions to these processes are permitted unless agreed by with the Agency.

SCHEDULE B: Emission Limits

B.1 Emissions to Sewer

Emission Point Reference No: SE1
Location: To be agreed by the Agency
Volume to be emitted: Maximum in any one day: 100 m^3

Maximum rate per hour: 10 m^3

Parameter	Emission Limit Value
Temperature	25 ^oC (max)
pH	6 - 10
Toxicity	30 TU
	mg/1
BOD	50
COD	300
Nitrates (as N)	10
Sulphate (as SO_4)	500
Phenols (as C_6H_5OH)	3
Arsenic	0.6
Mercury	0.01
Cadmium	0.05
Cyanide (total, free)	3
Lead	0.5
Zinc	10
Copper	5
Chromium	0.5
Total PAH	0.2
Mineral Oils	50

B.3 Noise Emissions

Daytime dB $L_{Ar,T}$ (30 minutes)	Evening time dB $L_{Ar,T}$ (30 minutes)	Night-time dB $L_{Aeq,T}$ (15-30 minutes)
55	50	45 Note 1

Note 1: There shall be no clearly audible tonal component or impulsive component in the noise emission from the activity at any noise-sensitive location.

B.4 Dust Deposition Limits

Level (mg/m^2 /day) Note 1
350

Note 1: 30 day composite sample with the results expressed as mg/m^2 /day.

SCHEDULE C: Control & Monitoring

C.1.1 Control of Emissions to Air

Emission Point Reference No: To be agreed with the Agency
Description of Treatment: Carbon filtration
Dust filtration

Control Parameter	Monitoring	Key Equipment Note 1
Dust filter (on stabilisation plant)	Back pressure	Pressure meter
Carbon filter	Flow	Flow meter

Note 1: The licensee shall maintain appropriate access to standby and/or spares to ensure the operation of the abatement system.

C.1.2 Monitoring of Emissions to Air

Emission Point Reference No: To be agreed with the Agency

Parameter	Monitoring Frequency	Analysis Method/Technique
VOCs Note 1	Quarterly	Standard method

Note 1: Volatile organic compounds - Benzene, toluene, xylene isomers, 2-butanone, ethyl benzene and naphthalene.

C.2.1 Control of Emissions to Sewer

Emission Point Reference No: SE1
Description of Treatment: DNAPL recovery and water treatment
Equipment: Oil separator
Sand filter
Activated carbon unit

Control Parameter	Monitoring	Key Equipment [Note 1]
Groundwater flow	Flow	Continuous flow meter
Volume of recovered coal tar	Volume	Level meter
Back pressure	Pressure	Pressure meter

Note 1: The licensee shall maintain appropriate access to standby and/or spares to ensure the operation of the abatement system.

C.2.2 Monitoring of Emissions to Sewer

Emission Point Reference No: SE1

Parameter	Monitoring Frequency [Note 1]	Analysis Method /Technique
Flow	Continuous	On-line flow meter with recorder
Temperature	Continuous	On-line temperature probe with recorder
pH	Continuous	On-line pH electrode/meter and recorder
Dissolved oxygen	Continuous	On-line DO meter with recorder
Conductivity	Continuous	On-line conductivity meter with recorder
BOD	Daily when discharge occurs	Standard Method
COD	Daily when discharge occurs	Standard Method
Nitrates (as N)	Daily when discharge occurs	Standard Method
Sulphate (as SO_4)	Daily when discharge occurs	Standard Method
Phenols (as C_6H_5OH)	Daily when discharge occurs	Standard Method
Arsenic	Daily when discharge occurs	Standard Method
Mercury	Daily when discharge occurs	Standard Method
Cadmium	Daily when discharge occurs	Standard Method
Cyanide (total, free)	Daily when discharge occurs	Standard Method
Lead	Daily when discharge occurs	Standard Method
Zinc	Daily when discharge occurs	Standard Method
Chromium	Daily when discharge occurs	Standard Method
Total PAH	Daily when discharge occurs	Standard Method
Mineral Oils	Daily when discharge occurs	Standard Method
Toxicity [Note 2]	When required by the Agency	Standard Method

Note 1: The frequency of monitoring may be amended as per Condition 6.8 of this licence.
Note 2: The number of toxic units (Tu) = 100/x hour EC/LC_{50} in percentage vol/vol so that higher Tu values reflect grater levels of toxicity. For test regimes where species death is not easily detected, immobilisation is considered equivalent to death.

C.3 Monitoring of Storm Water Emissions

Emission Point Reference No: SW1 [Note1]

Parameter	Monitoring Frequency	Analysis Method/Technique
pH	Weekly	Standard method
COD	Weekly	Standard method
Visual Inspection	Daily	Sample and examine for colour and odour.

Note 1: At a point prior to discharge to the sewer.

C.4 Noise Monitoring

Location: As listed in the EIS or at additional locations as may be agreed by the Agency

Period	Minimum Survey Duration
Daytime	4 hour survey with a minimum of 3 sampling periods at each noise monitoring location.[Note 2]
Evening-time	2 hours survey with a minimum of 1 sampling period at each noise monitoring location.
Night-time [Note 1]	3 hour survey with a minimum of 2 sampling periods at each noise monitoring location.

Note 1: Night-time measurements should be made between 2300hrs and 0400hrs, Sunday to Thursday, with 2300hrs being the preferred start time.

Note 2: Sampling period is to be the time period T stated within the relevant licence. Typically this will be either 15 minutes or 30 minutes in duration. This applies to day, evening and night time periods.

C.5 Ambient Monitoring

Air Monitoring

Locations: As listed in the EIS or at additional locations as may be agreed by the Agency

Parameter	Monitoring Frequency	Analysis Method/Technique
Dust deposition	Monthly	VDI 2119 (Bergerhoff method)
VOCs [Note 1]	Quarterly	Standard method

Note 1: Volatile organic compounds - Benzene, toluene, xylene isomers, 2-butanone, ethyl benzene and naphthalene.

C.6 Soil and Groundwater Monitoring [Note 1]

Locations: As agreed by the Agency

Parameter			
Arsenic	Benzene	TPH Aliphatics (C5-6)	TPH Aromatics (C5-7)
Cyanide	Toluene	TPH Aliphatics (C6-8)	TPH Aromatics (C7-8)
Copper	Ethylbenzene	TPH Aliphatics (C8-10)	TPH Aromatics (C8-10)
Chromium	Xylene	TPH Aliphatics (C10-12)	TPH Aromatics (C10-12)
Nickel	Naphthalene	TPH Aliphatics (C12-16)	TPH Aromatics (C12-16)
Selenium	Fluoranthene		TPH Aromatics (C16-21)
Ammonium	Phenols		TPH Aromatics (C21-35)
Zinc			

Note 1: Standard method at a quarterly frequency

SCHEDULE D: Annual Environmental Report

Annual Environmental Report Content [Note 1]
Emissions from the installation.
Waste management record.
Waste treatment efficiency report.
Resource consumption summary.
Complaints summary.
Schedule of Environmental Objectives and Targets.
Environmental management programme – report for previous year.
Environmental management programme – proposal for current year.
Pollutant Release and Transfer Register – report for previous year.
Pollutant Release and transfer Register – proposal for current year.
Noise monitoring report summary.
Ambient monitoring summary.
Tank and pipeline testing and inspection report.
Reported incidents summary.
Energy efficiency audit report summary.
Report on the assessment of the efficiency of use of raw materials in processes and the reduction in waste generated.
Report on progress made and proposals being developed to minimise water demand and the volume of trade effluent discharges.
Reports on financial provision made under this licence, management and staffing structure of the installation, and a programme for public information.
Review of Closure, Restoration & Aftercare Management Plan.
Statement of measures in relation to prevention of environmental damage and remedial actions (Environmental Liabilities).
Environmental Liabilities Risk Assessment Review (every three years or more frequently as dictated by relevant on-site change including financial provisions).
Any other items specified by the Agency.

Note 1: Content may be revised subject to the agreement of the Agency.

Sign off for Proposed Determinations/Decisions

Signed on behalf of the said Agency _____
On the xx day of xxxxx, 200X xxxxxxxxxxx **Authorised Person**