

Attachment B.6 (iv)

Appropriate Assessment Screening Report

IE0311237-22-RP-0006

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Appropriate Assessment Screening Report

AbbVie Ireland NL B.V Manorhamilton Rd
VOC Abatement System
IE0311237-22-RP-0006, Issue: A

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Document Sign Off

Appropriate Assessment Screening Report

AbbVie Ireland NL B.V Manorhamilton Rd
VOC Abatement System
IE0311237-22-RP-0006, Issue A

File No: IE0311237.22.060

CURRENT ISSUE					
Issue No: A	Date: 02/09/15	Reason for issue: License Review Application			
Sign Off	Originator	Checker	Reviewer	Approver	Customer Approval (if required)
Print Name	Ciarán Reay	Paul O' Sullivan		Mags Dalton	
Signature	Authorised Electronically				
Date	02/09/15	02/09/15		02/09/15	

PREVIOUS ISSUES							
Issue No	Date	Originator	Checker	Reviewer	Approver	Customer	Reason for issue

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1 Introduction

AbbVie Ireland NL B.V (herein referred to as AbbVie) is replacing its existing thermal oxidiser with a new energy efficient thermal oxidiser installation.

This report has been prepared by PM Group and contains information required for the competent authority to undertake a screening exercise for Appropriate Assessment (AA). The report provides information on and assesses the potential for the proposed development to impact on Natura 2000 sites¹.

The information in this report forms part of, and should be read in conjunction with the Industrial Emissions Review application submitted to the Environmental Protection Agency (EPA) in connection with the proposed new abatement plant.

It is necessary that the proposal has regard to Article 6 of the European Commission Habitats Directive (EC/92/43) (as amended) (herein referred to as the Habitats Directive). This is transposed into Irish Law by the European Communities (Birds and Natural Habitats) Regulations, 2011 (SI 477 of 2011) (herein referred to as the Habitats Regulations).

It is the responsibility of the competent authority, in this instance Sligo County Council, to make a decision as to whether or not the proposed development is likely to have significant effects, either individually or in combination with other plans or projects, upon Natura 2000 sites. If likely significant effects cannot be ruled out then it would be necessary for Sligo County Council to undertake an AA of the implications of the proposed upgrade on Natura 2000 sites in view of their conservative objectives.

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¹ Natura 2000 sites are part of an EU-wide network of nature protection areas established under the EU Habitats Directive. The aim of the network is to aid long-term survival of Europe's most valuable and threatened species and habitats. It is comprised of Special Areas of Conservation (SAC) designated by member states under the Habitats Directive., and also incorporates Special Protection Areas (SPA) designated under the EU Birds Directive.

2 Methodology

Screening is the first stage of an AA. This stage identifies the likely impacts on a Natura 2000 site, if any, which would arise from a proposed development, whether alone or in combination with other plans and projects, and further considers whether these impacts are likely to adversely affect the integrity of any Natura 2000 sites.

If the conclusions at the end of the screening exercise are that there is no likelihood of significant impacts occurring on any Natura 2000 sites, as a result of the proposed development either alone or in combination with other plans and projects, then there is no requirement to proceed to subsequent stages of an AA.

However, even if the screening exercise makes a finding of no significant impacts, and therefore concludes that further stages of the AA process are not required, these findings must be clearly documented in a “Screening Report for Appropriate Assessment ” in order to provide transparency of decision-making.

Screening for Appropriate Assessment involves the following:

1. Determining whether a project or plan is directly connected with or necessary to the conservation management of any Natura 2000 site;
2. Describing the details of the project / plan proposals and other cumulative plans or projects that may affect any Natura 2000 sites (see Section 3);
3. Describing the characteristics of relevant Natura 2000 sites and identifying the potential for effects on any Natura 2000 sites undertaken on the basis of available information as a desk study or field survey or primary research as necessary (see Table 3.2).
4. Assessing the likelihood and significance of any likely effects on any Natura 2000 sites (see Table 3.2)

This screening exercise was based upon both a desktop study and an air dispersion modelling exercise conducted by PM Group using the air dispersion modelling software AERMOD Version 7.7. The purpose of the air dispersion modelling was to ensure that the proposed Thermal Oxidiser fully complied with the conditions of AbbVie’s existing Industrial Emissions licence and did not result in a breach of applicable European and Irish Air Quality Standards (AQS).

The desktop study relied on the following sources of information:

- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie
- Ordnance Survey of Ireland mapping and aerial photography available from www.osi.ie
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2008)

3 Screening Assessment

3.1 Brief Site description

The site is located at Ballytivnan, Manorhamilton Road, Co. Sligo and currently occupies an area of approximately 12.5ha (31 acres).

Prior to commencement of construction of the original Pharmaceutical Operations Facility the site was Greenfield.

3.1.1 Natura 2000 Sites in Vicinity of the Site

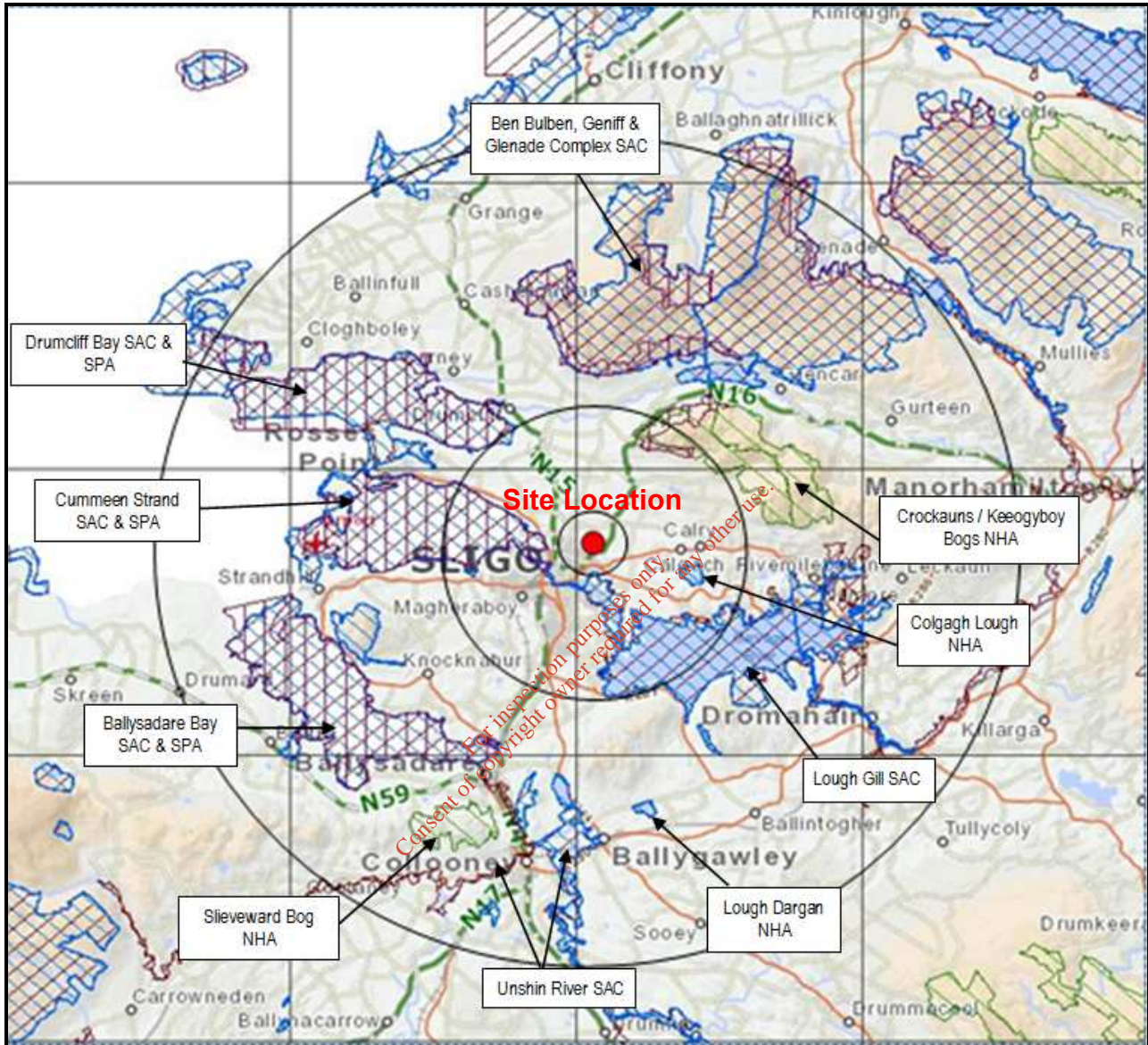
The proposed development site is not located within a National heritage Area (NHA), Special Area of Conservation (SAC) or a Special Protection Area (SPA). A 15km buffer zone was chosen as a precautionary measure, to ensure that all potentially affected Natura 2000 sites are included in the screening process. A total of 10 designated sites are located within this 15km buffer zone.

The Natura 2000 designated sites located within 1km, 5km and 15km of the proposed upgrade works are listed in Table 3.1 below and illustrated in Figure 3.1.

Table 3.1 Natura 2000 designated sites located within 15km of the proposed site

No.	Site Name	Site Code		
		NHA	SAC	SPA
1	Ballysadre Bay		000622	004129
2	Cummeen Strand	-	000627	004035
3	Drumcliff Bay	-	000627	004013
4	Lough Gill	-	001976	-
5	Crockauns / Keelogyboy Bogs	002435	-	-
6	Ben Bulben, Gleniff and Glenade Complex	-	000623	-
7	Unshin River	-	001898	-
8	Slieveward Bog	001902	-	-
9	Lough Dargan	001906	-	-
10	Colgagh Lough	001658		

Figure 3.1: Natura 2000 sites within 1km, 5km and 15km of the proposed site²



² Source: National Parks and Wildlife Service, <http://webgis.npws.ie/npwsviewer> (Annotated by PM Group)

3.2 Description of Proposed Development

Waste gas streams are produced as part of the manufacturing process at the site. In order to ensure compliance with its Industrial Emissions License (Ref. No. P0643-02), AbbVie currently treats these gases by passing them through either a direct thermal oxidizer (for non-chlorinated streams) or through a cryogenic abatement system (for chlorinated streams) prior to release to atmosphere. AbbVie now wishes to upgrade and replace its existing direct fired thermal oxidiser with a new energy efficient thermal oxidiser installation. This new thermal oxidiser will be able to treat both chlorinated and non-chlorinated waste gases.

There will be no additional environmental emissions associated with the new thermal oxidiser installation. The proposed development will be replacing an existing thermal oxidiser which had no environmental impacts on the environment. In support of this, air dispersion modelling has been carried out as part of the Industrial Emissions Licence Review application. In addition, there will be no increase in the levels of traffic travelling to and from site following completion of the works; therefore the installation of the new abatement plant is not considered to have the potential to adversely impact any surrounding habitat.

3.3 Potential Impacts from Proposed Developments on Natura 2000 Sites

The installation of the new thermal oxidiser is anticipated to positively impact the environment due to improvements in the design of these units and age / performance of the equipment. All technology and equipment associated with the new thermal oxidiser has been chosen based on Best Available Technique (BAT) concepts. A full BAT review has been submitted as part of the Industrial Emissions Licence Review application.

3.3.1 Impact on Air

Results from the air dispersion modelling exercise carried out by PM Group (IE0311237-22-RP-0001 Rev B) show that atmospheric emissions from the proposed thermal oxidizer will not result in ground level concentrations which exceed the relevant AQs for the protection of human health, vegetation and the environment.

3.3.2 Impact on Surface Water

There will be no impact on emissions to surface water as a result of the new thermal oxidiser.

3.3.3 Impact on Sewer

There will be a minimal increase in volumes of effluent emitted to sewer as a result of the new thermal oxidiser. Any emissions will be treated along with the rest of the site's effluent in line with the emission limit values as set out in the site's existing licence before release to the public sewer.

3.3.4 Impact on Groundwater

All new tanks associated with the new thermal oxidiser skid are bunded and hence there will be no impact on groundwater.

Table 3.2: Identification of Natura 2000 Sites and their Relevance to the Proposed Development

Site Code and Name	Distance from Development	Do any potential source-pathway-receptor links exist between the proposed development and the Natura 2000 site?
<p>Ballysadare Bay IE0000622</p>	<p>Approx. 8km Southwest</p>	<p>No.</p> <p>As the proposed development site is approx. 8km away from Ballysadare Bay it is considered to be outside the zone of influence for potential air impacts.</p> <p>The surface water discharge point from the AbbVie Site, consisting of surface/storm water runoff from hardstanding and roof surfaces at the site, will have minimum adverse impact upon the water quality of the stream. Potential contamination of the surface/storm runoff by accidental spillages is minimised through the segregation of plant operations from the surface collection system and the presence of bunding structures.</p>
<p>Cummeen Strand IE0000627</p>	<p>Approx. 2km West</p>	<p>No.</p> <p>As the proposed development site is approx. 2km away from Cummeen Strand it is considered to be outside the zone of influence for potential air impacts.</p> <p>The surface water discharge point from the AbbVie Site, consisting of surface/storm water runoff from hardstanding and roof surfaces at the site, will have minimum adverse impact upon the water quality of the stream. Potential contamination of the surface/storm runoff by accidental spillages is minimised through the segregation of plant operations from the surface collection system and the presence of bunding structures.</p>
<p>Drumcliff Bay IE0004013</p>	<p>Approx. 5km Northwest</p>	<p>No.</p> <p>As the proposed development site is approx. 5km away from Drumcliff Bay it is considered to be outside the zone of influence for potential air impacts.</p> <p>The surface water discharge point from the AbbVie Site, consisting of surface/storm water runoff from hardstanding and roof surfaces at the site, will have minimum adverse impact upon the water quality of the stream. Potential contamination of the surface/storm runoff by accidental spillages is minimised through the segregation of plant operations from the surface collection system and the presence of bunding structures.</p>
<p>Lough Gill IE0001976</p>	<p>Approx. 3km Southeast</p>	<p>No.</p> <p>As the proposed development site is approx. 3km away from Lough Gill it is considered to be outside the zone of influence for potential air impacts.</p> <p>The surface water discharge point from the AbbVie Site, consisting of surface/storm water runoff from hardstanding and roof surfaces at the site, will have minimum adverse impact upon the water quality of the stream. Potential contamination of</p>

Site Code and Name	Distance from Development	Do any potential source-pathway-receptor links exist between the proposed development and the Natura 2000 site?
		the surface/storm runoff by accidental spillages is minimised through the segregation of plant operations from the surface collection system and the presence of bunding structures.
Crockauns/Keelogyboy Bogs IE0002435	Approx. 4km Northeast	<p>No.</p> <p>As the proposed development site is approx. 4km away from Crockauns/Keelogyboy Bogs it is considered to be outside the zone of influence for potential air impacts.</p> <p>The surface water discharge point from the AbbVie Site, consisting of surface/storm water runoff from hardstanding and roof surfaces at the site, will have minimum adverse impact upon the water quality of the stream. Potential contamination of the surface/storm runoff by accidental spillages is minimised through the segregation of plant operations from the surface collection system and the presence of bunding structures.</p>
Ben Bulben, Gleniff and Glenade Complex IE0000623	Approx. 5km North	<p>No.</p> <p>As the proposed development site is approx. 5km away from Ben Bulben, Gleniff and Glenade complex it is considered to be outside the zone of influence for potential air impacts.</p> <p>The surface water discharge point from the AbbVie Site, consisting of surface/storm water runoff from hardstanding and roof surfaces at the site, will have minimum adverse impact upon the water quality of the stream. Potential contamination of the surface/storm runoff by accidental spillages is minimised through the segregation of plant operations from the surface collection system and the presence of bunding structures.</p>
Unshin River IE0001898	Approx. 9km South	<p>No.</p> <p>As the proposed development site is approx. 9km away from Unshin River, it is considered to be outside the zone of influence for potential air impacts. the presence of bunding structures.</p> <p>The surface water discharge point from the AbbVie Site, consisting of surface/storm water runoff from hardstanding and roof surfaces at the site, will have minimum adverse impact upon the water quality of the stream. Potential contamination of the surface/storm runoff by accidental spillages is minimised through the segregation of plant operations from the surface collection system and the presence of bunding structures.</p>
Slieveward Bog IE0001902	Approx. 10km Southeast	<p>No.</p> <p>As the proposed development site is approx. 10km away from Slieveward Bog, it is considered to be outside the zone of influence for potential air impacts.</p> <p>The surface water discharge point from the AbbVie Site, consisting of surface/storm water runoff from</p>

Site Code and Name	Distance from Development	Do any potential source-pathway-receptor links exist between the proposed development and the Natura 2000 site?
		hardstanding and roof surfaces at the site, will have minimum adverse impact upon the water quality of the stream. Potential contamination of the surface/storm runoff by accidental spillages is minimised through the segregation of plant operations from the surface collection system and the presence of bunding structures.
Lough Dargan IE0001906	Approx. 8km South	No. As the proposed development site is approx. 8km away from Lough Dargan, it is considered to be outside the zone of influence for potential air impacts. The surface water discharge point from the AbbVie Site, consisting of surface/storm water runoff from hardstanding and roof surfaces at the site, will have minimum adverse impact upon the water quality of the stream. Potential contamination of the surface/storm runoff by accidental spillages is minimised through the segregation of plant operations from the surface collection system and the presence of bunding structures.
Colgagh Lough IE0001658	Approx. 4km East	No. As the proposed development site is approx. 4km away from Colgagh Lough, it is considered to be outside the zone of influence for potential air impacts. The surface water discharge point from the AbbVie Site, consisting of surface/storm water runoff from hardstanding and roof surfaces at the site, will have minimum adverse impact upon the water quality of the stream. Potential contamination of the surface/storm runoff by accidental spillages is minimised through the segregation of plant operations from the surface collection system and the presence of bunding structures.

4 Conclusion

The proposed works will involve the upgrade of the existing direct fired thermal oxidiser to an energy efficient thermal oxidiser at the AbbVie Manorhamilton Road, Sligo site.

As tabulated in Table 3.1 there are six SACs, four NHAs and three SPAs which were identified within a 15km radius of the proposed development site. There is not considered to be any source-pathway-receptor links between the proposed development and these Natura 2000 sites. This report concludes that there would be no impact on the Natura 2000 Network and that no further assessment is required.

Attachment B.6 (v)

IPPC Licence P0643-02

Technical Amendment A to Licence P0643-02

Technical Amendment B to Licence P0643-02

Technical Amendment C to Licence P0643-02

IED Amendment P0643-02

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This licence was amended on 30th June 2009 under Section S96(1) of the Environmental Protection Agency Acts, 1992 to 2007. The details of Amendment A must be read in conjunction with this licence. The amendment document is entitled Technical Amendment A.

This licence was amended on 21st February 2013 under Section S96(1) of the Environmental Protection Agency Acts, as amended. The details of Amendment A and B must be read in conjunction with this licence. The amendment document is entitled Technical Amendment B.

This licence was amended on 19th December 2013 under Section S82A(11) of the Environmental Protection Agency Act 1992, as amended. The details of the Amendment must be read in conjunction with this licence. The amendment document is entitled "IED Amendment".

This licence was amended on 24th April 2014 under Section 96(1) of the Environmental Protection Agency Act 1992, as amended. The details of Amendment C must be read in conjunction with this licence. The amendment document is entitled "Technical Amendment C".

LICENCE REG NO P0643-02 HAS BEEN TRANSFERRED.

Please note that licence Reg No: P0643-02 was transferred to AbbVie Ireland NL B.V. on 23/07/2015. For further information on this please refer to Transfer Notification on the Agency's website.



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

INTEGRATED POLLUTION PREVENTION AND CONTROL REVISED LICENCE

Licence Register Number:	755
Licensee:	Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations
Location of Installation:	Manorhamilton Road Sligo County Sligo

INTRODUCTION

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

Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations is a subsidiary of Abbott Laboratories with its headquarters in North Chicago. Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations are engaged in the manufacture of bulk pharmaceuticals including products used for the treatment of cancer, obesity, benign prostatic hyperplasia and male erectile dysfunction. The installation is located in the town lands of Ballytivnan and Rathbraughan on the outskirts of Sligo town.

There is one thermal oxidiser on site used to handle gaseous emissions containing non-chlorinated solvents from the manufacturing processes. There is one process scrubber used to treat acid emissions from the bulk pharmaceutical building and acid charging emissions. Low volumes of trade effluent streams, made up of organic, inorganic and aqueous components are generated on site. Trade effluent from the installation depending on the contaminant concentration is sent to sewer or is disposed of off-site. The sewer discharges untreated to the Garavoge estuary, Sligo.

The facility is operated 24 hours per day 7 days per week and currently employee numbers are approximately 95.

The installation was first licensed by the Agency in December 2002. This licence provides for the addition of two contained manufacturing cells in the existing Bulk Pharmaceutical Building for the manufacture of two new Active Pharmaceutical Ingredients namely Trandolapril (high blood pressure treatment) and ABT-510 (cancer treatment), the use of Dichloromethane on-site, the addition of a Kilo Laboratory for the production of ABT-578 and Paracalcitol, the production of Gopten/Tarka capsules, the introduction of a cryogenic condenser abatement system for the treatment of gaseous exhaust streams containing dichloromethane, additional tanks in the tank farm area and an expansion to the drum storage area.

The licence sets out in detail the conditions under which Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations will operate and manage this installation.

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Glossary of Terms

All terms in this licence should be interpreted in accordance with the definitions in the Environmental Protection Agency Act 1992 and 2003, (the Acts), unless otherwise defined in this section.

Adequate lighting	20 lux measured at ground level.
AER	Annual Environmental Report.
Agency	Environmental Protection Agency
Agreement	Agreement in writing.
Annually	All or part of a period of twelve consecutive months.
Attachment	Any reference to Attachments in this licence refers to attachments submitted as part of this licence application.
API	Active pharmaceutical ingredient.
Application	The application by the licensee for this licence.
Appropriate facility	A waste management facility, duly authorised under relevant law and technically suitable.
BAT	Best Available Techniques.
Bi-annually	All or part of a period of six consecutive months.
Biennially	Once every two years.
BOD	5 day Biochemical Oxygen Demand.
CEN	Comité Européen De Normalisation – European Committee for Standardisation
COD	Chemical Oxygen Demand.
Containment boom	A boom which 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	0800 hrs to 2200 hrs.
DB(A)	Decibels (A weighted).
DO	Dissolved Oxygen.
Documentation	Any report, record, result, 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.

EMP	Environmental Management Programme.
Emission Limits	Those limits, including concentration limits and deposition rates established in <i>Schedule B</i> of this licence.
Environmental Damage	Has the meaning given it 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.
Facility	Any site or premises used for the purposes of the recovery or disposal of waste.
Fortnightly	A minimum of 24 times per year, at approximately two week intervals.
Fugitive emission	As defined in the Solvents Directive 1999/13/EC.
GC/MS	Gas Chromatography/Mass Spectroscopy
Green waste	Waste wood (excluding timber), plant matter such as grass cuttings, and other vegetation.
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.
HFO	Heavy Fuel Oil.
Hours of Operation	The hours during which the installation is authorised to be operational.
ICP	Inductively Coupled Plasma Spectroscopy.
Incident	The following shall constitute an incident for the purposes of this licence: <ul style="list-style-type: none">a) an emergency;b) any emission which does not comply with the requirements of this licence;c) any exceedence of the daily duty capacity of the waste handling equipment;d) any trigger level specified in this licence which is attained or exceeded; and,e) any indication that environmental pollution has, or may have, taken place.
Installation	A stationary technical unit or plant where the activity concerned referred to in the First Schedule of EPA Acts 1992 and 2003 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.
IPPC	Integrated Pollution Prevention & Control.
K	Kelvin.
KPa	Kilo Pascals.

Leq	Equivalent continuous sound level.
Licensee	Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations, Manorhamilton Road, Sligo, County Sligo.
List I	As listed in the EC Directives 76/464/EEC and 80/68/EEC and amendments.
List II	As listed in the EC Directives 76/464/EEC and 80/68/EEC and amendments.
Local Authority	Sligo County Council
Maintain	Keep in a fit state, including such regular inspection, servicing, calibration and repair as may be necessary to adequately perform its function.
Mass Flow Limit	An Emission Limit Value which is expressed as the maximum mass of a substance which 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 approximately monthly intervals.
Night-time	2200 hrs to 0800 hrs.
Noise Sensitive Location (NSL)	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other installation 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 systems for light liquids, (e.g. oil and petrol)-Part 2: Selection of nominal size, installation, operation and maintenance.
Organic Solvent	Any VOC that is used alone or in combination with other agents, and without undergoing a chemical change, to dissolve raw materials, products or waste materials, or is used as a cleaning agent to dissolve contaminants, or as a dissolver, or a dispersion medium, or as a viscosity adjuster, or a plasticizer, or as a preservative.
PER	Pollution Emission Register.
Ppm	Parts per million.
Quarterly	All or part of a period of three consecutive months beginning on the first day of January, April, July or October.
Regional Fisheries Board	North Western Regional Fisheries Board.
Sanitary Authority	Sligo County Council
Sanitary Effluent	Waste water from installation toilet, washroom and canteen facilities.
Sample(s)	Unless the context of this licence indicates to the contrary, samples shall include measurements by electronic instruments.
SMP	Solvent Management Plan.

SOP	Standard Operating Procedure.
Standard Method	A National, European or internationally recognised procedure (eg, I.S. EN, ISO, CEN, BS or equivalent), as 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.
TA Luft	Technical Instructions on Air Quality Control - TA Luft in accordance with art. 48 of the Federal Immission Control Act as promulgated on 14 May 1990 (BGBl. I p. 880), as amended by Article 2 of the Act of 27 July 2001 (BGBl. I p. 1950). Federal Ministry for Environment, Bonn 2002.
TOC	Total Organic Carbon.
Trade Effluent	Trade Effluent has the meaning given in the water pollution Acts 1977 and 1990
Trigger Level	A parameter value, the achievement or exceedance of which requires certain actions to be taken by the licensee.
VOC	Volatile organic compound, shall mean any organic compound having at 293.15 K a vapour pressure of 0.01 kPa or more, or having a corresponding volatility under the particular conditions of use.
Waste disposal operation	Means any of the operations included in the Third Schedule to the Waste Management Acts 1996 to 2003.
Waste recovery operation	Means any of the operations included in the Fourth Schedule to the Waste Management Acts 1996 to 2003.
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 Decisions

Reasons for the Decision

The 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 and 2003.

In reaching this decision the Environmental Protection Agency has considered the application and supporting documentation received from the applicant and the report of its inspector.

No objection having been received to the recommended determination, the licence is granted in accordance with the terms of the recommended determination.

Part I Schedule of Activities Licensed

In pursuance of the powers conferred on it by the Environmental Protection Agency Acts, 1992 and 2003, the Agency hereby grants a revised licence to:

Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations, Manorhamilton Road, Sligo, County Sligo,

under Section 90(2) of the said Acts to carry on the following activity

- :- the use of a chemical or biological process for the production of basic pharmaceutical products,

at Manorhamilton Road, Sligo, County Sligo, 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 Activities at this installation shall be limited as set out in Schedule A: Limitations.
- 1.2 The installation shall be controlled, operated, and maintained and emissions shall take place as set out in this licence. All programmes required to be carried out under the terms of this licence, become part of this licence.
- 1.3 For the purposes of this licence, the installation is the area of land outlined in black on the drawing titled "Site Location Map" in attachment 2 of the original application (Reg. No. 643). Any reference in this licence to "installation" shall mean the area thus outlined in black. 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 which would, or is likely to, result in
- (a) 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
- (b) 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 This licence is for the purposes of IPPC licensing under the EPA Acts 1992 and 2003 only and nothing in this licence shall be construed as negating the licensee's statutory obligations or requirements under any other enactments or regulations.
- 1.6 This licence has been granted in substitution for licence granted to the licensee on 11th December 2002 and bearing Register No.: 643. The previous licence (Reg. No. 643) is replaced by this revised licence.

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 on 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 maintain an Environmental Management System (EMS). 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 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 maintain an EMP; this should include a time schedule, for achieving the Environmental Objectives and Targets prepared under Condition 2.2.2.2. Once agreed the EMP shall be maintained by the licensee. It shall include:

- (a) designation of responsibility for targets;
- (b) the means by which they may be achieved;
- (c) 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) (Condition 11.11).

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 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

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

2.2.2.6 Awareness and Training

The licensee shall 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 maintain a Communications Programme to ensure that members of the public can obtain information at the installation, at all reasonable times, concerning the environmental performance of the installation.

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 all infrastructure referred to in this licence prior to the commencement of the licensed activities or as required by the conditions of this licence.
- 3.2 Installation Notice Board
- 3.2.1 The licensee shall provide and maintain 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.
- 3.2.2 The board shall clearly show:-
- the name and telephone number of the installation;
 - the normal hours of opening;
 - the name of the licence holder;
 - an emergency out of hours contact telephone number;
 - the licence reference number; and
 - where environmental information relating to the installation can be obtained.
- 3.3 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.
- 3.4 Sampling equipment shall be operated and maintained such that sufficient sample is collected to meet both internal monitoring requirements and those of the Agency. A separate composite sample or homogeneous sub-sample (of sufficient volume as advised) should be refrigerated immediately after collection and retained as required for EPA use.
- 3.5 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.

- 3.6 Tank and Drum Storage Areas
- 3.6.1 All tank and drum storage areas shall be rendered impervious to the materials stored therein.
- 3.6.2 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 which could be stored within the bunded area.
- 3.6.3 All drainage from bunded areas shall be diverted for collection and safe disposal.
- 3.6.4 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.
- 3.6.5 Subject to the requirements of Condition 3.6.6 the integrity and water tightness of all the bunding structures and their resistance to penetration by water or other materials stored therein shall be tested and demonstrated by the licensee at least once every three years. This testing shall be carried out in accordance with any guidance published by the Agency.
- 3.6.6 The integrity and water tightness of all the bunding structures installed following grant of this licence shall be tested and demonstrated by the licensee prior to use.
- 3.7 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.
- 3.8 Silt Traps and Oil Separators
- 3.8.1 The licensee shall maintain silt traps and oil separator at the installation to ensure that all storm water discharges from the installation pass through a silt trap and oil separator prior to discharge. The separator shall be a Class I full retention separator and the silt traps and separator shall be in accordance with I.S. EN 585-2:2003 (separator systems for light liquids).
- 3.8.2 A grease trap shall be maintained on the sewer pipeline in accordance with the manufacturers instructions.
- 3.9 Firewater Retention
- 3.9.1 In the event of a fire or a spillage to storm water, the site storm water shall be automatically diverted to the containment pond. The licensee shall have regard to any guidelines issued by the Agency with regard to firewater retention, including the Environmental Protection Agency Draft Guidance Note to Industry on the Requirements for Fire-Water Retention Facilities.
- 3.9.2 Firewater shall not be disposed of without the prior authorisation of the Agency.
- 3.10 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 separator, shall be fitted with high liquid level alarms (or oil detectors as appropriate) within six months from the date of grant of this licence.

- 3.11 All flanges and valves on over-ground pipes used to transport materials other than uncontaminated water, where no permanent provision for containment of leaks is provided, shall be subject to weekly visual inspection or otherwise monitored for leaks to the satisfaction of the Agency. All such inspections shall be recorded in a log which shall be available for inspection by the Agency.
- 3.12 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 objectives and targets set out in Condition 2.2 of this licence for the reduction in fugitive emissions.
- 3.13 All wellheads, whose locations are shown on drawing No. 011048-22-DR-0002 Issue A, attachment 1 of additional information received 22/08/05, shall be adequately protected to prevent contamination or physical damage.
- 3.14 All groundwater monitoring points shall be included in the sites maintenance programme.
- 3.15 The licensee shall, maintain 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 atmosphere in this licence shall be interpreted in the following way:
- 4.1.1 Continuous Monitoring:
- (i) No 24 hour mean value shall exceed the emission limit value.
 - (ii) No 30 minute mean value shall exceed twice the emission limit value.
 - (iii) For TOC (as C) concentration limits, no hourly average value shall exceed 1.5 times the emission limit value.
- 4.1.2 For Non-Continuous Monitoring:
- (i) For any parameter where, due to sampling/analytical limitations, a 30 minute sample is inappropriate, a suitable sampling period should be employed and the value obtained therein shall not exceed the emission limit value.
 - (ii) For flow, no hourly or daily mean value, calculated on the basis of appropriate spot readings, shall exceed the relevant limit value.
 - (iii) For all other parameters, no 30 minute mean value shall exceed the emission limit value.
 - (iv) Mass flow thresholds refer to a rate of discharge expressed in units of kg/h, above which the concentration emission limit value applies. Mass flow threshold rates shall be determined on the basis of a single 30 minute measurement (i.e. the concentration determined as a 30 minute average shall be multiplied by an appropriate measurement of flow and the result shall be expressed in units of kg/h).

- (v) Mass flow limits shall be calculated on the basis of the concentration, determined as an average over the specified period, multiplied by an appropriate measurement of flow. No value, so determined, shall exceed the mass flow limit value.
- 4.2 The concentration and volume flow limits for emissions to atmosphere specified in this licence shall be based on gas volumes under standard conditions of :-
- 4.2.1 In the case of non-combustion gases:
Temperature 273K, Pressure 101.3 kPa (no correction for oxygen or water content).
- 4.2.2 In the case of combustion gases:
Temperature 273K, Pressure 101.3 kPa, dry gas; 3% oxygen for liquid and gas fuels; 6% oxygen for solid fuels, 11% oxygen for thermal oxidiser (or as otherwise agreed with the Agency following the completion of a test programme).
- 4.3 Emission limit values for emissions to sewer in this licence shall be interpreted in the following way:-
- 4.3.1 Continuous monitoring:
- (i) No flow value shall exceed the specified limit.
 - (ii) No pH value shall deviate from the specified range.
 - (iii) No temperature value shall exceed the limit value.
- 4.3.2 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 result similarly calculated shall exceed 1.2 times the emission limit value.
- 4.3.3 Discrete Sampling:
- (i) No temperature value shall exceed the limit value.
 - (ii) For parameters other than pH and temperature, no grab sample value shall exceed 1.2 times the emission limit value.
- 4.4 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.
- 4.5 Noise from the installation shall not give rise to sound pressure levels (Leq, 30 min) measured at noise sensitive locations of the installation 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 The licensee shall ensure that the activities shall be carried out in a manner such that emissions including odours do not result in significant impairment of, and/or significant interference with amenities or the environment beyond the installation boundary.
- 5.3 No substance shall be discharged in a manner, or at a concentration which, following initial dilution, causes tainting of fish or shellfish.
- 5.4 The licensee shall ensure that vermin, birds, flies, mud, dust, litter and odours do not give rise to nuisance at the installation or in the immediate area of the installation. Any method used by the licensee to control any such nuisance shall not cause environmental pollution.
- 5.5 The licensee shall ensure that the effluent discharge shall not contain petroleum spirits or organic solvents (including chlorinated organic solvents) that would give rise to flammable or explosive vapours in the sewer.
- 5.6 The licensee shall at no time discharge or permit to be discharged into the sewer any liquid matter or thing which 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.
- 5.7 No substance shall be present in such concentrations as would constitute a danger to sewer maintenance personnel working in the sewerage system or as would be damaging to the fabric of the sewer or as would interfere with the biological functioning of a downstream wastewater treatment works.
- 5.8 No emission to sewer shall take place that gives rise to any reaction within the sewer or to the liberation of by-products that may be of environmental significance.
- 5.9 Non-trade effluent wastewater (e.g. firewater, accidental spillage) that occurs on-site shall not be discharged to the sewer without the prior authorisation of the Sanitary Authority.

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 Sanitary Authority in accordance with Section 99E of the EPA Acts 1992 and 2003.

Condition 6. Control and Monitoring

- 6.1 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:
- 6.1.1 Analysis shall be undertaken by competent staff in accordance with documented operating procedures.
- 6.1.2 Such procedures shall be assessed for their suitability for the test matrix and performance characteristics determined.
- 6.1.3 Such procedures shall be subject to a programme of Analytical Quality Control using control standards with evaluation of test responses.

- 6.1.4 Where analysis is sub-contracted it shall be to a competent laboratory.
- 6.2 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. Agreement for the use of alternative equipment, other than in emergency situations, shall be obtained from the Agency.
- 6.3 Monitoring and analysis equipment shall be operated and maintained as necessary so that monitoring accurately reflects the emission or discharge.
- 6.4 All treatment/abatement and emission control equipment shall be calibrated and maintained, in accordance with the instructions issued by the manufacturer/supplier or installer.
- 6.5 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.
- 6.6 The integrity and water tightness of all underground pipes and tanks and their resistance to penetration by water or other materials carried or stored therein shall be tested and demonstrated by the licensee. This testing shall be carried out by the licensee at least once every three years and reported to the Agency on each occasion. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.
- 6.7 Process Effluent
- 6.7.1 No discharge of trade effluent to sewer shall take place until such time as the Agency and the Sanitary Authority have given written agreement for the discharge to commence. Prior to the discharge to sewer, trade effluent generated shall be disposed of in an alternative manner in compliance with this licence.
- 6.7.2 The drainage system and bunds shall be inspected weekly, desludged as necessary and properly maintained at all times. All sludge and drainage from these operations shall be collected for safe disposal.
- 6.7.3 A representative sample of trade effluent shall be screened for the presence of organic compounds, pharmaceutical actives and have a complete chemical characterisation undertaken. The report on this screening shall be submitted to the Agency prior to the disposal of trade effluent to sewer. Such screening shall be repeated at intervals as requested by the Agency thereafter.
- 6.7.4 The licensee shall as a minimum undertake an assessment of the impact of undiluted trade effluent on the receiving environment as a minimum using toxicity testing (or respirometry testing if appropriate) carried out by standard and internationally accepted procedures and by a competent laboratory. The biodegradability of all components of the trade effluent, including pharmaceutical actives and their interaction with the receiving environment shall be assessed and reported to the Agency prior to the disposal of the trade effluent to sewer.
- 6.7.5 The licensee shall as necessary undertake an assessment of the impact of any new active ingredients on the existing environment and the proposed municipal WWTP for Sligo. The licensee shall consult with the Agency, on the nature and extent of the assessment and submit a programme, for agreement by the Agency prior to the introduction of new materials. The licensee shall, following agreement with the Agency, complete the required studies and shall submit a report to the Agency on the findings within a time-scale specified by the Agency.

- 6.8 Storm water
- 6.8.1 The licensee shall operate a continuous pH monitor, TOC monitor and flow meter on the surface water discharge point.
- 6.8.2 A visual examination of the storm water discharge shall be carried out daily. A log of such inspections shall be maintained.
- 6.8.3 The drainage system, bunds, silt traps, grease traps and oil separators shall be inspected weekly, desludged as necessary and properly maintained at all times. All sludge and drainage from these operations shall be collected for safe disposal. All such inspections, maintenance and records of oil and sludge removal shall be recorded in a log which shall be available for inspection by the Agency.
- 6.8.4 The licensee shall maintain, and update as required by the Agency, a response programme for occurrences when the TOC warning and action levels of the discharge to surface water are reached. This programme shall be submitted to the Agency as part of the AER.
- 6.9 Noise
- 6.9.1 The licensee shall carry out a noise survey of the site operations annually. The survey programme shall be undertaken in accordance with the methodology specified in the 'Environmental Noise Survey Guidance Document' as published by the Agency.
- 6.9.2 There shall be no clearly audible tonal component or impulsive component in the noise emission from the activity at any noise sensitive location.
- 6.10 Fugitive emissions to atmosphere shall not exceed 5% of solvent input on an annual basis.
- 6.11 The licensee shall prepare a solvent management plan in accordance with any relevant guidelines in Annex III of Council Directive 1999/13/EC or as may be issued by the Agency from time to time. The solvent management plan shall be used to demonstrate compliance with the fugitive emission limit value. The SMP shall be submitted as part of the AER.
- 6.12 The licensee shall maintain a programme, to the satisfaction of the Agency, for the identification and reduction of fugitive emissions. This programme shall be included in the Environmental Management Programme.
- 6.13 Pollution Emission Register (PER)
- 6.13.1 The licensee shall maintain a PER for the site. The substances to be included in the PER shall be agreed by the Agency each year by reference to the list specified in the Agency's AER Guidance Note. The PER shall be prepared in accordance with any relevant guidelines issued by the Agency and shall be submitted as part of the AER.
- 6.14 Test Programme
- 6.14.1 The licensee shall prepare, to the satisfaction of the Agency, a test programme for the commissioning of the Cryogenic condenser abatement system installed to reduce emissions to air. This programme shall include dioxin analysis and shall be submitted to the Agency, prior to implementation.
- 6.14.2 This programme, following agreement with the Agency, shall be completed within three months of the commencement of operation of the abatement equipment.

- 6.14.3 The criteria for the operation of the abatement equipment as determined by the test programme, shall be incorporated into the standard operating procedures as agreed by the Agency.
- 6.15 The test programme shall include as a minimum, the following:
- 6.15.1 Establish all criteria for operation, control and management of the abatement equipment to ensure compliance with the emission limit values specified in this licence.
- 6.15.2 Assess the performance of any monitors on the abatement system and establish a maintenance and calibration programme for each monitor.
- 6.15.3 A report on the test programme shall be submitted to the Agency within two months of completion.
- 6.16 The Cryogenic condenser air abatement systems shall not be operated outside the agreed commissioning Test Programme without the prior written agreement of the Agency.
- 6.17 The temperature at the point where the exhaust from the Cryogenic condenser abatement system mixes with the exhaust gases from the thermal oxidiser shall not exceed 200°C.
- 6.18 Following completion, to the satisfaction of the Agency, of the test program for the cryogenic condenser abatement system, in the event of a thermal oxidiser breakdown, or incident, the licensee may divert non-chlorinated vapours from on-site processes to the cryogenic condenser abatement system.
- 6.19 Boilers shall be operated so as to give a smoke colour less than or equal to shade number 1 on the Ringelmann chart except during periods of start up. Such start up periods shall not exceed 30 minutes in any 24-hour period.
- 6.20 The licensee shall examine at least annually, the possibility of substituting 2-Methoxyethanol, the List I substances and the List II substances used on site with less harmful substances. This substitution examination shall be included in the schedule of Environmental Objectives and Targets under Condition 2 above.
- 6.21 Only vapours from processes or abatement systems not involving the use of chlorinated solvents shall be directed to the thermal oxidiser. There shall be no solid or liquid waste material combusted in the thermal oxidiser.
- 6.22 In the event of:
- (i) failure of any piece of control equipment relating to the operation of the thermal oxidiser or cryogenic condenser abatement system or the failure of any continuous monitor relating to the monitoring of operational parameters or emissions, where a contingency system, which must have been previously agreed with the Agency, is not implemented, or
 - (ii) by-pass of the thermal oxidiser being initiated, or
 - (iii) failure of the thermal oxidiser or cryogenic condenser abatement system to achieve the operating parameters and emission limit values specified under *Schedule B.1 Emissions to Air*,
- the relevant processes shall be shut down or ducted to alternative abatement as soon as practicable and in a manner consistent with safety and the protection of the environment.
- 6.23 The licensee shall include the elimination/minimisation of thermal oxidiser shutdown events in the Schedule of Environmental Objectives and Targets under Condition 2 above.

- 6.24 The licensee shall permit authorised persons, of the Agency and Sanitary Authority, to inspect, examine and test, at all reasonable times, any works and apparatus installed in connection with the trade effluent and to take samples of the trade effluent.
- 6.25 The licensee shall undertake an assessment of the efficiency of the on-site thermal oxidiser and the feasibility of monitoring prior to the addition of quench air. The licensee shall consult with the Agency, on the nature and extent of the assessment. A report on the findings of this assessment shall be available for on-site inspection; this assessment shall be included in the Schedule of Environmental Objectives and Targets under Condition 2 above.
- 6.26 **Maintenance Programme**
The licensee shall establish and maintain a structured programme for maintenance based on technical descriptions of equipment. This programme shall be supported by appropriate record keeping systems and diagnostic testing. The licensee shall clearly allocate responsibility for the planning and execution of all aspects of this programme.
- 6.27 **Efficient Process Control**
The licensee shall ensure there is adequate control of processes under all modes of operation, identifying the key performance indicators and methods for measuring and controlling these parameters. Abnormal operating conditions shall be documented and analysed to identify the root causes. Appropriate preventive measures and actions shall be taken where the causes of the abnormal operations are identified.

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 Sanitary Authority in accordance with Section 99E of the EPA Acts 1992 and 2003.*

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. A copy of the most recent audit report shall be available for on-site inspection by authorised persons of the Agency.
- 7.2 The audit shall identify all 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 under Condition 2 above.
- 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 under Condition 2 above.

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

Condition 8. Materials Handling

- 8.1 Disposal or recovery of waste shall only take place in accordance with the conditions of this licence and in accordance with the appropriate National and European legislation and protocols.
- 8.2 Waste sent off-site for recovery or disposal shall be transported only by an authorised waste contractor. The waste shall be transported only from the site of the activity to the site of recovery/disposal in a manner which will not adversely affect the environment and in accordance with the appropriate National and European legislation and protocols.
- 8.3 The licensee shall ensure that waste prior to transfer to another person shall be classified packaged and labelled in accordance with National, European and any other standards which are in force in relation to such labelling.
- 8.4 Waste shall be stored in designated areas, protected as may be appropriate, against spillage and leachate run-off. The waste is to be clearly labelled and appropriately segregated.
- 8.5 No waste classified as green list waste in accordance with the EU Transfrontier Shipment of Waste Regulations (Council Regulation EEC No.259/1993, as amended) shall be consigned for recovery without the agreement of the Agency.
- 8.6 Waste for disposal/recovery off-site shall be analysed in accordance with Schedule C: Control & Monitoring of this licence.
- 8.7 Unless approved in writing 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.
- 8.8 The loading and unloading of materials shall be carried out in designated areas, protected as may be appropriate, against spillage and leachate run-off.

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

Condition 9. Accident Prevention and Emergency Response

- 9.1 The licensee shall maintain a documented Accident Prevention Policy which will address 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 maintain a documented Emergency Response Procedure, which shall address 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 In the event of an incident the licensee shall immediately:-
- (i) isolate the source of any such emission;
 - (ii) carry out an immediate investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
 - (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) provide a proposal to the Agency for its agreement within one month of the incident occurring or as otherwise agreed with the Agency to:-
 - identify and put in place measures to avoid reoccurrence of the incident; and
 - identify and put in place any other appropriate remedial action.

Reason: To provide for the protection of the environment.

Condition 10. Decommissioning & Residuals 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, subsoils, 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 Residuals Management Plan:
- 10.2.1 The Residuals Management 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. The licensee shall refer to guidance published by the Agency including “Guidance Documents and Assessment Tools on Environmental Liabilities Risk Assessment and Residual Management Plans incorporating Financial Provision Assessment”.
- 10.2.2 The audit shall be carried out in accordance with the guidance published by the Agency.
- 10.3 The Residuals Management Plan shall include as a minimum, the following:-
- 10.3.1 A scope statement for the plan.
- 10.3.2 The criteria which define the successful decommissioning of the activity or part thereof, which ensures minimum impact on the environment.
- 10.3.3 A programme to achieve the stated criteria.
- 10.3.4 Where relevant, a test programme to demonstrate the successful implementation of the decommissioning plan.
- 10.3.5 Details of costings for the plan and the financial provisions to underwrite those costs.
- 10.4 A final validation report to include a certificate of completion for the residuals management plan, 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. Notifications, Records and Reports

- 11.1 The licensee shall notify the Agency by both telephone and either facsimile or electronic mail, if available, to the Agency's Office of Environmental Enforcement, West/North West Region, John Moore Road, Castlebar, County Mayo, or to such other Agency office as may be specified by the Agency, as soon as practicable after the occurrence of any of the following:
- 11.1.1 Any release of environmental significance to atmosphere from any potential emission point including bypasses.
 - 11.1.2 Any emission which does not comply with the requirements of this licence.
 - 11.1.3 Any malfunction or breakdown of key control equipment or monitoring equipment set out in Schedule C: Control & Monitoring which is likely to lead to loss of control of the abatement system.
 - 11.1.4 Any incident with the potential for environmental contamination of surface water or groundwater, or posing an environmental 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.
- 11.2 A summary report of emissions to sewer shall be submitted to the Agency as part of the AER. The information contained in this report shall be prepared in accordance with any relevant guidelines issued by the Agency. A summary report of emissions to sewer shall be submitted to the Sanitary Authority monthly.
- 11.3 The licensee shall notify the Sanitary Authority of any incident with the potential for environmental contamination of surface water or groundwater, posing a threat to land, to a Sanitary Authority sewer, to personnel working in proximity to a sewer, or for requiring an emergency response by the local authority.
- 11.4 In the event of any incident which relates to discharges to sewer, having taken place, the licensee shall notify the Local and Sanitary Authority as soon as practicable, after such an incident.
- 11.5 In the case of any incident which relates to discharges to water, the licensee shall notify the Local Authority and the North Western Regional Fisheries Board as soon as practicable after such an incident.
- 11.6 The licensee shall make a record of any incident. This record shall include details of the nature, extent, and impact of, and circumstances giving rise to, the incident. The record shall include all corrective actions taken to; manage the incident, minimise wastes generated and the effect on the environment, and avoid recurrence. The licensee shall as soon as practicable following incident notification, submit to the Agency the incident record.
- 11.7 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 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.
- 11.8 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.

- 11.9 The licensee shall submit details of the operation, maintenance, calibration, monitoring, and backup of control equipment, for the aqueous water solvent stripper to the Agency for agreement prior to use. The criteria for the operation of the solvent stripper shall be incorporated into standard operating procedures.
- 11.10 The licensee shall as a minimum keep the following documents at the site:-
- (i) the licences 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
- and this documentation shall be available to the Agency for inspection at all reasonable times.
- 11.11 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 and shall be prepared in accordance with any relevant guidelines issued by the Agency.
- 11.12 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 as a minimum contain details of the following:
- 11.12.1 The tonnages and EWC Code for the waste materials imported and/or sent off-site for disposal/recovery.
 - 11.12.2 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).
 - 11.12.3 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.
 - 11.12.4 Written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site.
 - 11.12.5 Details of all wastes consigned abroad for Recovery and classified as 'Green' in accordance with the EU Transfrontier Shipment of Waste Regulations (Council Regulation EEC No. 259/1993, as amended). The rationale for the classification must form part of the record.
 - 11.12.6 Details of any rejected consignments.
 - 11.12.7 Details of any approved waste mixing.
 - 11.12.8 The results of any waste analyses required under Schedule C: Control & Monitoring.
 - 11.12.9 The tonnages and EWC Code for the waste materials recovered/disposed on-site.

- 11.13 The licensee shall keep a record of the occasions when the cryogenic condenser abatement system is used to simultaneously treat the chlorinated, and the non-chlorinated vapours diverted from the thermal oxidiser. This record shall include the date of use, start time, finish time and the reason for diversion of the non chlorinated vapours to the cryogenic condenser abatement system. These records shall be kept up to date and be available to the Agency for inspection at all reasonable times.

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 €15,275, 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 and 2003. The first payment shall be a pro-rata amount for the period from the date of this licence to the 31st day of December, and shall be paid to the Agency within one month from the date 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 and 2003, 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 defraying its costs in regard to items not covered by the said annual contribution.

12.2 Sanitary Authority Charges

12.2.1 The licensee shall pay to the Sanitary Authority 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 to be made on demand upon commencement of discharge of effluent to the proposed municipal wastewater treatment plant.

12.2.2 The licensee shall pay an annual charge to the Sanitary Authority towards the cost of monitoring the trade effluent. This amount will be revised from time to time. Payment to be made on demand upon commencement of discharge of effluent to the proposed municipal wastewater treatment plant.

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) or accidents/incidents, as may be associated with the carrying on of the activity.

- 12.3.2 The licensee shall review the Environmental Liabilities Risk Assessment (ELRA) as necessary to reflect any significant change on site, and in any case at least every three years. The review results are to be notified to the Agency as part of the AER. The licensee shall refer to guidance published by the Agency “Guidance Documents and Assessment Tools on Environmental Liabilities Risk Assessment and Residual Management Plans incorporating Financial Provision Assessment”.
- 12.3.3 The licensee shall, to the satisfaction of the Agency, maintain the financial provision to cover any liabilities identified in Condition 12.3.2. 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.

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 Sanitary Authority in accordance with Section 99E of the EPA Acts 1992 and 2003.

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SCHEDULE A: Limitations

There are no limitations on the installation specified in the Schedule.

SCHEDULE B: Emission Limits

B.1 Emissions to Air

Emission Point Reference No.:	A1-1, A1-2 (Boilers)	
Location:	North of Utilities building	
Volume to be emitted:	Maximum in any one day:	313,128 m ³
	Maximum rate per hour:	13,047 m ³
Minimum discharge height:	26 m above ground	

Parameter	Emission Limit Value
Oxides of sulphur (as SO ₂)	70 mg/m ³
Nitrogen oxides (as NO ₂)	180 mg/m ³
Smoke	<1 (Ringelmann Shade)

Emission Point Reference No.:	A2-1 (Following mixing of Thermal Oxidiser & Cryogenic Condenser emissions)	
Location:	Eastern side of Utilities building	
Volume to be emitted:	Maximum in any one day:	116,688 m ³
	Maximum rate per hour:	4,862 m ³
Minimum discharge height:	10 m above ground	

Parameter	Emission Limit Value
Oxides of sulphur (as SO ₂)	70 mg/m ³
Nitrogen oxides (as NO ₂)	200 mg/m ³
Carbon monoxide	100 mg/m ³
TA Luft Class I Organics	20mg/m ³ (at mass flows of >0.1 kg/hour)
TA Luft Class II Organics	100mg/m ³ (at mass flows >0.5 kg/hour)
Total Organic Carbon (as C)	20 mg/m ³
<u>Mass sum of individual compounds:</u> 2-Methoxyethanol and Dimethylformamide	2 mg/m ³ (at mass flows >0.01kg/h)

Emission Point Reference No.: A2-2 (Scrubber)
Location: Eastern side of Utilities building
Volume to be emitted: Maximum in any one day: **19,200 m³**
 Maximum rate per hour: **800 m³**
Minimum discharge height: 11.2 m above ground

Parameter	Emission Limit Value
Chlorides (as HCl)	10 mg/m ³
Formic acid	10 mg/m ³



Emission Point Reference No.: A2-3 (Dust extraction system Building 40)
Location: Building 40
Volume to be emitted: Maximum in any one day: 432,000 m³
 Maximum rate per hour: 18,000 m³
Minimum discharge height: 15.4 m above ground

Parameter	Emission Limit Value
Total Dust	1 mg/m ³
Dust (as active pharmaceutical ingredients)	0.15 mg/m ³ (at mass flow > 1g/h)



Emission Point Reference No.: A2-4 (Central dust extraction system Building 20)
Location: Building 20
Volume to be emitted: Maximum in any one day: 168,480 m³
 Maximum rate per hour: 7,020 m³
Minimum discharge height: 16.9 m above ground

Parameter	Emission Limit Value
Total Dust	1 mg/m ³
Dust (as active pharmaceutical ingredients)	0.15 mg/m ³ (at mass flow > 1g/h)



Emission Point Reference: Exhaust from Cryogenic condenser
(prior to mixing with Thermal Oxidiser emission)

Location: Eastern side of Utilities building

Volume to be emitted: Maximum in any one day: **7,200 m³**
Maximum rate per hour: **300 m³**

Parameter	Emission Limit Value
TA Luft Class I Organics	20 mg/m ³
TA Luft Class II Organics	100 mg/m ³



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B.2 Emissions to Water

There are no Emissions to Water of environmental significance.



B.3 Emission to Sewer

Emission Point Reference No.: SE 1
Location: Sligo County Council Sewer
 South of site close to southern boundary
Volume to be emitted: Maximum in any one day: 230 m³

Parameter	Emission Limit Value	
Temperature	25°C (max.)	
pH	6 - 9	
Toxicity ^{Note 1}	10 TU	
	mg/l	kg/day
BOD	450	--
COD	1,300	--
Suspended Solids	350	--
Ammonia (as N)	25	--
Total Phosphorus (as P)	10	--
Sulphate (SO ₄)	1,500	--
Chlorides	8,000	--
Detergents (as MBAS)	20	--
Fats, Oils Grease	10	--

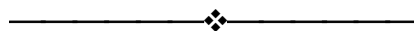
Note 1: The toxicity limit shall not apply, following commissioning of the proposed municipal waste water treatment plant, where effluent is further treated in the proposed treatment plant.



B.4 Noise Emissions

Daytime dB(A) L _{Aeq} (30 minutes)	Night-time dB(A) L _{Aeq} (30 minutes)
55 ^{Note 1}	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.



SCHEDULE C: Control & Monitoring

C.1.1 Control of Emissions to Air

Emission Point Reference No.: A2-1
Description of Treatment: Thermal oxidiser

Control Parameter	Monitoring	Key Equipment ^{Note 1}
Burner flame operation	Continuous	Flame sensor
Inlet and outlet temperature	Continuous	Thermocouple
Inlet and exhaust air flow	Continuous	Flow meter
Pressure of flue gas	Continuous	Pressure transmitter
Temperature ^{Note 2}	Continuous	Thermocouple

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

Note 2: Monitoring shall take place on the thermal oxidiser exhaust immediately prior to the mixing of the cryogenic condenser exhaust and the thermal oxidiser exhaust.



Emission Point Reference No.: A2-2
Description of Treatment: Scrubber

Control Parameter	Monitoring	Key Equipment ^{Note 1}
pH – scrubber liquid	Continuous	pH meter and recorder
Liquid flow	Continuous	Flow indicator
Air flow	Continuous	Differential pressure gauge

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



Emission Point Reference No.: A2-3, A2-4
Description of Treatment: HEPA extraction

Control Parameter	Monitoring	Key Equipment ^{Note 1}
HEPA filter efficiency	Continuous differential pressure	Pressure sensor and alarm
Air flow	Annually	Pitot tube and manometer

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

Emission Point Reference: Exhaust from Cryogenic condenser
(prior to mixing with Thermal Oxidiser emission)

Description of Treatment: Cryogenic condenser

Control Parameter	Monitoring	Key Equipment ^{Note 1}
Temperature	Continuous	Thermocouple
Pressure drop	Continuous	Pressure transmitter

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.: A1-1, A1-2

Parameter	Monitoring Frequency	Analysis Method/Technique
SO _x	Biannually	Flue gas analyser
NO _x	Biannually	Flue gas analyser
CO	Biannually	Flue gas analyser
Particulates	Annually	Isokinetic/Gravimetric
Combustion efficiency	Biannually	Flue gas analyser



Emission Point Reference No.: A2-1

Parameter	Monitoring Frequency	Analysis Method/Technique
Oxides of Sulphur (as SO ₂)	Continuous	Infra-red analyser
Nitrogen of oxides (as NO ₂)	Continuous	Infra-red analyser
Carbon monoxide	Continuous	Infra-red analyser
Oxygen	Continuous	Electrochemical cell
Total Organic Carbon (as C)	Continuous	Flame ionisation detection or other method to be agreed with the Agency
Temperature	Continuous	Temperature probe
Flow	Continuous	Continuous flow meter
2-Methoxyethanol and Dimethylformamide	Monthly, when in use	To be agreed with the Agency
TA Luft Class I Organics	Quarterly	Adsorption/GC-MS or other method to be agreed by the Agency
TA Luft Class II Organics	Quarterly	Adsorption/GC-MS or other method to be agreed by the Agency



Emission Point Reference No.: A2-2

Parameter	Monitoring Frequency	Analysis Method/Technique
Chlorides (as HCl)	Monthly	Standard Methods
Formic acid	Monthly	Standard Methods



Emission Point Reference No.: A2-3, A2-4

Parameter	Monitoring Frequency	Analysis Method/Technique
Dust (as active pharmaceutical ingredients)	Annually	Isokinetic/gravimetric



Emission Point Reference: Exhaust from Cryogenic condenser
(prior to mixing with Thermal Oxidiser emission)

Parameter	Monitoring Frequency	Analysis Method/Technique
TA Luft Class I	Monthly	Adsorption/GC-MS or other method to be agreed by the Agency
TA Luft Class II	Monthly	Adsorption/GC-MS or other method to be agreed by the Agency



C.2.1 Control of Emissions to Water

There are no Emissions to Water of environmental significance.



C.2.2 Monitoring of Emissions to Water

There are no Emissions to Water of environmental significance.



C.2.3 Monitoring of Storm Water Emission

Emission Point Reference No.: SW 1

Parameter	Monitoring Frequency	Analysis Method/Technique
pH	Continuous	pH electrode/meter
TOC	Continuous	TOC analyser
COD	Weekly	Standard Method
Visual Inspection	Daily	Sample and examine for colour and odour



C.3.1 Control of Emissions to Sewer

Emission Point Reference No.: SE 1

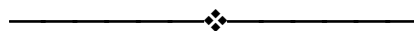
Description of Treatment: Waste Water Treatment

Equipment:

Control Parameter	Monitoring	Key Equipment ^{Note 1}
Flow (Final Effluent)	Continuous	Flow Meter/Recorder
pH (Final Effluent)	Continuous	pH Meter/Recorder
Aqueous waste solvent stripper	As agreed with Agency ^{Note 2}	As agreed with Agency
Grease traps	Monthly	Visual Inspection

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

Note 2: Monitoring programme to be agreed with the Agency under Condition 11.9.



C.3.2 Monitoring of Emissions to Sewer

Emission Point Reference No.: SE 1

Parameter	Monitoring Frequency	Analysis Method/Technique
Flow	Continuous	On-line flow meter with recorder
pH	Continuous	pH electrode/meter and recorder
Temperature	Daily	Thermometer
TOC	Continuous	On-line TOC meter with recorder
Chemical Oxygen Demand	Daily ^{Note 1}	Standard Method
Biochemical Oxygen Demand	Weekly ^{Note 1}	Standard Method
Suspended Solids	Daily ^{Note 1}	Gravimetric
Total Nitrogen (Kjeldahl, nitrate, nitrite)	Monthly ^{Note 1}	Standard Method
Ammonia (as N)	Weekly ^{Note 1}	Ion selective electrode
Total Phosphorus (as P)	Weekly ^{Note 1}	Standard Method
Chlorides	Monthly ^{Note 1}	Standard Method
Sulphates (as SO ₄)	Monthly ^{Note 1}	Standard Method
Total Heavy Metals	Annually ^{Note 1}	Atomic Absorption/ICP
Organic Solvents ^{Note 2}	Quarterly ^{Note 1}	Gas Chromatography
Oils, fats & greases	Quarterly ^{Note 1}	Standard Method
Detergents (as MBAS)	Quarterly ^{Note 1}	Standard Method
Pharmaceutical Actives	Annually and as required by the Agency under Condition 6.7 ^{Note 1}	To be agreed with the Agency
Toxicity ^{Note 3}	Annually	To be agreed by the Agency

Note 1: All samples shall be collected on a 24 hour flow proportional composite sampling basis.

Note 2: Screening for priority pollutant list substances. (such as US EPA volatile and/or semi-volatile compounds). This analysis shall include those organic solvents in use in the process, which are likely through normal process operations to be diverted to the waste water streams.

Note 3: The number of toxic units (Tu) = 100/x hour EC/LC₅₀ in percentage vol/vol so that higher Tu values reflect greater levels of toxicity. For test regimes where species death is not easily detected, immobilisation is considered equivalent to death.



C.4 Waste Monitoring

Waste Class	Frequency	Parameter	Method
Solvent waste from manufacture of API and from solvent stripper.	Per consignment ^{Note 1}	See Note 2	Standard analytical methods
Chlorinated Solvent Waste from manufacture of API (containing Dichloromethane)	Per consignment ^{Note 1}	See Note 2	Standard analytical methods
Aqueous Waste	Per consignment ^{Note 1}	See Note 2	Standard analytical methods
Aqueous Waste (containing Chlorinated Solvent)	Per consignment ^{Note 1}	See Note 2	Standard analytical methods
Other ^{Note 2}			

Note 1: Analysis shall be per consignment unless otherwise agreed with the Agency.

Note 2: Analytical requirements to be determined on a case by case basis.



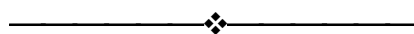
C.5 Noise Monitoring

Monitoring as per Condition 6.9.



C.6 Ambient Monitoring

There is no ambient monitoring required in this licence.



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C.7 Groundwater Monitoring

Location: M1-1, MW-2, MW-3 and MW-4 ^{Note 1}

Parameter	Monitoring Frequency	Analysis Method/Technique
pH	Biannually	pH electrode/meter
COD	Biannually	Standard Method
Conductivity	Biannually	Standard Method
Major anions	Biannually	Standard Method
Major cations	Biannually	Standard Method
Heavy metals	Biannually	Atomic Absorption/ICP
Trace organics ^{Note 2}	Biannually	(1) United States Environmental Protection Agency Method 524.2 – Measurement of purgeable organic compounds in water by capillary column gas chromatography / mass spectrometry. (2) Non-purgeable organic compounds by GC or GC/MS.

Note 1: Locations as per Drawing No. 011048-22-DR-0002 Issue A, Attachment 4 of additional information received 22/08/05.

Note 2: This analysis shall reflect and include those organic solvents used on-site.

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Schedule D: Annual Environmental Report

Annual Environmental Report Content ^{Note 1}

Emissions from the installation.
 Emissions to sewer summary.
 Surface water results summary.
 Waste management record.
 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
 Pollution emission register – report for previous year
 Pollution emission register – proposal for current year
 Report on List I & II substance reductions.
 Solvent management plan.
 Noise monitoring report.
 Groundwater monitoring summary.
 Bund test report (every three years).
 Tank and pipeline testing and inspection report.
 Report on water usage.
 Reported incidents summary.
 Energy efficiency audit report summary (when required).
 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 discharge.
 Review of residuals management plan.
 Review of Environmental Liabilities insurance cover.
 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.

Signed on behalf of the said Agency
 on the 21st day of November, 2005

Padraic Larkin
 Director/Authorised Person

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

TECHNICAL AMENDMENT A
TO
INTEGRATED POLLUTION PREVENTION &
CONTROL LICENCE

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Licence Register Number:	P0643-02
Licensee:	Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations
Location of Installation:	Manorhamilton Road, Sligo, County Sligo.



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 Integrated Pollution and Prevention Control (IPPC) licence Reg. No. P0643-02 granted on the 21st November 2005, as well as any amendments noted herein, any emissions from the activity will comply with and not contravene any of the requirements of Section 83(5) of the Environmental Protection Agency Acts, 1992 to 2007.

Technical Amendment

In pursuance of the powers conferred on it by Section 96(1) (c) of the Environmental Protection Agency Acts, 1992 to 2007, the Agency amends the licence, granted to Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations, Manorhamilton Road, Sligo, County Sligo.

Henceforth, the licence shall be read in conjunction with the amendments set out below.

This technical amendment is limited to the following:

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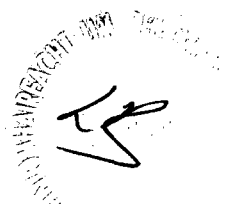
Amendments

New Conditions or Amended Conditions

Amend Condition 6 of the licence, to include the following after Condition 6.27.

- 6.28 In the treatment of solvent vapours, the thermal oxidiser and the cryogenic condenser shall not be used simultaneously.
- 6.29 Within four months of the date of grant of this technical amendment or prior to the commencement of the next campaign using chlorinated solvents, whichever is sooner, the licensee shall provide for continuous monitoring of total organic carbon at the cryogenic condenser.

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New Schedules or Amended Schedules

Amend Schedule B.1 Emissions to Air of the existing licence as follows

B.1 Emissions to Air

Emission Point Reference No.:	A1-1, A1-2 (Boilers)
Location:	North of Utilities building
Volume to be emitted:	Maximum in any one day: 313,128 m ³
	Maximum rate per hour: 13,047 m³
Minimum discharge height:	26 m above ground
Parameter	Emission Limit Value
Oxides of sulphur (as SO₂)	70 mg/m ³
Nitrogen oxides (as NO₂)	180 mg/m ³
Smoke	<1 (Ringelmann Shade)

Emission Point Reference No.:	A2-1(a) (Thermal Oxidiser)	
Location:	Eastern side of Utilities building	
Volume to be emitted:	Maximum in any one day:	95,088 m ³
	Maximum rate per hour:	3,962 m ³
Minimum discharges height:	10 m above ground	
Parameter	Emission Limit Value	
Oxides of sulphur (as SO₂)	70 mg/m ³	
Nitrogen oxides (as NO₂)	200 mg/m ³	
Carbon Monoxide	300 mg/m ³	
Total Organic Carbon (as C)	20 mg/m ³	
TA Luft Class I Organics	20 mg/m ³ (at mass flows of > 0.1 kg/hour)	
TA Luft Class II Organics	100 mg/m ³ (at mass flows of > 0.5 kg/hour)	
Mass sum of individual compounds:		
2-Methoxyethanol and Dimethylformamide	2 mg/m ³ (at mass flows of > 0.01 kg/hour)	

Emission Point Reference No.:	A2-1(b) (Cryogenic Condenser)	
Location:	Eastern side of Utilities building	
Volume to be emitted:	Maximum in any one day:	21,600 m³
	Maximum rate per hour:	900 m³
Minimum discharges height:	10 m above ground	
Parameter	Emission Limit Value	
Total Organic Carbon (as C)	20 mg/m³	
TA Luft Class I Organics	20 mg/m³ (at mass flows of > 0.1 kg/hour)	
TA Luft Class II Organics	100 mg/m³ (at mass flows of > 0.5 kg/hour)	
Mass sum of individual compounds: 2-Methoxyethanol and Dimethylformamide	2 mg/m³ (at mass flows of > 0.01 kg/hour)	



Emission Point Reference No.:	A2-2 (Scrubber)	
Location:	Eastern side of Utilities building	
Volume to be emitted:	Maximum in any one day:	19,200 m³
	Maximum rate per hour:	800 m³
Minimum discharge height:	11.2 m above ground	
Parameter	Emission Limit Value	
Chlorides (as HCl)	10 mg/m³	
Formic acid	10 mg/m³	



Emission Point Reference No.:	A2-3 (Dust extraction system Building 40)	
Location:	Building 40	
Volume to be emitted:	Maximum in any one day:	432,000 m³
	Maximum rate per hour:	18,000 m³
Minimum discharge height:	15.4 m above ground	
Parameter	Emission Limit Value	
Total Dust	1 mg/m³	
Dust (as active pharmaceutical ingredients)	0.15 mg/m³ (at mass flow > 1g/h)	



Emission Point Reference No.:	A2-4 (Central dust extraction system Building 20)	
Location:	Building 20	
Volume to be emitted:	Maximum in any one day:	168,480 m ³
	Maximum rate per hour:	7,020 m ³
Minimum discharge height:	16.9 m above ground	
Parameter	Emission Limit Value	
Total Dust	1 mg/m ³	
Dust (as active pharmaceutical ingredients)	0.15 mg/m ³ (at mass flow > 1g/h)	

Amend Schedule C.1.1 Control of Emissions to Air and Schedule C.1.2 Monitoring of Emissions to Air of the existing licence as follows

C.1.1 Control of Emissions to Air

Emission Point Reference No.: A2-1(a)
Description of Treatment: Thermal oxidiser

Control Parameter	Monitoring	Key Equipment <small>Note 1</small>
Burner flame operation	Continuous	Flame sensor
Inlet and outlet temperature	Continuous	Thermocouple
Inlet and exhaust air flow	Continuous	Flow meter
Pressure of flue gas	Continuous	Pressure transmitter
Temperature	Continuous	Thermocouple

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

Emission Point Reference No.: A2-2
Description of Treatment: Scrubber

Control Parameter	Monitoring	Key Equipment <small>Note 1</small>
pH – scrubber liquid	Continuous	pH meter and recorder
Liquid flow	Continuous	Flow indicator
Air flow	Continuous	Differential pressure gauge

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

Emission Point Reference No.: A2-3, A2-4
Description of Treatment: HEPA extraction

Control Parameter	Monitoring	Key Equipment ^{Note 1}
HEPA filter efficiency	Continuous differential pressure	Pressure sensor and alarm
Air flow	Annually	Pitot tube and manometer

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



Emission Point Reference: A2-1(b)
Description of Treatment: Cryogenic condenser

Control Parameter	Monitoring	Key Equipment ^{Note 1}
Temperature	Continuous	Thermocouple
Pressure drop	Continuous	Pressure transmitter

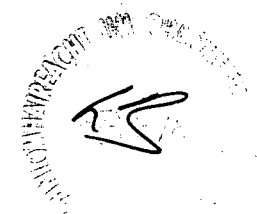
Note 1: The licensee shall maintain appropriate access to standby and/or spares to ensure the operation of the abatement system.



C.1.2 Monitoring of Emissions to Air

Emission Point Reference No's.: A1-1, A1-2

Parameter	Monitoring Frequency	Analysis Method/Technique
SOx	Biannually	Flue gas analyser
NOx	Biannually	Flue gas analyser
CO	Biannually	Flue gas analyser
Particulates	Annually	Isokinetic/Gravimetric
Combustion efficiency	Biannually	Flue gas analyser



Emission Point Reference No's.: A2-1(a)

Parameter	Monitoring Frequency	Analysis Method/Technique
Oxides of Sulphur (as SO ₂)	Continuous	Infra-red analyser
Nitrogen of oxides (as NO ₂)	Continuous	Infra-red analyser
Carbon monoxide	Continuous	Infra-red analyser
Total Organic Carbon (as C)	Continuous	Flame ionisation detection or other method to be agreed with the Agency
Oxygen	Continuous	Electrochemical cell
Temperature	Continuous	Temperature probe
Flow	Continuous	Continuous flow meter
2-Methoxyethanol and Dimethylformamide	Monthly, when in use	To be agreed with the Agency
TA Luft Class I Organics	Quarterly	Adsorption/GC-MS or other method to be agreed by the Agency
TA Luft Class II Organics	Quarterly	Adsorption/GC-MS or other method to be agreed by the Agency



Emission Point Reference No.: A2-2

Parameter	Monitoring Frequency	Analysis Method/Technique
Chlorides (as HCl)	Monthly	Standard Methods
Formic acid	Monthly	Standard Methods



Emission Point Reference No's.: A2-3, A2-4

Parameter	Monitoring Frequency	Analysis Method/Technique
Dust (as active pharmaceutical ingredients)	Annually	Isokinetic/gravimetric



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Emission Point Reference:

A2-1(b)


Parameter	Monitoring Frequency	Analysis Method/Technique
Total Organic Carbon (as C)	Continuous	Flame ionisation detection or other method to be agreed with the Agency
2-Methoxyethanol and Dimethylformamide	Monthly, when in use	To be agreed with the Agency
TA Luft Class I	Monthly	Adsorption/GC-MS or other method to be agreed by the Agency
TA Luft Class II	Monthly	Adsorption/GC-MS or other method to be agreed by the Agency



This technical amendment shall be cited as Amendment A to the licence.

Sealed by the Seal of the Agency on this the 30th day of June, 2009

PRESENT when the seal of the Agency was affixed hereto



Laura Burke, Director/Authorised Person

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

TECHNICAL AMENDMENT B
TO
INTEGRATED POLLUTION PREVENTION &
CONTROL LICENCE

Licence Register Number:	P0643-02
Licensee:	Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations
Location of Installation:	Manorhamilton Road Sligo County Sligo

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Reasons for the Decision

The Environmental Protection Agency has examined the terms of IPPC Licence Reg. No. P0643-02 granted on 21/11/2005 (and amended on 30/06/2009), having regard to S.I. No. 543 of 2002 (Emissions of Volatile Organic Compounds from Organic Solvents Regulations, 2002) and determined that the licence can be brought into conformity with the provisions and requirements of said regulations by the exercise of the powers conferred by Section 96(1)(c) of the Environmental Protection Agency Acts 1992 to 2012.

The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of Integrated Pollution Prevention and Control (IPPC) licence Reg. No. P0643-02 granted on the 21/11/2005, (and amended on 30/06/2009) as well as any amendments noted herein, any emissions from the activity will comply with and not contravene any of the requirements of Section 83(5) of the Environmental Protection Agency Acts, 1992 to 2012.

Technical Amendment

In pursuance of the powers conferred on it by Section 96(1)(c) of the Environmental Protection Agency Acts, 1992 to 2012, the Agency amends the licence, granted to Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations, Manorhamilton Road, Sligo, County Sligo.

Henceforth, the licence shall be read in conjunction with Amendment A issued on 30/06/2009 and the amendments set out below.

This technical amendment is limited to the following Conditions:

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Amendments

New Conditions

Append Condition 6.30 of the licence, to read as follows

6.30 Risk Phrase VOCs

Any substance or preparation, which, because of its content of VOCs classified as carcinogens, mutagens or toxic to reproduction under Directive 67/548/EEC, is assigned or needs to carry the risk phrases R45, R46, R49, R60, R61 shall be replaced, as far as possible within the shortest possible timeframe and, taking into account article 20(1)(b) of S.I. No. 543 of 2002, by less harmful substances or preparations. Guidance on replacement given in Council Directive 1999/13/EC shall be observed. Measures for replacement of such substances or preparations shall be incorporated into the Schedule of Environmental Objectives and Targets under Condition 2.2.2.2.

This technical amendment shall be cited as Amendment B to the licence.

Sealed by the Seal of the Agency on this the 21st day of February 2013.

**PRESENT when the seal of the Agency
was affixed hereto**


Patrick Byrne, Authorised Person



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

TECHNICAL AMENDMENT C
To
INDUSTRIAL EMISSIONS LICENCE

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Licence Register Number:	P0643-02
Licensee:	Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations
Location of Installation:	Manorhamilton Road Sligo County Sligo



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 licence Reg. No. P0643-02 granted on the 21/11/2005, and amended on 30/06/2009, 21/02/2013 and 19/12/2013 as well as any amendments noted herein, any emissions from the activity will comply with and not contravene any of the requirements of Section 83(5) of the Environmental Protection Agency Act 1992 as amended.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the activity, individually or in combination with other plans or projects is likely to have a significant effect on a European Site(s). In this context, particular attention was paid to the European sites at Cummeen Strand/Drumcliff Bay (Sligo Bay) (Site Code 627), Cummeen Strand (Site Code 4035), Lough Gill (Site Code 1976), Drumcliff Bay (Site Code 4013) and the Agency considered, for the reasons set out below, that the 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 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 activity is not required.

It has been determined that this installation is not likely to have a significant effect on a European Site as the amendment does not substantially change the current nature or extent of the operations and emissions at the installation.

Technical Amendment

In pursuance of the powers conferred on it by Section 96(1)(c) of the Environmental Protection Agency Act 1992 as amended, the Agency amends the licence, granted to Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations, Manorhamilton Road, Sligo, County Sligo for an installation located at Manorhamilton Road, Sligo, County Sligo.

Henceforth, the licence shall be read in conjunction with Amendment A issued on 30/06/2009, Amendment B issued on 21/02/2013, a Section 82A(11) Amendment issued on 19/12/2013, and the amendments set out below.

This technical amendment is limited to the following Conditions and Schedules:

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Amendments

Amended Conditions

Amend Condition 6 of the licence, to delete Condition 6.28 and renumber Condition 6.29 to be 6.28.

Amended Schedules

Amend the following entry in Schedule B.3 of the existing licence to read as follows:

B.3 Emission to Sewer

Emission Point Reference No.: SE 1

Location: Sligo County Council Sewer
South of site close to southern boundary

Volume to be emitted: Maximum in any one day: 300 m³

Parameter	Emission Limit Value
Temperature	40°C (max.)
pH	6 - 9
Toxicity ^{Note 1}	10 TU
	mg/l
BOD	450
COD	1,300
Suspended Solids	350
Ammonia (as N)	25
Total Phosphorus (as P)	10
Sulphate (SO ₄)	1,500
Chlorides	8,000
Detergents (as MBAS)	20
Fats, Oils Grease	10

Note 1: The toxicity limit shall not apply, following commissioning of the proposed municipal waste water treatment plant, where effluent is further treated in the proposed treatment plant.

Amend the following entry in Schedule B.1 of the existing licence to read as follows:

Emission Point Reference No.: A2-4 (Central dust extraction system Building 20)
Location: Building 20
Volume to be emitted: Maximum in any one day: 96,480 m³
 Maximum rate per hour: 4,020 m³
Minimum discharge height: 16.9 m above ground

Parameter	Emission Limit Value
Total Dust	1 mg/m ³
Dust (as active pharmaceutical ingredients)	0.15 mg/m ³ (at mass flow>1g/h)



Amend Schedule B.1 of the existing licence by inserting limitations in relation to emission point A2-5 as follows:

Emission Point Reference No.: A2-5 (Central dust extraction system Building 20)
Location: Building 20 (T70655E 337570N)
Volume to be emitted: Maximum in any one day: 72,000m³
 Maximum rate per hour: 3,000m³
Minimum discharge height: 16.2 m above ground

Parameter	Emission Limit Value
Total Dust	1 mg/m ³
Dust (as active pharmaceutical ingredients)	0.15 mg/m ³ (at mass flow>1g/h)

Amend the following entry in Schedule C.1.1 of the existing licence to read as follows:

Emission Point Reference No.: A2-3, A2-4, A2-5
Description of Treatment: HEPA extraction

Control Parameter	Monitoring	Key Equipment ^{Note 1}
HEPA filter efficiency	Continuous differential pressure	Pressure sensor and alarm
Air flow	Annually	Pitot tube and manometer

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

Amend the following entry in Schedule C.1.2 of the existing licence to read as follows:

Emission Point Reference No.: A2-3, A2-4, A2-5

Parameter	Monitoring Frequency	Analysis Method/Technique
Dust (as active pharmaceutical ingredients)	Annually	Isokinetic/gravimetric



This technical amendment shall be cited as Amendment C to the licence.

Sealed by the Seal of the Agency on this the 24th day of April, 2014

PRESENT when the seal of the Agency was affixed hereto

Marie O'Connor
Marie O'Connor **Authorised Person**

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

Section 82A(11) Amendment
to
Industrial Emissions Licence

Licence Register Number:	P0643-02
Licensee:	Abbott Ireland
Location of Installation:	Manorhamilton Road Sligo Sligo

Reason for the Decision

The Environmental Protection Agency has examined the terms of Licence Reg. No. P0643-02 as required by the provisions of Section 82A(8)(a) of the Environmental Protection Agency Act 1992 as amended, and determined that the licence can be brought into conformity with the provisions and requirements of Council Directive 2010/75/EU by the exercise of the powers conferred by Section 82A(11) of the Environmental Protection Agency Act 1992 as amended.

The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of Licence Reg. No. P0643-02, granted on 21/11/2005, any amendments made to date, as well as any amendments noted herein, the carrying on of the activity will comply with and not contravene any of the requirements of Section 83(5) of the Environmental Protection Agency Act 1992 as amended.

Amendment

In pursuance of the powers conferred on it by Section 82A(11) of the Environmental Protection Agency Act 1992 as amended, the Agency hereby amends Licence Reg. No. P0643-02, granted to Abbott Ireland, Manorhamilton Road, Sligo, Sligo.

Henceforth, the licence shall be read in conjunction with any other amendment made to the licence and the amendments set out below.

From the date of this amendment, Licence Reg. No. P0643-02 shall be deemed to be an Industrial Emissions Licence, granted under Part IV of the Environmental Protection Agency Act 1992 as amended.

This amendment is limited to the following Glossary of Terms or Interpretation, Conditions and Schedules of Licence Reg. No. P0643-02:

Hee

Amendments

Amend Glossary of Terms or the Interpretation as follows

To be inserted into the Glossary or the Interpretation of the existing licence or where relevant replace the existing term.

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.
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).
Industrial Emissions Directive	Industrial Emissions Directive means 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).
Waste	Any substance or object which the holder discards or intends or is required to discard.

HK

Amend the 'Schedule of Activities Licensed' as follows:

The licensed activities are amended to be as follows:

- 5.16 The production of pharmaceutical products including intermediates (production means the production on an industrial scale by chemical or biological processing)

New Conditions

Amend the licence to insert the following additional conditions at the end of Condition 2 of the licence:


- 2A The licensee shall notify the Agency, in a format as may be specified by the Agency, without delay after:
- (i) an incident or accident that significantly affects the environment, and/or
 - (ii) the occurrence of any breach of one or more of the conditions attached to this licence.
- 2B The licensee shall, where an incident or accident that significantly affects the environment occurs, without delay take measures to limit the environmental consequences of the incident or accident and to prevent further possible incident or accident.
- 2C The licensee shall, where a breach of one or more of the conditions of this licence occurs, without delay take measures to restore compliance with the conditions of this licence within the shortest possible time.
- 2D 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.

Reason: To bring the licence into conformity with the requirements of the Industrial Emissions Directive.

This amendment shall be cited as a Section 82A(11) Amendment and should be read in conjunction with Licence Reg. No. P0643-02, granted on 21/11/2005 and any other amendments made to the licence.

Sealed by the seal of the Agency on this the 19th day of December, 2013

PRESENT when the seal of the Agency was affixed hereto:



Marie O'Connor, Authorised Person

Attachment B.6 (v)

IPPC Licence P0643-02

Technical Amendment A to Licence P0643-02

Technical Amendment B to Licence P0643-02

Technical Amendment C to Licence P0643-02

IED Amendment P0643-02

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Appointments



ICBAN (Irish Central Border Area Network) Ltd.

is a cross-border development organisation led by 8 member Councils for the area known as the Central Border Region

As part of its new approach, ICBAN wishes to recruit personnel who will play a key role in helping realise the ambitions of this Region. ICBAN is seeking suitably qualified, experienced and creative individuals with the requisite interpersonal skills for the following posts based in Enniskillen:

Innovation Officer

Salary £27,924 - £29,558 (NJC Scale SO2, SP 32-34)

Funded to July 2016 initially with possibility of an extension

Executive Assistant

Salary £25,440 - £27,123 (NJC Scale SO1, SP 29-31)

for Maternity Cover to May 2016 approximately

To download an Application Pack containing further information, including a full set of essential and desirable criteria, please visit www.icban.com or contact Marie White on 028 / 048 6634 0710 or email: marie@icban.com

Closing date for receipt of completed applications is

Friday, 25th September at 4:00 pm

ICBAN Ltd. is an equal opportunity employer and welcomes applications from all sections of the community



Just the job

In our **Appointments** section

PUBLIC NOTICES

APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY (EPA) FOR THE REVIEW OF A LICENCE

Abbvie Ireland NL B.V., Manorhamilton Road, Co. Sligo, is applying to the Environmental Protection Agency (EPA) for a review of its Industrial Emissions Licence, Reg. No. P0643-02. The class of the activity is Class 5.16: The production of pharmaceutical products including intermediates according to the First Schedule of the Protection of the Environment Act 2003, as amended. The site is located off Manorhamilton Road within the Ballytivnan and Rathbraghan Townlands, Co. Sligo.

The most recent Environmental Impact Statement has been submitted to the Agency with the application. The Environmental Impact Statement and any further information relating to the effects on the environment of emissions from the activity which may be furnished to the Agency in the course of the Agency's consideration of the application, will be available at the headquarters of the Agency. The original Environmental Impact Statement was lodged with Sligo County Council at the time of the original planning application for the site.

A copy of the application for the licence review may be inspected at or obtained from the headquarters of the Agency (EPA, Johnstown Castle Estate, Co. Wexford, Tel: 053-9160600) and the Agency's website (www.epa.ie) as soon as practicable after receipt of the application by the Agency.



The Glasshouse

The Glasshouse is Sligo's Premier 4 Star City Centre Hotel, it has 116 deluxe rooms, an award winning restaurant and two lively bars. The following full time positions are currently available at the hotel:

BAR AND RESTAURANT WAITING STAFF

Experience in working in a bar/restaurant is essential.

RECEPTIONIST

Minimum 1-2 years experience on hotel front desk is essential, training will be provided.

Please apply by email to info@theglasshouse.ie with the position you are applying for in the subject line.

The Glasshouse, Swan Point, Sligo www.theglasshouse.ie

Grosvenor GROSVENOR SERVICES ARE CURRENTLY SEEKING AN

EXPERIENCED SITE CLEANING MANAGER

TO MANAGE THEIR CONTRACT CLEANING WITHIN PENNY'S SLIGO.

Hours available are 10.25 hours per week
Days to be confirmed rate of pay **€15.19** per hour

Hours of work are early mornings 7am until 8.30am
6 days per week also Saturday evenings to prepare the store for Sunday trading.

We are seeking someone with experience of Managing a small team of cleaners
Must have experience using scrubber dryers and be able to complete weekly time sheets in accordance with company guidelines
You will report directly to Grosvenor Area Manager Simon Mulholland.

All Applications to be sent to smulholland@grosvenorservices.com
No later than Friday 18th September 2015



NORTH WEST PARENTS AND FRIENDS ASSOCIATION SLIGO.

North West Parents and Friends Association is a Voluntary Organisation providing person centred services for children and adults with special needs and their families.

Require:

Job Title: CARE ASSISTANTS

Location: LEITRIM (ST. CIARAN'S SERVICES, CARRICK ON SHANNON)

Contract: PERMANENT (30 HOURS PER WEEK) / LOCUM

To work with Adults and/or Children with varying degrees of Intellectual Disability/Autism in Day/Residential/Respite Services. Successful candidates will be expected to work hours which may include day time hours, evenings, night duty and/or sleepover duty to include weekends. Hours of work will vary. Applications should meet the following criteria to be considered for the position.

Essential Criteria	Desirable Criteria
<ul style="list-style-type: none"> Health Care – FETAC Level 5 Training / Social Studies Qualification. Experience of working with Adults and/or Children with Intellectual Disability. Full Clean Drivers licence. 	<ul style="list-style-type: none"> Person Centred Planning. Assessment and Management of Risk. Knowledge/experience of Menu Planning and household budgeting. First Aid. Moving and Handling. Food Hygiene. Computer Skills.

Job Title: CARE ASSISTANTS

Location: SLIGO (HOLY FAMILY SPECIAL PRE-SCHOOL, BALLYTIVNAN)

Contract: PERMANENT (20 HOURS PER WEEK)

To work with Children with special needs/autism in the Holy Family Special Pre-School. Hours of work may vary. Applications should meet the following criteria to be considered for the position.

Essential Criteria	Desirable Criteria
<ul style="list-style-type: none"> Minimum requirement - FETAC Level 5 Childcare qualification. 	<ul style="list-style-type: none"> Experience of working with children with special needs. Children First. Basic First Aid. Manual Handling. Computer Skills

Applicants for all positions must supply suitable character references and be prepared to complete a Garda Vetting Form.

Interested Applicants should apply with letter of application and CV to:

Ms. Cathy Maye, HR Officer, NWPFA Association, RSW, Cleveragh Industrial Estate, Sligo.

Closing Date for receipt of applications Friday, 18th September 2015.

NWPFA are an equal opportunities employer.



Trainee Mould Design Engineer

Avenue Mould Solutions is one of Europe's foremost manufacturers of complex, high volume injection moulds. From its advanced manufacturing facility in Finisklin Business Park it supplies the highly demanding requirements of the medical device and Drug delivery device sectors.

Due to continued expansion we are seeking to recruit a Trainee Mould Design Engineer.

Key Requirements:

- Bachelor's degree in mechanical engineering or similar, alternatively have completed a toolmaking apprenticeship.
- A proficiency in the use of Solid Works or similar design software.
- Experience working with Microsoft Excel.
- Excellent Planning & Organizing Skills
- Strong work ethic, excellent interpersonal skills and a willingness to learn.

The successful candidate will receive a unique training in the highly specialised field of injection mould design and project management, they will also gain experience in toolroom practises, injection moulding, design for manufacture, metrology and Mouldflow.

Prospective applicants should forward their CV to **Kevin Mullen, Avenue Mould Solutions Ltd, Finisklin Business Park, Sligo • Phone: 071-9169510 or Email: kevinm@avenuemouldsolutions.ie**



PM Group
Killakee House
Belgard Square
Dublin 24
Ireland

Our Reference: IE0311237-22-LET-01

04/09/15

Sligo County Council
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Sligo,
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International Office Network

Belgium	Saudi Arabia
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Poland	USA
Russia	

Re: Notice to Sligo County Council of Proposed Industrial Emissions Activities (IEA) Licence Review Application for AbbVie Ireland NL B.V.

The project delivery specialists

Dear Sir/Madam

I am writing to you in order to give notice that AbbVie Ireland NL B.V., Manorhamilton Road, Co. Sligo, is applying to the Environmental Protection Agency (EPA) for a review of its Industrial Emissions Licence, Reg. No. P0643-02. The class of the activity is *Class 5.16: The production of pharmaceutical products including intermediates* according to the First Schedule of the Protection of the Environment Act 2003, as amended. The site is located off Manorhamilton Road within the Ballytivnan and Rathbraghan Townlands, Co. Sligo.

The most recent Environmental Impact Statement has been submitted to the Agency with the application. The Environmental Impact Statement and any further information relating to the effects on the environment of emissions from the activity which may be furnished to the Agency in the course of the Agency's consideration of the application, will be available at the headquarters of the Agency. The original Environmental Impact Statement was lodged with Sligo County Council at the time of the original planning application (PL 01/481) for the site.

A copy of the application for the licence review may be inspected at or obtained from the headquarters of the Agency (EPA, Johnstown Castle Estate, Co. Wexford, Tel: 053-9160600) and the Agency's website (www.epa.ie) as soon as practicable after receipt of the application by the Agency.

If you have any questions please do not hesitate to contact me.

Yours sincerely,

Ciaran Reay
EHS Consultant
PM Group on behalf of AbbVie Ireland NL B.V.

CC John Ryan (AbbVie Ireland NL B.V.)
Michael Gallagher (AbbVie Ireland NL B.V.)

Project Management Limited
t/a PM Group, is a private company limited by shares, registered in Ireland.
Company Registration No. 043789.
Registered Office: Killakee House, Belgard Square, Dublin 24, Ireland.

Directors D Flinter (Chairman), D Murphy (CEO), L Foley, B Gallagher, H Keelan, S Kelly, M Lynam, JC O'Connell, L O'Mahony, A Schouten (British), M Shelly, L Westman

Secretary J Sheehan

SITE NOTICE

APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR THE REVIEW OF A LICENCE

Abbvie Ireland NL B.V., Manorhamilton Road, Co. Sligo, is applying to the Environmental Protection Agency (EPA) for a review of its Industrial Emissions Licence, Reg. No. P-0643-02. The class of the activity is *Class 5.16: The production of pharmaceutical products including intermediates* according to the First Schedule of the Protection of the Environment Act 2003, as amended. The site is located off Manorhamilton Road within the Ballytivnan and Rathbraghan townlands, Co. Sligo.

The most recent Environmental Impact Statement has been submitted to the Agency with the application. The Environmental Impact Statement and any further information relating to the effects on the environment of emissions from the activity which may be furnished to the Agency in the course of the Agency's consideration of the application, will be available at the headquarters of the Agency. The Environmental Impact Statement was lodged with Sligo County Council at the time of the original planning application (PL 01/481) for the site.

A copy of the application for the licence review may be inspected at or obtained from the headquarters of the Agency (EPA, Johnstown Castle Estate, Co. Wexford, Tel: 053-9160600) and the Agency's website (www.epa.ie) as soon as practicable after receipt of the application by the Agency.

Consent of copy for publication purposes only. For more information required, contact the EPA.



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Attachment B.12

Fluorinated Gases Inventory

Fluorinated Gases Obligation

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Attachment B.12
Regulations controlling Fluorinated Greenhouse Gases and Ozone Depleting Substances

Location	Equipment	Serial No.	Refrigerant	Quantity (kg)	Leak Checking Requirement	Contractor Responsible	kW Rating	F-Gas Charge Category
Security	Toshiba RAV-SM56ATE-E	106M0112	R410a	1.2	None	Noonans	5kW	E
B10 Comms Room	Mitsubishi FOEN12SV	B1200167KK	R410a	3	Inspection for leakage every 12 months	Noonans		D
	Liebert CP70AU100VIOPO	2039370002	R407c	5	Inspection for leakage every 12 months	Noonans		D
Warehouse Link Downflow Booth	Daikin ERQ100A7V1B	3201001	R410a	4	Inspection for leakage every 12 months	Noonans	6.2	D
B20 Synthroid	Daikin ERQ206A7W18	S202143	R410a	7.7	Inspection for leakage every 12 months	Noonans		C
	Daikin ERQ206A7W18	S202144	R410a	7.7	Inspection for leakage every 12 months	Noonans		C
	Daikin ERQ125A7W1B	5200798	R410a	6.2	Inspection for leakage every 12 months	Noonans		
B70 Groundfloor Office	Mitsubishi UH-P2GAA	2A000032	R407c	2.6	None	Noonans		E
B70 Utilities Office	Toshiba RAV-SM563AT-E	111P0105	R410a	1	None	Noonans		E
	Toshiba RAV-SM563AT-E	111P0102	R410a	1	None	Noonans		E
	Toshiba RAV-SM563AT-E	109P0631	R410a	1	None	Noonans		E
B70 Utilities	HVAC Chiller 1	-	R134a	419	Inspection for leakage every 6 months - automatic leak detection in place	Noonans	2280	A
	HVAC Chiller 2	-	R134a	419	Inspection for leakage every 6 months - automatic leak detection in place	Noonans	2280	A
	HVAC Chiller 3	TBD	R134a	222	Inspection for leakage every 6 months - automatic leak detection in place	Noonans	1000	A

Attachment B.12
Regulations controlling Fluorinated Greenhouse Gases and Ozone Depleting Substances

Location	Equipment	Serial No.	Refrigerant	Quantity (kg)	Leak Checking Requirement	Contractor Responsible	kW Rating	F-Gas Charge Category
	Process Chiller 1	-	Ammonia	76	Inspection for leakage every 12 months as automatic leak detection system is in place	Noonans	260	B
	Process Chiller 2	-	Ammonia	76	Inspection for leakage every 12 months as automatic leak detection system is in place	Noonans	260	B
Sycamore Rooms 1	Daikin RXYQ12P7W1B	1600875	R410a	8.6	Inspection for leakage every 12 months	Noonans		C
Sycamore Rooms 2	Toshiba RAS-137SAV-E	02900759	R410a	0.8	None	Noonans	1.29	E
	Toshiba RAS-137SAV-E	02900760	R410a	0.8	None	Noonans	1.29	E
	Toshiba RAS-137SAV-E	02900765	R410a	0.8	None	Noonans	1.29	E
	Toshiba RAS-137SAV-E	02900764	R410a	0.8	None	Noonans	1.29	E
	Toshiba RAS-137SAV-E	02900795	R410a	0.8	None	Noonans	1.29	E
	Toshiba RAS-137SAV-E	02900762	R410a	0.8	None	Noonans	1.29	E
	Toshiba RAS-SM803AT-E	009N0025	R410a	1.7	None	Noonans	2.49	E
	Toshiba RAS-SM803AT-E	009N0088	R410a	1.7	None	Noonans	3.41	E
Sycamore Rooms 2	Mitsubishi SRC40HGS	240921463RE	R410a	1.15	None	Noonans		
Sycamore Rooms 4	Mitsubishi SRC40HG-S	931601992 RE	R410a	1.15	None	Noonans	1.45	E
	Mitsubishi SRC40HG-S	931601978 RE	R410a	1.15	None	Noonans	1.45	E
	Mitsubishi SRC28HG-S	155201256 RE	R410a	0.85	None	Noonans	0.95	E

Attachment B.12
Regulations controlling Fluorinated Greenhouse Gases and Ozone Depleting Substances

Location	Equipment	Serial No.	Refrigerant	Quantity (kg)	Leak Checking Requirement	Contractor Responsible	kW Rating	F-Gas Charge Category
	Mitsubishi SRC28HG-S	155201203 RE	R410a	0.85	None	Noonans	0.95	E
	Mitsubishi SRC28HG-S	155201202 RE	R410a	0.85	None	Noonans	0.95	E
	Mitsubishi SRC28HG-S	155201233 RE	R410a	0.85	None	Noonans	0.95	E
	Mitsubishi SRC28HG-S	155201127 RE	R410a	0.85	None	Noonans	0.95	E
	Mitsubishi SRC28HG-S	155201228 RE	R410a	0.85	None	Noonans	0.95	E
	Mitsubishi SRC40HG-S	93160198 RE	R410a	1.15	None	Noonans	1.45	E
	Mitsubishi SRC40HG-S	931602029 RE	R410a	1.15	None	Noonans	1.45	E
Synthroid Lab	Toshiba RAV-SM803AT-E	202P0040	R410a	1.7	None	Noonans		E
	Toshiba RAV-137SAV-E	12800984	R410a	0.8	None	Noonans		E
	Toshiba RAV-137SAV-E	12800985	R410a	0.8	None	Noonans		E

Overview of the obligations on AbbVie as operator depending on the F-Gas Charge of the application.

<i>F-Gas charge category</i> <i>Obligations for the operator</i>	A (≥300kg)	B (≥30kg and <300kg)	C (≥3kg and <30kg; hermetically sealed ≥6kg and <30kg)	D (hermetically sealed ≥3kg and <6kg)	E (<3kg)
Installation ¹¹ , maintenance or servicing of the equipment by certified personnel and companies, Art. 5 (3) ¹²	✓	✓	✓	✓	✓
Leakage prevention and repair of detected leakage as soon as possible, Art. 3 (1) ¹²	✓	✓	✓	✓	✓
Regular leakage checks by certified personnel, Art. 3 (2) ¹²	✓	✓	✓		
Installation of a leakage detection system which must be checked at least every 12 months, Art. 3 (3) ¹²					
Record keeping, Art. 3 (6) ¹²	✓	✓	✓	✓	
Recovery of F-Gases before final disposal of the equipment, and when appropriate during maintenance or servicing, by certified personnel, Art. 4 (1), (4) ¹²	✓	✓	✓	✓	✓

Table 3 Overview of obligations for the operator depending on the F-Gas charge of the application

Attachment B.13

Correspondence with the Office of Environmental
Enforcement (OEE)

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Mr. Michael Gallagher
Site Services and EHS&E Manager
Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations
Manorhamilton Road
Sligo

West/North West Region
Environmental Protection Agency
Regional Inspectorate, John Moore Road
Castlebar, County Mayo, Ireland
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W www.epa.ie
LoCall 1890 33 55 99

28th November 2012

Our Ref: P0643-02(12)APR14HB.docx

Approval of new gas boiler emission points

Dear Mr. Gallagher

I refer to your letter dated 19th November 2012 in relation to the introduction of new boiler emission points at the facility resulting from the installation of three gas (LPG) boilers. **Please note that the Agency approves the new emission points (A1-4, A1-5 and A1-6) under Condition 1.4 of your IPPC licence P0643-02.** It is also noted that LPG will also be supplied to Boiler C (emission point A1-3) which will run for the majority of the year. It is also noted that the kerosene fired Boilers A and B (emission points A1-1 and A1-2) will only be used as back up for peak demand.

In terms of monitoring the emissions from the gas fired boilers (A1-3, A1-4, A1-5 and A1-6) an annual combustion efficiency test is sufficient. In relation to emissions from the kerosene fired boilers to be used as back-up (A1-1 and A1-2) annual monitoring in accordance with Schedule C1.2 of your IPPC licence is sufficient on the basis that those boilers are used for less than 6 months in a 12 month period.

You should note that the new stack may require planning permission and you should contact your Planning Authority in that regard.

Please quote the above reference in any future correspondence in relation to this matter.

Yours sincerely


Helen Boyce, Inspector
Office of Environmental Enforcement

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West/North West Region
Environmental Protection Agency
Regional Inspectorate, John Moore Road
Castlebar, County Mayo, Ireland

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Mr. James Hughes
Site Services and EHS&E Manager
Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations
Abbott Ireland Pharmaceutical Operations
Manorhamilton Road
Sligo

09/08/2011

Our Ref: P0643-02(11)APR11JG.docx

Dear Mr. Hughes

I refer to your letter of 03/06/2011 received by the Agency on 07/06/2011 regarding the proposed installation of a smaller steam boiler to run during warmer months. The Agency notes the content of your submission and agrees to the installation of the 1500Kg/hr boiler contingent on the points listed below and compliance with the conditions of your IPPC licence Reg. No P0643-02.

- A maximum of two boilers will run at any one time.
- The three boilers will not be fired at the same time.
- The boilers will all discharge to the existing emission stack.
- The additional boiler will comply with the ELVs in your IPPC licence.
- Monitoring of emissions will be as required for boilers number A1-1 and A1-2.

You should note that the Agency will keep this agreement under review and may revoke this agreement at any time in the future.

If you have any queries in relation to the above please contact the undersigned on 094 90 48400. Please quote the above reference in future correspondence in relation to this matter.

Yours sincerely



John Gibbons, Inspector
Office of Environmental



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abbvie

Office of Climate, Licensing & Resource Use,
Environmental Protection Agency Headquarters,
P.O. Box 3000,
Johnstown Castle Estate ,
Co. Wexford.

Licence Reg. No: P0643-02

Company Name: AbbVie Ireland NL B.V.

5th July 2013

Re: Technical Amendment to IPPC Licence P0643-02

Dear Ms. Keavey,

In regards to the new proposed emission point (A2-5) AbbVie Ireland wish to resubmit the proposal for the new emission point (A2-5). AbbVie can confirm that the new proposed emission point (A2-5), in combination with the other dust extraction system emission points from the installation (i.e. A2-3, A2-4) will not exceed the maximum mass emissions provided for under the existing licence.

Emission limits for the current emission point (A2-4) are always well within current licence limits, this can be verified by the monitoring results attached to this letter in Attachment 1.

In order to keep all emission points within the current licence limits AbbVie Ireland propose to reduce the licence limit on emission point (A2-4) to from 7020m³/hr to 4020m³/hr. This flow limit with the proposed limit for emission point (A2-5), 3000m³/hr will keep the new proposed emission point, (A2-5) within the current licence limit for (A2-4).

Dispersion modelling has been completed to show the combined effect of these two emission points. This report is attached, see Attachment 2.

If you require any additional information or clarification please do not hesitate to contact us at 071 9136600.

Yours Sincerely,


Michael Gallagher,
Site Services & EHS&E Manager

05 JUL 13

**Attachment 1
2009 Monitoring results – A2-4**

Table 2 Emissions to atmosphere at Abbott Ireland Pharmaceuticals, Sligo

Emission Source	Dust Extraction system Building 20 A2-4
Starting Date and Time Duration (mins)	08 Dec 09 13.40 30 mins
Temperature, (°C)	29
Volumetric Flow Rate (Nm ³ /hr)	1264
	Concentration, mg/Nm³
Total Dust	< 2.0 x 10 ⁻⁴
Dust (as API)	< 1.0 x 10 ⁻⁵
IPPC Licence Limits	
Volumetric Flow Rate (Nm ³ /hr)	7020
Total Dust	1 mg/m ³
Dust (as API)	0.15 mg/m ³

Note 1: Volumetric Flow Rate obtained from on site *in situ* monitor

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2010 Monitoring results – A2-4

Table 5 Emissions to atmosphere at Abbott Ireland Pharmaceuticals, Sligo

Emission Source	Dust Extraction system Building 20 A2-4
Starting Date and Time Duration (mins)	24 Nov 10 13.24 30 mins
Temperature, (°C)	26
Volumetric Flow Rate (Nm ³ /hr)	1264
	Concentration, mg/Nm³
Total Dust	0.9
Dust (as API)	< 0.46 x 10 ⁻²
IPPC Licence Limits	
Volumetric Flow Rate (Nm ³ /hr)	7020
Total Dust	1 mg/m ³
Dust (as API)	0.15 mg/m ³

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2011 Monitoring results – A2-4

Table 4. Emissions to atmosphere from Central Dust Extraction A2-4

EMISSION MONITORING DATE	28 February 2011	
EMISSION SOURCE	Central Dust Extraction A2-4	
SAMPLE TIME	From 13:29 to 13:59	
MEASURED EMISSIONS		
TEMPERATURE, °C	23.1	
VELOCITY, m/sec	5.11	
FLOW RATE, Nm ³ /hr	2,539	
PARAMETER	CONCENTRATION, mg/Nm ³	MASS EMISSION RATE, kg/hr
Particulates	< 0.16	< 4.1 x 10 ⁻⁴
Dust as active pharmaceutical ingredient	< 0.16	< 4.1 x 10 ⁻⁴
IPPC Licence Limits		
Parameter	Concentration mg/Nm ³	
Particulates	1	
Dust as active pharmaceutical ingredient	0.15 (at mass flow > 1g/hour)	
Flow	7,020	

2012 Monitoring results – A2-4

Table 3. Emissions to atmosphere from Central Dust Extraction A2-4

EMISSION MONITORING DATE	19 December 2012	
EMISSION SOURCE	Central Dust Extraction A2-4	
SAMPLE TIME	From 14:03 to 14:33	
MEASURED EMISSIONS		
TEMPERATURE, °C	24.1	
VELOCITY, m/sec	5.32	
FLOW RATE, Nm ³ /hr	2,599	
PARAMETER	CONCENTRATION, mg/Nm ³	MASS EMISSION RATE, kg/hr
Particulates	< 0.01	< 9.72x10 ⁻⁵
Dust as active pharmaceutical ingredient	1.0 x 10 ⁻²	< 2.43x10 ⁻⁵
IPPC Licence Limits		
Parameter	Concentration mg/Nm ³	
Particulates	1	
Dust as active pharmaceutical ingredient	0.15 (at mass flow > 1g/hour)	
Flow	7,020	

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Attachment 2

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LS Approval - Notice - C1.2-SEW Approval

Subject

LS Approval - Notice - C1.2-SEW Approval

Created Date

21/03/2013

Dear Michael,

I refer to your submission LR001139, "Notification of New Product (Synthroid)" in relation to the manufacture of demonstration and validation batches of the proposed new product Synthroid.

The approval is sought under Condition 1.4 of IPPC Licence P0643-02 for alterations to your activity due to a material change in:

- The nature or quantity of an emission,
- Range of processes to be carried out,
- The raw materials, intermediates, products and waste generated

I am to advise you that on the basis of the information provided, the Agency approves your request for the manufacture of the demonstration and validation batches of Synthroid. Approval of the demonstration and validation batches of Synthroid is contingent on the following:

- Emissions to air from the process are to be discharged through the licenced emission point A2-4. Emissions to air from the new process are to enter the A2-4 exhaust stream prior to the A2-4 monitoring point.
- All waste (both liquid and solid) generated from the process is to be disposed of as hazardous waste. Prior to removal off-site, all waste must be stored in a bunded location.
- There are to be no discharges to sewer or surface water from the new process.

You are reminded of the requirement to comply with the Conditions of IPPC Licence P0643-02 at all times. *You should note that full scale or commercial manufacture is not approved under Condition 1.4 of your licence as part of this approval.*

The Agency may at any time, if it considers necessary, revisit and/or revoke this approval.

Yours sincerely,

Helen Boyce, Inspector
Office of Environmental Enforcement, Castlebar
Tel: 094 90 48400

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Licence Return Approval Notice

Subject

Licence Return Approval Notice

Created Date

11/08/2015

Dear Ms Gillespie,

The Agency has reviewed your submission LR017838, "Test Programme for the New Thermal Oxidiser" in relation to the commissioning of new Thermal Oxidiser which was recently installed at the AbbVie Ireland NL B.V. facility, IE Licence Reg. No. P0643-02.

You are granted approval for the Thermal Oxidiser Test Programme as detailed in the report '*Validation of Environmental Compliance for Direct Fired Thermal Oxidiser and Scrubber Unit at AbbVie Sligo*' (AWN Consulting) received on 31/07/2015. The approval is subject to compliance with the Emission Limit Values and Monitoring Requirements specified in Schedules B.1 and C.1 of IE Licence P0643-02.

You are reminded that Condition 6.21 of the IE Licence requires that '*only vapours from processes or abatement systems not involving the use of chlorinated solvents shall be directed to the thermal oxidiser. There shall be no solid or liquid waste material combusted in the thermal oxidiser*'.

A report on the test programme should be submitted to the Agency within 2 months of completion.

You are reminded of the requirement to comply with the Conditions of IE Licence P0643-02 at all times.

The Agency may at any time, if it considers necessary, revisit and/or revoke this approval.

The person dealing with this matter is Michelle McKim.

Yours sincerely,

Michelle McKim, Inspector.

Office of Environmental Enforcement.

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LS Approval - Notice - C1.2-SEW Approval

Subject

LS Approval - Notice - C1.2-SEW Approval

Created Date

14/07/2014

Dear Ms Gillespie,

I refer to your submission LR009605, "Upgrade & Replacement of Existing Thermal Oxidiser" in relation to the proposed replacement of the existing direct fired Thermal Oxidiser with a new energy efficient Thermal Oxidiser. The approval is sought under Condition 1.4 of the IE Licence P0643-02.

The Agency agrees to the replacement of the existing Thermal Oxidiser with a new energy efficient Thermal Oxidiser under Condition 1.4 of the IE Licence. A test programme for the commissioning of the new Thermal Oxidiser should be submitted to, and agreed with the Agency prior to the operation of the new Thermal Oxidiser. This agreement is subject to compliance with the Conditions of IE Licence P0643-02.

Condition 6.21 of the IE Licence requires that *"Only vapours from processes or abatement systems not involving the use of chlorinated solvents shall be directed to the thermal oxidiser. There shall be no solid or liquid waste material combusted in the thermal oxidiser"*. That Agency notes that chlorinated gaseous waste streams are currently treated in the Cryogenic Abatement System but it is proposed to treat both the chlorinated and non-chlorinated gaseous waste streams in the new Thermal Oxidiser.

This proposed change cannot be accommodated under Condition 1.4 of your licence. A Technical Amendment (Section 96(1) of the EPA Acts or a Review of your licence (Section 90(1) of the EPA Act) will be required to provide for this proposed change.

To determine if the proposed change can be accommodated by Technical Amendment the OEE has forwarded your request to the Agency's Environmental Licensing Programme (ELP), EPA Regional Inspectorate, Inniscarra Co. Cork. If the alteration is considered to be a significant change and cannot be accommodated by a Technical Amendment, the ELP will notify you of the process for applying for a Review.

Yours sincerely,

Michelle McKim, Inspector

Office of Environmental Enforcement.

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Licensee Return LR009605 for Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations (P0643-02)

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Enter a short subject heading below for your return to the EPA:

Upgrade & Replacement of Existing Thermal Oxidiser

Date Received:

15/05/2014

Enter the details of your return to the EPA below:

Subject:

Upgrade & Replacement of Existing Thermal Oxidiser On the 06th December 2013, members from AbbVie Ireland NL B.V. met with Mick Henry and Michelle McKim to review a proposal to upgrade and replace the existing thermal oxidiser with a new energy efficient thermal oxidiser installation as per Condition 1.4 of our Licence. As a follow up to this meeting, I'm submitting the following documents for your review: • Environmental Review of Abatement System • Appendix A- BAT Review • Attachment 1- Air Dispersion Modelling In the Air Dispersion Modelling Report, both a 10m & 15m stack height has been modelled. I would like to bring to your attention that the Vendor appointed to supply the new energy efficient thermal oxidiser has recommended that a 15m stack height is installed due to the location of the scrubber. This will impact Schedule B1 and Condition 6.21 of our existing Licence. Following your review and pending any follow up items you may have, we are willing to meet to discuss and agree on next steps in relation to this project and updates to our existing license. Kind Regards
Lorraine Gillespie

Select the type of return you are making to the EPA:

Requests for Approval (RFA) and Site Reports

Select the sub-type of return:

Condition 1 changes

Category:

New or altered Process

Decision:

Approved

File Attachments:

- [Appendix A- BAT Review.doc](#)
- [Attachment 1 Air Dispersion Modelling Report IE0311237-22-RP-0001_A.PDF](#)
- [Environmental Review of Abatement System IE0311237-22-RP-0002_A_05.pdf](#)

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Subject	Status
LS Approval - Notice - C1.2-SEW Approval	Closed

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Attachment B.14

AbbVie Annual Environmental Report 2014

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Facility Information Summary	
AER Reporting Year	2014
Licence Register Number	P0643-02
Name of site	AbbVie Ireland NL B.V
Site Location	Manorhamilton Road, Sligo, Co. Sligo
NACE Code	2110 (Manufacture of basic pharmaceutical products)
Class/Classes of Activity	5.16.0: Chemicals
National Grid Reference (6E, 6 N)	570530E 837424N
<p>A description of the activities/processes at the site for the reporting year. This should include information such as production increases or decreases on site, any infrastructural changes, environmental performance which was measured during the reporting year and an overview of compliance with your licence <u>listing all exceedances of licence limits (where applicable) and what they relate to e.g. air, water, noise.</u></p> <p>AbbVie Ireland NL B.V is involved in the manufacture of pharmaceuticals at its facility in Sligo Town. AbbVie holds an Industrial Emissions Licence (P0643-02) (originally an IPPC Licence issued in November 2005), as granted by the EPA.</p> <p>The following key facilities are located on the AbbVie Ireland site: administration buildings, manufacturing building, drug product building, tank farm, wastewater treatment system, security and stores. There were no new buildings/facilities added during 2014. Two new mobile bunds were introduced to the site in 2014.</p> <p>There was one ELV exceedance during 2014 for wastewater discharge to sewer on 15 Oct 2014. Continuous pH monitoring recorded an increase from 7.77 to 9.52. However, the 24-hr composite sample was 7.41 (which is within the ELV).</p> <p>There were three other reported incidents during 2014 which are detailed in the Complaint/Incidents section of this AER. Other than the one temporary ELV exceedance for discharge to sewer, the AbbVie facility was in compliance with its IED Licence for 2014.</p>	

Declaration:

All the data and information presented in this report has been checked and certified as being accurate. The quality of the information is assured to meet licence requirements.

<i>Lorraine Gilaspie</i>	<i>31-March-2015</i>
Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)	Date

AIR-summary template	Lic No: P0643-02	Year: 2014
-----------------------------	------------------	------------

Answer all questions and complete all tables where relevant

- 1 Does your site have licensed air emissions? If yes please complete table A1 and A2 below for the current reporting year and answer further questions. If **you do not have** licensed emissions and **do not complete a solvent management plan** (table A4 and A5) you do not need to complete the tables

Additional information	
Yes	There are eight emission points to atmosphere at AbbVie: - A1-1 and A1-2 from boilers (A1-3 exists but is redundant) - A2-1(a) from Thermal Oxidiser - A2-1(b) from Cryogenic Condenser - A2-2 Scrubber (not in operation in 2014) - A2-3, A2-4 and A2-5 from dust extraction systems

Periodic/Non-Continuous Monitoring

- 2 Are there any results in breach of licence requirements? If yes please provide brief details in the comment section of TableA1 below
- 3 Was all monitoring carried out in accordance with EPA guidance [Basic air monitoring checklist](#) note AG2 and using the basic air monitoring checklist? [AGN2](#)

No	
Yes	

Table A1: Licensed Mass Emissions/Ambient data-periodic monitoring (non-continuous)

Emission reference no:	Parameter/ Substance	Frequency of Monitoring	ELV in licence or any revision thereof	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence limit	Method of analysis	Annual mass load (kg)	Comments - reason for change in % mass load from previous year if applicable
A1-1	Sulphur oxides (SOx/SO2)	Bi-annual	70	No 30min mean can exceed the ELV	2.3	mg/Nm3	yes	Flue Gas Analyser	550.44	
A1-1	Carbon monoxide (CO)	Bi-annual	n/a	n/a	15.1	mg/Nm3	n/a	Flue Gas Analyser	633.84	
A1-1	Nitrogen oxides (NOx/NO2)	Bi-annual	180	No 30min mean can exceed the ELV	95.2	mg/Nm3	yes	Flue Gas Analyser	2973	
A1-1	Total Particulates	Annually	n/a	n/a	10.3	mg/Nm3	n/a	Isokinetic/Gravimetric	131.4	
A1-1	Combustion Efficiency	Bi-annual	n/a	n/a	93	%	n/a	Flue Gas Analyser	n/a	
A1-1	Smoke	Bi-annual	<1	<ELV	<1	Ringelmann Shade	yes	Ringelmann Test	n/a	
A1-1	volumetric flow	Bi-annual	13047	<ELV	3116	Nm3/hour	yes	Flow Meter	n/a	
A1-2	Sulphur oxides (SOx/SO2)	Bi-annual	70	No 30min mean can exceed the ELV	3.8	mg/Nm3	yes	Flue Gas Analyser	550.44	
A1-2	Carbon monoxide (CO)	Bi-annual	n/a	n/a	27.1	mg/Nm3	n/a	Flue Gas Analyser	633.84	
A1-2	Nitrogen oxides (NOx/NO2)	Bi-annual	180	No 30min mean can exceed the ELV	40.05	mg/Nm3	yes	Flue Gas Analyser	2973	
A1-2	Total Particulates	Annually	n/a	n/a	70.7	mg/Nm3	n/a	Isokinetic/Gravimetric	131.4	

AIR-summary template										
			Lic No: P0643-02		Year: 2014					
A1-2	Combustion Efficiency	Bi-annual	n/a	n/a	94.4	%	n/a	Flue Gas Analyser	n/a	
A1-2	Smoke	Bi-annual	<1	<ELV	<1	Ringelmann Shade	yes	Ringelmann Test	n/a	
A1-2	volumetric flow	Bi-annual	13047	<ELV	2848	Nm ³ /hour	yes	Flow Meter	n/a	
A2-1(a)	2-methoxyethanol & dimethylformamide	Monthly	2	No 30min mean can exceed the ELV	1.04	mg/Nm ³	yes	Adsorption/GC-MS	28.82	
A2-1(a)	TA Luft organic substances class 1	Quarterly	20	No 30min mean can exceed the ELV	1.09	mg/Nm ³	yes	Adsorption/GC-MS	32.76	
A2-1(a)	TA Luft organic substances class 2	Quarterly	100	No 30min mean can exceed the ELV	1.56	mg/Nm ³	yes	Adsorption/GC-MS	1.53	
A2-1(b)	2-methoxyethanol & dimethylformamide	Monthly	2	No 30min mean can exceed the ELV	0.3	mg/Nm ³	yes	Adsorption/GC-MS	28.82	
A2-1(b)	TA Luft organic substances class 1	Monthly	20	No 30min mean can exceed the ELV	0.3	mg/Nm ³	yes	Adsorption/GS-MS	32.76	
A2-1(b)	TA Luft organic substances class 2	Monthly	100	No 30min mean can exceed the ELV	0.7	mg/Nm ³	yes	Adsorption/GS-MS	1.53	
A2-3	Total Dust	Annually	1	No 30min mean can exceed the ELV	100 ug/sample	mg/m ³	yes	Isokinetic/Gravimetric	n/a	
A2-3	Dust (as APIs)	Annually	0.15	No 30min mean can exceed the ELV	<0.15 ug/sample	mg/m ³	yes	Isokinetic/Gravimetric	n/a	
A2-3	volumetric flow	Annually	18,000	<ELV	424	Nm ³ /hour	yes	Flow Meter	n/a	
A2-4	Total Dust	Annually	1	No 30min mean can exceed the ELV	20 ug/sample	mg/m ³	yes	Isokinetic/Gravimetric	n/a	
A2-4	Dust (as APIs)	Annually	0.15	No 30min mean can exceed the ELV	<0.15 ug/sample	mg/m ³	yes	Isokinetic/Gravimetric	n/a	
A2-4	volumetric flow	Annually	7,020	<ELV	789	Nm ³ /hour	yes	Flow Meter	n/a	

Note 1: Volumetric flow shall be included as a reportable parameter

AIR-summary template		Lic No:	P0643-02	Year	2014
Continuous Monitoring					

4	Does your site carry out continuous air emissions monitoring? If yes please review your continuous monitoring data and report the required fields below in Table A2 and compare it to its relevant Emission Limit Value (ELV)	Yes	Continuous monitoring is carried out at emission point references A2-1(a) and A2-1(b)
5	Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below	Yes	1 no. - See Incident section for more details (Incident Report no. INCI004355)
6	Do you have a proactive service agreement for each piece of continuous monitoring equipment?	Yes	Service level agreements in place with Vendors (IES) and associated PMs
7	Did your site experience any abatement system bypasses? If yes please detail them in table A3 below	No	

Table A2: Summary of average emissions -continuous monitoring

Emission reference no:	Parameter/ Substance	ELV in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission (Average 24 hr mean)	Annual maximum (24hr mean)	Monitoring Equipment downtime (hours)	Number of ELV exceedences in current reporting year	Comments
A2-1(a)	Sulphur oxides (SOx/SO2)	70	24-hour	No 24hr mean > ELV	mg/Nm3	9.34	72.82	126	0	
A2-1(a)	Nitrogen oxides (NOx/NO2)	200	24-hour	No 24hr mean > ELV	mg/Nm3	77.17	196.36	126	0	
A2-1(a)	Carbon monoxide (CO)	300	24-hour	No 24hr mean > ELV	mg/Nm3	3.15	36.9	126	0	
A2-1(a)	Total Organic Carbon (as C)	20	24-hour	No 24hr mean > ELV	mg/Nm3	0.025	4.15	126	0	
A2-1(a)	Oxygen	n/a	24-hour	n/a	%	18.66	20.9	126	0	
A2-1(a)	Temperature	n/a	24-hour	n/a	degrees C	13.7	282.7	126	0	
A2-1(a)	Flow	3962	24-hour	No 24hr mean > ELV	Nm3/hour	1751	3001.12	126	0	
A2-1(b)	Total Organic Carbon (as C)	20	24-hour	No 24hr mean > ELV	mg/Nm3	0.025	0.41	126	0	
A2-1(b)	Flow	900	24-hour	No 24hr mean > ELV	Nm3/hour	122	1382.12	126	0	

note 1: Volumetric flow shall be included as a reportable parameter.

Table A3: Abatement system bypass reporting table

[Bypass protocol](#)

Date*	Duration** (hours)	Location	Reason for bypass	Impact magnitude	Corrective action

* this should include all dates that an abatement system bypass occurred

** an accurate record of time bypass beginning and end should be logged on site and maintained for future Agency inspections please refer to bypass protocol link

AIR-summary template		Lic No: P0643-02	Year: 2014					
Solvent use and management on site								
8 Do you have a total Emission Limit Value of direct and fugitive emissions on site? if yes please fill out tables A4 and A5	Yes	Licence condition 6.10: - fugitive emissions to atmosphere shall not exceed 5% of solvent input on an annual basis						
Table A4: Solvent Management Plan Summary Total VOC Emission limit value		Please refer to linked solvent regulations to complete table 5 and 6 Solvent regulations						
Reporting year	Total solvent input on site (kg)	Total VOC emissions to Air from entire site (direct and fugitive)	Total VOC emissions as % of solvent input					
2013	26,650.54	43.1	0.0038%					
2014	684,700.0	520	0.77%					
			Total Emission Limit Value (ELV) in licence or any revision thereof					
			Compliance					
			5% Yes					
			5% Yes					
Table A5: Solvent Mass Balance summary								
	(I) Inputs (kg)	(O) Outputs (kg)						
Solvent	(I) Inputs (kg)	Organic solvent emission in waste	Solvents lost in water (kg)	Collected waste solvent (kg)	Fugitive Organic Solvent (kg)	Solvent released by other ways e.g.	Solvents destroyed onsite through	Total emission of Solvent to air (kg)
Methanol	222,264							
Methylene Chloride	7,694							
Isopropyl Acetate	17,829							
Isopropyl Alcohol	98,338							
Ethyl Acetate	143,073							
Triethylamine	2,355							
Tetrahydrofuran	72,270							
Ethanol	14,397							
4-Methylmorpholine (NMM)	103							
Dimethyl Sulfoxide	3,526							
N-Methylpyrrolidone	3,645							
Hexanes	760							
Miscellaneous	109,900							
							Total	5200kg

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AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0643-02 Year 2014

Additional information

1 Does your site have licensed emissions direct to surface water or direct to sewer? If yes please complete table W2 and W3 below for the current reporting year and answer further questions. If you do not have licensed emissions you only need to complete table W1 and or W2 for storm water analysis and visual inspections

Yes	The stormwater discharge reference is SW-1 and the sewer discharge reference is SE-1.
Yes	Licence Condition 6.8.2: A visual examination of the storm water discharge shall be carried out daily. A log of such inspections shall be maintained.

2 Was it a requirement of your licence to carry out visual inspections on any surface water discharges or watercourses on or near your site? If yes please complete table W2 below summarising only any evidence of contamination noted during visual inspections

Table W1 Storm water monitoring

Location reference	Location relative to site activities	PRTR Parameter	Licensed Parameter	Monitoring date	ELV or trigger level in licence or any revision thereof*	Licence Compliance criteria	Measured value (annual average)	Unit of measurement	Compliant with licence	Comments
SW-1	onsite	n/a	COD	Weekly	n/a	n/a	10	mg/L	yes	
SW-1	onsite	n/a	pH	Daily	n/a	n/a	7.95	pH Units	yes	
SW-1	onsite	n/a	Temperature	Daily	n/a	n/a	14.1	degrees C	yes	

*trigger values may be agreed by the Agency outside of licence conditions

Table W2 Visual inspections-Please only enter details where contamination was observed.

Location Reference	Date of inspection	Description of contamination	Source of contamination	Corrective action	Comments
SW-1	03-Oct-14	Turbid	site	none	Minor observation, returned to clear shortly after inspection
SW-1	06-Oct-14	Turbid	site	none	Minor observation, returned to clear shortly after inspection
SW-1	07-Oct-14	Turbid	site	none	Minor observation, returned to clear shortly after inspection

Licensed Emissions to water and /or wastewater(sewer)-periodic monitoring (non-continuous)

3 Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below

No	Additional information
Yes	

4 Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box

[External/Internal Lab Quality Assessment of results checklist](#)

Table W3: Licensed Emissions to water and /or wastewater (sewer)-periodic monitoring (non-continuous)

Emission reference no:	Emission released to	Parameter/ Substance ^{Note 1}	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision thereof ^{Note 2}	Licence Compliance criteria	Measured value (annual average)	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments
SE-1	Wastewater/Se wer	BOD	composite	Weekly	n/a	450	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	18.3	mg/L	yes	5-day incubation and DO probe	QP-CHEM-2016		1,275,785	
SE-1	Wastewater/Se wer	Kjeldahl Nitrogen	composite	Monthly	n/a	-	n/a	5.57	mg/L	n/a	Digestion and Spectrometry	QP-CHEM-2073		388,313	
SE-1	Wastewater/Se wer	Nitrate (as NO3)	composite	Monthly	n/a	25	n/a	4.37	mg/L	n/a	ISE (Ion Selective Electrode)	QP-CHEM-2043		304,655	
SE-1	Wastewater/Se wer	Nitrite (as N)	composite	Monthly	n/a	-	n/a	0.18	mg/L	n/a	Standard Method			12,549	
SE-1	Wastewater/Se wer	Nitrogen	composite	Monthly	n/a	25	n/a	6.47	mg/L	n/a	Standard Method			451,056	
SE-1	Wastewater/Se wer	Ammonia (as N)	composite	Weekly	n/a	25	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	1.98	mg/L	yes	ISE (Ion Selective Electrode)			138,036	
SE-1	Wastewater/Se wer	Total phosphorus	composite	Weekly	n/a	10	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	1.08	mg/L	yes	Standard Method			75,292	
SE-1	Wastewater/Se wer	Chlorides	composite	Monthly	n/a	8000	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	663	mg/L	yes	Titration	QP-CHEM-2035		46,221,045	

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AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)														Lic No:	P0643-02	Year	2014
SE-1	Wastewater/Se wer	Sulphate	composite	Monthly	n/a	1500	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	78	mg/L	yes	Turbidimetry	QP-CHEM-2050	5,437,770				
SE-1	Wastewater/Se wer	Aluminium	composite	Annually	n/a	-	n/a	<0.1 (Limit of Detection LOD)	mg/L	n/a	AAS (Atomic Absorption Spectroscopy)		n/a				
SE-1	Wastewater/Se wer	Cadmium	composite	Annually	n/a	0.00008 (AA-EQS)	n/a	<0.0006 LOD	mg/L	n/a	Standard Method		n/a				
SE-1	Wastewater/Se wer	Chromium	composite	Annually	n/a	0.0034 (Cr VI) (AA-EQS)	n/a	<0.002 LOD	mg/L	n/a	Standard Method		n/a				
SE-1	Wastewater/Se wer	Cobalt	composite	Annually	n/a	-	n/a	0.003	mg/L	n/a	Standard Method		209				
SE-1	Wastewater/Se wer	Copper	composite	Annually	n/a	0.005 (AA-EQS)	n/a	0.026	mg/L	n/a	Standard Method		1,813				
SE-1	Wastewater/Se wer	Iron	composite	Annually	n/a	-	n/a	0.27	mg/L	n/a	Standard Method		18,823				
SE-1	Wastewater/Se wer	Lead	composite	Annually	n/a	0.0072 (AA-EQS)	n/a	<0.006 LOD	mg/L	n/a	Standard Method		n/a				
SE-1	Wastewater/Se wer	Manganese	composite	Annually	n/a	-	n/a	0.029	mg/L	n/a	Standard Method		2,022				
SE-1	Wastewater/Se wer	Mercury	composite	Annually	n/a	0.00005 (AA-EQS)	n/a	<0.1 LOD	mg/L	n/a	Standard Method		n/a				
SE-1	Wastewater/Se wer	Nickel	composite	Annually	n/a	0.002 (AA-EQS)	n/a	<0.003 LOD	mg/L	n/a	Standard Method		n/a				
SE-1	Wastewater/Se wer	Silver	composite	Annually	n/a	-	n/a	<0.0007 LOD	mg/L	n/a	Standard Method		n/a				
SE-1	Wastewater/Se wer	Tin	composite	Annually	n/a	-	n/a	<0.007 LOD	mg/L	n/a	Standard Method		n/a				
SE-1	Wastewater/Se wer	Titanium	composite	Annually	n/a	-	n/a	0.003	mg/L	n/a	Standard Method		209				
SE-1	Wastewater/Se wer	Zinc	composite	Annually	n/a	0.008 (AA-EQS)	n/a	0.422	mg/L	n/a	Standard Method		29,420				
SE-1	Wastewater/Se wer	Antimony	composite	Annually	n/a	-	n/a	<0.0032 (LOD)	mg/L	n/a	Standard Method		n/a				
SE-1	Wastewater/Se wer	Arsenic	composite	Annually	n/a	0.025 (AA-EQS)	n/a	<0.005 (LOD)	mg/L	n/a	Standard Method		n/a				
SE-1	Wastewater/Se wer	Chloroform	composite	Quarterly	n/a	-	n/a	0.0032	mg/L	n/a	GCMS (Gas Chromatography Mass Spectroscopy)		223	All other VOC and SVOC compounds were below their respective LOD values			
SE-1	Wastewater/Se wer	Dichloromethane	composite	Quarterly	n/a	0.002 (AA-EQS)	n/a	0.0329	mg/l	n/a	GCMS (Gas Chromatography Mass Spectroscopy)		2,294	All other VOC and SVOC compounds were below their respective LOD values			
SE-1	Wastewater/Se wer	Fats, Oils and Greases	composite	Quarterly	n/a	10	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	10	mg/L	yes	Hexane Extraction and Gravimetry	QP-CHEM-2019	697,150				
SE-1	Wastewater/Se wer	Detergents (as MBAS)	composite	Quarterly	n/a	20	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.31	mg/L	yes	Standard Method		21,612				
SE-1	Wastewater/Se wer	Toxicity	composite	Annually	n/a	10 TU	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	<2 TU	Toxicity Units	yes	Respirometry Test	EN ISO 8192:2007	n/a				

Note 1: Volumetric flow shall be included as a reportable parameter

Note 2: Where Emission Limit Values (ELV) do not apply to your licence please compare results against EQS for Surface water or relevant receptor quality standards

Continuous monitoring

Does your site carry out continuous emissions to water/sewer monitoring?

Yes	Additional Information
-----	------------------------

If yes please summarise your continuous monitoring data below in Table W4 and compare it to its relevant Emission Limit Value (ELV)

Did continuous monitoring equipment experience downtime? If yes please record downtime in table W4 below

Yes	Blockage in composite sampler from 05-Feb-14 to 07-Feb-14. Grab samples collected during down-time. Displacement of pH probe caused by high flow circa 19-Sept-14. pH probe out of operation until 29-Sept-14 while being replaced and reset.
-----	--

Do you have a proactive service contract for each piece of continuous monitoring equipment on site?

Yes	Service level agreements in place with Vendors (Water Technology) and associated PM
-----	---

Did abatement system bypass occur during the reporting year? If yes please complete table W5 below

No	
----	--

Table W4: Summary of average emissions -continuous monitoring

Emission reference no:	Emission released to	Parameter/ Substance	ELV or trigger values in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission for current reporting year (kg)	% change +/- from previous reporting year	Monitoring Equipment downtime (hours)	Number of ELV exceedences in reporting year	Comments
SE-1	Wastewater/Se wer	pH	6 - 9	24 hour	No pH value shall deviate from the .specified range	pH units	n/a	2%	197	1	Continuous composite sampling replaced by grab samples taken during down-time. Further details provided in Complaints-Incidents section.
SE-1	Wastewater/Se wer	Temperature	40	24 hour	No temperature value shall exceed the limit .value	degrees C	n/a	-11%	197	0	Continuous composite sampling replaced by grab samples taken during down-time. Further details provided in Complaints-Incidents section.
SE-1	Wastewater/Se wer	COD	1300	24 hour	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	mg/L	3,450,893	-62%	197	0	Continuous composite sampling replaced by grab samples taken during down-time. Further details provided in Complaints-Incidents section.
SE-1	Wastewater/Se wer	Suspended Solids	350	24 hour	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	mg/L	2,063,566	244%	197	3	Continuous composite sampling replaced by grab samples taken during down-time. Further details provided in Complaints-Incidents section.
SE-1	Wastewater/Se wer	volumetric flow	300	24 hour	No flow value shall exceed the specific limit.	m3/day	99,715m3 (total vol.)	84%	197	0	Continuous composite sampling replaced by grab samples taken during down-time. Further details provided in Complaints-Incidents section.

note 1: Volumetric flow shall be included as a reportable parameter.

Table W5: Abatement system bypass reporting table

Date	Duration (hours)	Location	Resultant emissions	Reason for bypass	Corrective action*	Was a report submitted to the EPA?	When was this report submitted?
						SELECT	

*Measures taken or proposed to reduce or limit bypass frequency

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Bund testing

dropdown menu click to see options

Additional information

Are you required by your licence to undertake integrity testing on bunds and containment structures? If yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed the integrity test** - **all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)

- 1 Are you required by your licence to undertake integrity testing on bunds and containment structures? If yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed the integrity test** - **all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)
 - 2 Please provide integrity testing frequency period
 - 3 Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)
 - 4 How many bunds are on site?
 - 5 How many of these bunds have been tested within the required test schedule?
 - 6 How many mobile bunds are on site?
 - 7 Are the mobile bunds included in the bund test schedule?
 - 8 How many of these mobile bunds have been tested within the required test schedule?
 - 9 How many sumps on site are included in the integrity test schedule?
 - 10 How many of these sumps are integrity tested within the test schedule?
- Please list any sump integrity failures in table B1**
- 11 Do all sumps and chambers have high level liquid alarms?
 - 12 If yes to Q11 are these failsafe systems included in a maintenance and testing programme?
 - 13 Is the Fire Water Retention Pond included in your integrity test programme?

Yes	All bunds due for testing in 2015.
3 years	
Yes	
35	(excl. 2 no. mobile bunds)
0	
2	
Yes	
2	
n/a	
n/a	
n/a	
Yes	

Table B1: Summary details of bund /containment structure integrity test

Bund/Containment structure ID	Type	Specify Other type	Product containment	Actual capacity	Capacity required*	Type of integrity test	Other test type	Test date	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest (if in current reporting year)
13309	prefabricated		IBC - varies	1350l	1100l	Hydraulic test		19/12/2013	Yes	Pass		SELECT	18/12/2016	
13310	prefabricated		IBC - varies	1350l	1100l	Hydraulic test		19/12/2013	Yes	Pass		SELECT	18/12/2016	

* Capacity required should comply with 25% or 110% containment rule as detailed in your licence

Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance?

- 15 Are channels/transfer systems to remote containment systems tested?
- 16 Are channels/transfer systems compliant in both integrity and available volume?

Yes	
n/a	
n/a	

Pipeline/underground structure testing

Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc? If yes please fill out table 2 below listing all underground structures and pipelines on site **which failed the integrity test and all which have not been tested within the integrity test period as specified**

- 2 Please provide integrity testing frequency period
- *please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)

Yes	Underground foul sewer line and surface water lines tested and inspected in March 2013 - due for reinspection in March 2016.
3 years	

Table B2: Summary details of pipeline/underground structures integrity test

Structure ID	Type system	Material of construction:	Does this structure have Secondary containment?	Type of secondary containment	Type integrity testing	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest (if in current reporting year)
	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT				SELECT

Please use commentary for additional details not answered by tables/ questions above

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Groundwater/Soil monitoring template	Lic No: P0643-02	Year: 2014
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		Comments
1 Are you required to carry out groundwater monitoring as part of your licence requirements?	yes	GW monitoring is carried out at 4 no. locations (MW1, MW2, MW3 and MW4)
2 Are you required to carry out soil monitoring as part of your licence requirements?	no	
3 Do you extract groundwater for use on site? If yes please specify use in comment section	no	
4 Do monitoring results show that groundwater generic assessment criteria such as GTVs or IGVs are exceeded or is there an upward trend in results for a substance? If yes, please complete the Groundwater Monitoring Guideline Template Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below.	no	
5 Is the contamination related to operations at the facility (either current and/or historic)	n/a	
6 Have actions been taken to address contamination issues? If yes please summarise remediation strategies proposed/undertaken for the site	n/a	
7 Please specify the proposed time frame for the remediation strategy	n/a	
8 Is there a licence condition to carry out/update ELRA for the site?	yes	
9 Has any type of risk assessment been carried out for the site?	yes	
10 Has a Conceptual Site Model been developed for the site?	n/a	
11 Have potential receptors been identified on and off site?	n/a	
12 Is there evidence that contamination is migrating offsite?	n/a	

Please provide an interpretation of groundwater monitoring data in the interpretation box below or if you require additional space please include a groundwater/contaminated land monitoring results interpretation as an additional section in this AER

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	Upward trend in pollutant concentration over last 5 years of monitoring data

.+ where average indicates arithmetic mean

++. maximum concentration indicates the maximum measured concentration from all monitoring results produced during the reporting year

Table 2: Downgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit	GTV's*	IGV	Upward trend in yearly average pollutant concentration over last 5 years of monitoring data

Groundwater/Soil monitoring template				Lic No:	P0643-02	Year	2014			
08 May 2014 & 12 Nov 2014	MW-1	Chloride	Standard Method	Biannual	28	27.75	mg/l	187.5		no
08 May 2014 & 12 Nov 2014	MW-1	Fluoride		Biannual	0.451	0.44	mg/l		1	no
08 May 2014 & 12 Nov 2014	MW-1	Sulphate		Biannual	109	63.4	mg/l	187.5		no
08 May 2014 & 12 Nov 2014	MW-1	Nitrate NO3	Ion Selective Electrode	Biannual	1	1	mg/l	37.5		no
08 May 2014 & 12 Nov 2014	MW-1	COD	Standard Method	Biannual	14	10	mg/l	No Abnormal Change		no
08 May 2014 & 12 Nov 2014	MW-1	Conductivity	pH electrode/meter	Biannual	882	606	uS/cm	800-1875		no
08 May 2014 & 12 Nov 2014	MW-1	pH	pH electrode/meter	Biannual	7.2	7.1	pH Units	6.5-9.5		no
08 May 2014 & 12 Nov 2014	MW-1	Nitrite NO2	Ion Selective Electrode	Biannual	0.025	0.025	mg/l	375		no
08 May 2014 & 12 Nov 2014	MW-1	Ammonia NH4	Ion Selective Electrode	Biannual	<0.27 (LOD)	<0.27 (LOD)	mg/l	0.0165-0.175		no
08 May 2014 & 12 Nov 2014	MW-1	Ortho-Phosphate		Biannual	0.25	0.25	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-1	Temperature	Thermometer	Biannual	12	12	degrees C	25		no
08 May 2014 & 12 Nov 2014	MW-1	Aluminium	Atomic Absorption/ICP	Biannual	1.93	1.17	mg/l	0.15		no
08 May 2014 & 12 Nov 2014	MW-1	Cadmium	Atomic Absorption/ICP	Biannual	<0.0006 (LOD)	<0.0006 (LOD)	mg/l	0.004		no
08 May 2014 & 12 Nov 2014	MW-1	Calcium	Atomic Absorption/ICP	Biannual	185	151	mg/l		200	no
08 May 2014 & 12 Nov 2014	MW-1	Chromium	Atomic Absorption/ICP	Biannual	<0.002 (LOD)	<0.002 (LOD)	mg/l	0.0375		no
08 May 2014 & 12 Nov 2014	MW-1	Cobalt	Atomic Absorption/ICP	Biannual	0.002	0.002	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-1	Copper	Atomic Absorption/ICP	Biannual	0.015	0.012	mg/l	1.5		no

Groundwater/Soil monitoring template				Lic No:	P0643-02	Year	2014			
08 May 2014 & 12 Nov 2014	MW-1	Iron	Atomic Absorption/ICP	Biannual	3.66	2.08	mg/l		0.2	no
08 May 2014 & 12 Nov 2014	MW-1	Lead	Atomic Absorption/ICP	Biannual	0.014	0.01	mg/l	0.019		no
08 May 2014 & 12 Nov 2014	MW-1	Magnesium	Atomic Absorption/ICP	Biannual	25.4	26.5	mg/l		50	no
08 May 2014 & 12 Nov 2014	MW-1	Manganese	Atomic Absorption/ICP	Biannual	1.4	2.48	mg/l		0.05	no
08 May 2014 & 12 Nov 2014	MW-1	Mercury	Atomic Absorption/ICP	Biannual	<0.0001 (LOD)	<0.0001 (LOD)	mg/l	0.00075		no
08 May 2014 & 12 Nov 2014	MW-1	Nickel	Atomic Absorption/ICP	Biannual	0.008	0.012	mg/l	0.015		no
08 May 2014 & 12 Nov 2014	MW-1	Potassium	Atomic Absorption/ICP	Biannual	2.1	2.19	mg/l		5	no
08 May 2014 & 12 Nov 2014	MW-1	Silver	Atomic Absorption/ICP	Biannual	0.0092	0.0095	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-1	Sodium	Atomic Absorption/ICP	Biannual	13.4	14.9	mg/l	150		no
08 May 2014 & 12 Nov 2014	MW-1	Tin	Atomic Absorption/ICP	Biannual	<0.007 (LOD)	<0.007 (LOD)	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-1	Zinc	Atomic Absorption/ICP	Biannual	0.024	0.03	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-1	Antimony	Atomic Absorption/ICP	Biannual	<0.0016 (LOD)	<0.0016 (LOD)	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-1	Selenium	Atomic Absorption/ICP	Biannual	<0.0016 (LOD)	<0.0016 (LOD)	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-1	Arsenic	Atomic Absorption/ICP	Biannual	0.0018	0.0022	mg/l	0.0075		no
08 May 2014 & 12 Nov 2014	MW-2	Chloride	Standard Method	Biannual	65.5	53.8	mg/l	187.5		no
08 May 2014 & 12 Nov 2014	MW-2	Fluoride		Biannual	0.302	0.285	mg/l		1	no
08 May 2014 & 12 Nov 2014	MW-2	Sulphate		Biannual	159	103.8	mg/l	187.5		no

Groundwater/Soil monitoring template			Lic No: P0643-02		Year 2014					
08 May 2014 & 12 Nov 2014	MW-2	Nitrate NO3	Ion Selective Electrode	Biannual	7.8	5.5	mg/l	37.5		no
08 May 2014 & 12 Nov 2014	MW-2	COD	Standard Method	Biannual	12	9.5	mg/l	No Abnormal Change		no
08 May 2014 & 12 Nov 2014	MW-2	Conductivity	pH electrode/meter	Biannual	950	651	uS/cm	800-1875		no
08 May 2014 & 12 Nov 2014	MW-2	pH	pH electrode/meter	Biannual	7.2	7.15	pH Units	6.5-9.5		no
08 May 2014 & 12 Nov 2014	MW-2	Nitrite NO2	Ion Selective Electrode	Biannual	0.025	0.025	mg/l	375		no
08 May 2014 & 12 Nov 2014	MW-2	Ammonia NH4	Ion Selective Electrode	Biannual	<0.27 (LOD)	<0.27 (LOD)	mg/l	0.0165-0.175		no
08 May 2014 & 12 Nov 2014	MW-2	Ortho-Phosphate		Biannual	0.1	0.06	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-2	Temperature	Thermometer	Biannual	12.9	12.9	degrees C	25		no
08 May 2014 & 12 Nov 2014	MW-2	Aluminium	Atomic Absorption/ICP	Biannual	0.98	1.65	mg/l	0.15		no
08 May 2014 & 12 Nov 2014	MW-2	Cadmium	Atomic Absorption/ICP	Biannual	0.0006	0.0006	mg/l	0.004		no
08 May 2014 & 12 Nov 2014	MW-2	Calcium	Atomic Absorption/ICP	Biannual	161	141	mg/l		200	no
08 May 2014 & 12 Nov 2014	MW-2	Chromium	Atomic Absorption/ICP	Biannual	0.003	0.003	mg/l	0.0375		no
08 May 2014 & 12 Nov 2014	MW-2	Cobalt	Atomic Absorption/ICP	Biannual	0.01	0.0177	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-2	Copper	Atomic Absorption/ICP	Biannual	0.014	0.018	mg/l	1.5		no
08 May 2014 & 12 Nov 2014	MW-2	Iron	Atomic Absorption/ICP	Biannual	3.1	5.5	mg/l		0.2	no
08 May 2014 & 12 Nov 2014	MW-2	Lead	Atomic Absorption/ICP	Biannual	0.014	0.022	mg/l	0.019		no
08 May 2014 & 12 Nov 2014	MW-2	Magnesium	Atomic Absorption/ICP	Biannual	14.1	14.5	mg/l		50	no

Groundwater/Soil monitoring template				Lic No:	P0643-02	Year	2014			
08 May 2014 & 12 Nov 2014	MW-2	Manganese	Atomic Absorption/ICP	Biannual	0.92	1.65	mg/l		0.05	no
08 May 2014 & 12 Nov 2014	MW-2	Mercury	Atomic Absorption/ICP	Biannual	<0.0001 (LOD)	<0.0001 (LOD)	mg/l	0.00075		no
08 May 2014 & 12 Nov 2014	MW-2	Nickel	Atomic Absorption/ICP	Biannual	0.0031	0.054	mg/l	0.015		no
08 May 2014 & 12 Nov 2014	MW-2	Potassium	Atomic Absorption/ICP	Biannual	3.95	4.42	mg/l		5	no
08 May 2014 & 12 Nov 2014	MW-2	Silver	Atomic Absorption/ICP	Biannual	0.0009	0.0011	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-2	Sodium	Atomic Absorption/ICP	Biannual	37.7	39.8	mg/l	150		no
08 May 2014 & 12 Nov 2014	MW-2	Tin	Atomic Absorption/ICP	Biannual	<0.007 (LOD)	<0.007 (LOD)	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-2	Zinc	Atomic Absorption/ICP	Biannual	0.055	0.08	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-2	Antimony	Atomic Absorption/ICP	Biannual	<0.0016 (LOD)	<0.0016 (LOD)	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-2	Selenium	Atomic Absorption/ICP	Biannual	0.0017	0.0018	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-2	Arsenic	Atomic Absorption/ICP	Biannual	0.005	0.0085	mg/l	0.0075		no
08 May 2014 & 12 Nov 2014	MW-3	Chloride	Standard Method	Biannual	32	29	mg/l	187.5		no
08 May 2014 & 12 Nov 2014	MW-3	Fluoride		Biannual	0.154	0.134	mg/l		1	no
08 May 2014 & 12 Nov 2014	MW-3	Sulphate		Biannual	33.6	31	mg/l	187.5		no
08 May 2014 & 12 Nov 2014	MW-3	Nitrate NO3	Ion Selective Electrode	Biannual	1.5	1.25	mg/l	37.5		no
08 May 2014 & 12 Nov 2014	MW-3	COD	Standard Method	Biannual	9	7	mg/l	No Abnormal Change		no
08 May 2014 & 12 Nov 2014	MW-3	Conductivity	pH electrode/meter	Biannual	855	652	uS/cm	800-1875		no

Groundwater/Soil monitoring template				Lic No:	P0643-02	Year	2014			
08 May 2014 & 12 Nov 2014	MW-3	pH	pH electrode/meter	Biannual	7.1	7.05	pH Units	6.5-9.5		no
08 May 2014 & 12 Nov 2014	MW-3	Nitrite NO2	Ion Selective Electrode	Biannual	0.025	0.025	mg/l	375		no
08 May 2014 & 12 Nov 2014	MW-3	Ammonia NH4	Ion Selective Electrode	Biannual	<0.27 (LOD)	<0.27 (LOD)	mg/l	0.0165-0.175		no
08 May 2014 & 12 Nov 2014	MW-3	Ortho-Phosphate		Biannual	0.02	0.02	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-3	Temperature	Thermometer	Biannual	11.7	11.7	degrees C	25		no
08 May 2014 & 12 Nov 2014	MW-3	Aluminium	Atomic Absorption/ICP	Biannual	0.56	0.6	mg/l	0.15		no
08 May 2014 & 12 Nov 2014	MW-3	Cadmium	Atomic Absorption/ICP	Biannual	<0.0006 (LOD)	<0.0006 (LOD)	mg/l	0.004		no
08 May 2014 & 12 Nov 2014	MW-3	Calcium	Atomic Absorption/ICP	Biannual	154	165	mg/l		200	no
08 May 2014 & 12 Nov 2014	MW-3	Chromium	Atomic Absorption/ICP	Biannual	<0.002 (LOD)	<0.002 (LOD)	mg/l	0.0375		no
08 May 2014 & 12 Nov 2014	MW-3	Cobalt	Atomic Absorption/ICP	Biannual	<0.002 (LOD)	<0.002 (LOD)	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-3	Copper	Atomic Absorption/ICP	Biannual	<0.009 (LOD)	<0.009 (LOD)	mg/l	1.5		no
08 May 2014 & 12 Nov 2014	MW-3	Iron	Atomic Absorption/ICP	Biannual	2.65	3.61	mg/l		0.2	no
08 May 2014 & 12 Nov 2014	MW-3	Lead	Atomic Absorption/ICP	Biannual	0.007	0.008	mg/l	0.019		no
08 May 2014 & 12 Nov 2014	MW-3	Magnesium	Atomic Absorption/ICP	Biannual	16.8	18.2	mg/l		50	no
08 May 2014 & 12 Nov 2014	MW-3	Manganese	Atomic Absorption/ICP	Biannual	0.208	0.269	mg/l		0.05	no
08 May 2014 & 12 Nov 2014	MW-3	Mercury	Atomic Absorption/ICP	Biannual	<0.0001 (LOD)	<0.0001 (LOD)	mg/l	0.00075		no
08 May 2014 & 12 Nov 2014	MW-3	Nickel	Atomic Absorption/ICP	Biannual	0.0009	0.0009	mg/l	0.015		no

Groundwater/Soil monitoring template				Lic No:	P0643-02	Year	2014			
08 May 2014 & 12 Nov 2014	MW-3	Potassium	Atomic Absorption/ICP	Biannual	1.82	1.87	mg/l		5	no
08 May 2014 & 12 Nov 2014	MW-3	Silver	Atomic Absorption/ICP	Biannual	<0.0007 (LOD)	<0.0007 (LOD)	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-3	Sodium	Atomic Absorption/ICP	Biannual	14.5	15.2	mg/l	150		no
08 May 2014 & 12 Nov 2014	MW-3	Tin	Atomic Absorption/ICP	Biannual	<0.007 (LOD)	<0.007 (LOD)	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-3	Zinc	Atomic Absorption/ICP	Biannual	<0.018 (LOD)	<0.018 (LOD)	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-3	Antimony	Atomic Absorption/ICP	Biannual	<0.0016 (LOD)	<0.0016 (LOD)	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-3	Selenium	Atomic Absorption/ICP	Biannual	0.0019	0.0021	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-3	Arsenic	Atomic Absorption/ICP	Biannual	0.002	0.003	mg/l	0.0075		no
08 May 2014 & 12 Nov 2014	MW-4	Chloride	Standard Method	Biannual	47.7	43.9	mg/l	187.5		no
08 May 2014 & 12 Nov 2014	MW-4	Fluoride		Biannual	0.649	0.622	mg/l		1	no
08 May 2014 & 12 Nov 2014	MW-4	Sulphate		Biannual	211	129.9	mg/l	187.5		no
08 May 2014 & 12 Nov 2014	MW-4	Nitrate NO3	Ion Selective Electrode	Biannual	0.025	0.025	mg/l	37.5		no
08 May 2014 & 12 Nov 2014	MW-4	COD	Standard Method	Biannual	9	7.5	mg/l	No Abnormal Change		no
08 May 2014 & 12 Nov 2014	MW-4	Conductivity	pH electrode/meter	Biannual	894	661	uS/cm	800-1875		no
08 May 2014 & 12 Nov 2014	MW-4	pH	pH electrode/meter	Biannual	7.2	7.2	pH Units	6.5-9.5		no
08 May 2014 & 12 Nov 2014	MW-4	Nitrite NO2	Ion Selective Electrode	Biannual	0.025	0.025	mg/l	375		no
08 May 2014 & 12 Nov 2014	MW-4	Ammonia NH4	Ion Selective Electrode	Biannual	<0.27 (LOD)	<0.27 (LOD)	mg/l	0.0165-0.175		no

Groundwater/Soil monitoring template				Lic No:	P0643-02	Year	2014			
08 May 2014 & 12 Nov 2014	MW-4	Ortho-Phosphate		Biannual	0.02	0.02	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-4	Temperature	Thermometer	Biannual	12.2	12.2	degrees C	25		no
08 May 2014 & 12 Nov 2014	MW-4	Aluminium	Atomic Absorption/ICP	Biannual	1.33	2.25	mg/l	0.15		no
08 May 2014 & 12 Nov 2014	MW-4	Cadmium	Atomic Absorption/ICP	Biannual	<0.006	<0.006	mg/l	0.004		no
08 May 2014 & 12 Nov 2014	MW-4	Calcium	Atomic Absorption/ICP	Biannual	232	352	mg/l		200	no
08 May 2014 & 12 Nov 2014	MW-4	Chromium	Atomic Absorption/ICP	Biannual	0.003	0.003	mg/l	0.0375		no
08 May 2014 & 12 Nov 2014	MW-4	Cobalt	Atomic Absorption/ICP	Biannual	0.004	0.005	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-4	Copper	Atomic Absorption/ICP	Biannual	0.017	0.025	mg/l	1.5		no
08 May 2014 & 12 Nov 2014	MW-4	Iron	Atomic Absorption/ICP	Biannual	3.13	6.03	mg/l		0.2	no
08 May 2014 & 12 Nov 2014	MW-4	Lead	Atomic Absorption/ICP	Biannual	0.015	0.023	mg/l	0.019		no
08 May 2014 & 12 Nov 2014	MW-4	Magnesium	Atomic Absorption/ICP	Biannual	25.2	27.2	mg/l		50	no
08 May 2014 & 12 Nov 2014	MW-4	Manganese	Atomic Absorption/ICP	Biannual	1.334	2.56	mg/l		0.05	no
08 May 2014 & 12 Nov 2014	MW-4	Mercury	Atomic Absorption/ICP	Biannual	<0.0001 (LOD)	<0.0001 (LOD)	mg/l	0.00075		no
08 May 2014 & 12 Nov 2014	MW-4	Nickel	Atomic Absorption/ICP	Biannual	0.012	0.019	mg/l	0.015		no
08 May 2014 & 12 Nov 2014	MW-4	Potassium	Atomic Absorption/ICP	Biannual	2.15	2.33	mg/l		5	no
08 May 2014 & 12 Nov 2014	MW-4	Silver	Atomic Absorption/ICP	Biannual	0.00087	0.0098	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-4	Sodium	Atomic Absorption/ICP	Biannual	20.9	23.4	mg/l	150		no

Groundwater/Soil monitoring template					Lic No:	P0643-02	Year	2014		
08 May 2014 & 12 Nov 2014	MW-4	Tin	Atomic Absorption/ICP	Biannual	<0.007 (LOD)	<0.007 (LOD)	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-4	Zinc	Atomic Absorption/ICP	Biannual	0.024	0.03	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-4	Antimony	Atomic Absorption/ICP	Biannual	<0.0016 (LOD)	<0.0016 (LOD)	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-4	Selenium	Atomic Absorption/ICP	Biannual	0.002	0.0024	mg/l	-	-	no
08 May 2014 & 12 Nov 2014	MW-4	Arsenic	Atomic Absorption/ICP	Biannual	0.0046	0.0078	mg/l	0.0075		no
<p>*please note exceedance of generic assessment criteria (GAC) such as a Groundwater Threshold Value (GTV) or an Interim Guideline Value (IGV) or an upward trend in results for a substance indicates that further interpretation of monitoring results is required. In addition to completing the above table, please complete the Groundwater Monitoring Guideline Template Report at the link provided and submit separately through ALDER as a licensee return or as otherwise instructed by the EPA. Groundwater monitoring template</p>										
<p>More information on the use of soil and groundwater standards/ generic assessment criteria (GAC) and risk assessment tools is available in the EPA published guidance (see the link in G31) Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites (EPA 2013).</p>										
<p>**Depending on location of the site and proximity to other sensitive receptors alternative Receptor based Water Quality standards should be used in addition to the GTV e.g. if the site is close to surface water compare to Surface Water Environmental Quality Standards (SWEQS). If the site is close to a drinking water supply compare results to the Drinking Water Standards (DWS)</p>								<p>Surface water EQS Groundwater regulations Drinking water (private supply) standards Drinking water (public supply) standards</p>		

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Table 3: Soil results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit
							SELECT
							SELECT

Where additional detail is required please enter it here in 200 words or less

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Environmental Liabilities template		Lic No:	P0643-02	Year	2014
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[Click here to access EPA guidance on Environmental Liabilities and Financial provision](#)

			Commentary
1	ELRA initial agreement status	TBC	AbbVie are engaging with the EPA to agree ELRA
2	ELRA review status	Review required and not completed;	AbbVie are engaging with the EPA to agree ELRA
3	Amount of Financial Provision cover required as determined by the latest ELRA	€75,375 (2010)	
4	Financial Provision for ELRA status	TBC	AbbVie are engaging with the EPA to agree ELRA
5	Financial Provision for ELRA - amount of cover	TBC	
6	Financial Provision for ELRA - type	TBC	
7	Financial provision for ELRA expiry date	TBC	
8	Closure plan initial agreement status	TBC	AbbVie are engaging with the EPA to agree CRAMP
9	Closure plan review status	Review required and not completed	AbbVie are engaging with the EPA to agree CRAMP
10	Financial Provision for Closure status	TBC	
11	Financial Provision for Closure - amount of cover	TBC	
12	Financial Provision for Closure - type	TBC	
13	Financial provision for Closure expiry date	TBC	

Environmental Management Programme/Continuous Improvement Programme template		Lic No:	P0643-02	Year	2014
Highlighted cells contain dropdown menu click to view		Additional Information			
1	Do you maintain an Environmental Mangement System (EMS) for the site. If yes, please detail in additional information	Yes	Abbvie has been ISO14001 accredited since 2012		
2	Does the EMS reference the most significant environmental aspects and associated impacts on-site	Yes	The purpose of the EMP is to identify the Environmental objectives and targets and action plans which have been created by the Health, Safety and Environmental Manager. The Register of Aspects references the most significant environmental aspects and is based on the risk assessment process. From this assessment the environmental objectives and targets are prioritised.		
3	Does the EMS maintain an Environmental Management Programme (EMP) as required in accordance with the licence requirements	Yes			
4	Do you maintain an environmental documentation/communication system to inform the public on environmental performance of the facility, as required by the licence	No	The Environmental Policy is available in the reception area. The HS&E manager, in conjunction with the relevant personnel, review the EMP on an annual basis with a view to demonstrating a commitment to continual improvement of environmental performance within the company. This is reported to the relevant personnel within Honeywell. Hard copies are available for viewing by the EPA on site. ☒		

Environmental Management Programme (EMP) report					
Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
1 Energy Efficiency/Utility conservation	4% CO2 reduction to be achieved in 2014	100	Reduction was achieved through the following projects: <ul style="list-style-type: none"> • TO heat recovery project • Heat pump and HVAC chiller project • Synthroid conversion to low pressure hot water • Air compressor and dryer project 	Energy Leader - Peter Moran	Reduced emissions

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	P0643-02	Year	2014
2	Waste reduction/Raw material usage efficiency	Implement at least 2 Environmental Sustainability projects that reduce water usage, energy consumption (at least 2) air emission or waste disposal in 2014	100	<p>Energy reduction was achieved through the following projects:</p> <ul style="list-style-type: none"> • TO heat recovery project • Heat pump and HVAC chiller project • Synthroid conversion to low pressure hot water • Air compressor and dryer project <p>Environmental Reduction projects include:</p> <ul style="list-style-type: none"> • Solid Hazardous Waste (Divert to Waste to Energy) • Aqueous Liquid (Reduce sampling based on history & utilise two Indaver sites for treatment) • Solvent Liquid Waste (divert to Lagan Cement for recovery) 	EHS - Lorraine Gillespie	Improved Environmental Management Practices	
3	Waste reduction/Raw material usage efficiency	10% reduction on waste disposal	100	<p>10% reduction on waste disposal costs by:</p> <p>Transportation Costs (Management of tanker drops & collections)</p> <p>Solid Hazardous Waste (Divert to Waste to Energy)</p> <p>Aqueous Liquid (Reduce sampling based on history & utilise two Indaver sites for treatment)</p> <p>- Solvent Liquid Waste (divert to Lagan Cement for recovery)</p> <p>- Optimise correct waste segregation in each of the four buildings</p>	EHS - Lorraine Gillespie	Reduced emissions	
4	Reduction of emissions to Wastewater	review alternative treatment for waste water streams generated from DP	100	Trials on the UV/ hydrogen peroxide system for Synthroid Waste Water completed in September 2014. Project was put on hold for 2014/ 2015.	EHS - Lorraine Gillespie & Site Services	Reduced emissions	
5	Waste reduction/Raw material usage efficiency	achieve zero waste to landfill	100	Achieved in 2014	EHS - Lorraine Gillespie & Site Services	Reduced emissions	

Noise monitoring summary report Lic No: P0643-02 Year: 2014

- 1 Was noise monitoring a licence requirement for the AER period?
If yes please fill in table N1 noise summary below
- 2 Was noise monitoring carried out using the EPA Guidance note, including completion of the "Checklist for noise measurement report" included in the guidance note as table 6? [Noise Guidance note NG4](#)
- 3 Does your site have a noise reduction plan
- 4 When was the noise reduction plan last updated?
- 5 Have there been changes relevant to site noise emissions (e.g. plant or operational changes) since the last noise survey?

Table N1: Noise monitoring summary

Date of monitoring	Time period	Noise location (on site)	Noise sensitive location -NSL (if applicable)	LA _{eq}	LA ₉₀	LA ₁₀	LA _{max}	Tonal or Impulsive noise* (Y/N)	If tonal /impulsive noise was identified was 5dB penalty applied?	Comments (ex. main noise sources on site, & extraneous noise ex. road traffic)	Is <u>site</u> compliant with noise limits (day/evening/night)?
29-Sep-14	13:13 - 13:28	B1		43	40	43	69	No	n/a	Road traffic main noise source	Yes
29-Sep-14	14:18 - 14:33	B1		47	41	45	74	No	n/a	Road traffic main noise source	Yes
29/30-Sep-14	23:57 - 00:12	B1		41	39	43	59	No	n/a	Road traffic main noise source	Yes
29-Sep-14	12:51 - 13:06	B2		45	43	46	58	No	n/a	Road traffic main noise source	Yes
29-Sep-14	13:57 - 14:12	B2		49	46	52	58	No	n/a	Road traffic main noise source	Yes
29-Sep-14	23:34 - 23:49	B2		46	44	47	58	No	n/a	Road traffic main noise source	Yes
29-Sep-14	12:31 - 12:46	B3		52	49	53	65	No	n/a	Road traffic main noise source	Yes
29-Sep-14	13:38 - 13:53	B3		52	50	53	66	No	n/a	Road traffic main noise source	Yes
29-Sep-14	23:15 - 23:30	B3		49	49	50	64	No	n/a	Road traffic main noise source	Yes
29-Sep-14	15:34 - 15:49	B4	NSL1	47	41	49	66	No	n/a	Road traffic main noise source	Yes
29-Sep-14	16:39 - 16:54	B4	NSL1	47	41	50	58	No	n/a	Road traffic main noise source	Yes
30-Sep-14	00:35 - 00:50	B4	NSL1	39	33	41	66	No	n/a	Road traffic main noise source	Yes
30-Sep-14	01:43 - 01:58	B4	NSL1	38	31	38	65	No	n/a	n/a	Yes
29-Sep-14	15:55 - 16:10		NSL2	49	43	53	59	No	n/a	Road traffic main noise source	Yes

29-Sep-14	16:58 - 17:13		NSL2	50	43	53	70	No	n/a	Road traffic main noise source	Yes
30-Sep-14	00:59 - 01:14		NSL2	39	35	39	55	No	n/a	Road traffic main noise source	Yes
30-Sep-14	02:05 - 02:20		NSL2	40	34	41	60	No	n/a	Road traffic main noise source	Yes
29-Sep-14	16:17 - 16:32		NSL3	68	39	72	85	No	n/a	Road traffic main noise source	Yes
29-Sep-14	17:22 - 17:37		NSL3	70	44	75	87	No	n/a	Road traffic main noise source	Yes
30-Sep-14	01:20 - 01:35		NSL3	60	34	44	86	No	n/a	Road traffic main noise source	Yes
30-Sep-14	02:25 - 02:40		NSL3	57	32	42	87	No	n/a	Road traffic main noise source	Yes

*Please ensure that a tonal analysis has been carried out as per guidance note NG4. These records must be maintained onsite for future inspection

If noise limits exceeded as a result of noise attributed to site activities, please choose the corrective action from the following options?

n/a

** please explain the reason for not taking action/resolution of noise issues?
Any additional comments? (less than 200 words)

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- 1 When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below
- 2 Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information
- 3 Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information

Additional information	
18/04/2014	Audits are carried out annually - AbbVie achieved ISO50001:2011 in 2013.
Yes	Member of SEAI - LIEN Group and part of the American Chamber of Commerce Energy Sub-Group
Yes	

Energy Use	Previous year	Current year	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*
Total Energy Used (MWHrs)	9,439	10,737		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	9,439	10,737		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	969	1,314		
Natural gas (m3)	987	468		
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

* where consumption of energy can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.
 ** where site production information is available please enter percentage increase or decrease compared to previous year

Water use	Water extracted		Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Water Emissions		Water Consumption	
	Previous year m3/yr.	Current year m3/yr.			Volume Discharged back to environment(m ³ /yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:	
Groundwater								
Surface water								
Public supply	70,896	80,869			69,715		11,154	
Recycled water								
Total	70,896	80,869			69,715		11,154	

* where consumption of water can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.
 ** where site production information is available please enter percentage increase or decrease compared to previous year

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Resource Usage/Energy efficiency summary Lic No: P0643-02 Year 2014

Table R3 Waste Stream Summary		Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	2630.751		2630.751		
Non-Hazardous (Tonnes)	84.753				

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Resource Usage/Energy efficiency summary Lic No: P0643-02 Year 2014

Date of audit	Recommendations	Description of Measures proposed	Origin of measures	Predicted energy savings %	Implementation date	Responsibility	Completion date	Status and comments
18/04/2014	1 no. non-conformance - Competence Training and Awareness	Updated new-starter training plans	energy audit	n/a	Mar-14	Energy Team Leader	Mar-14	
18/04/2014	Opportunities for Improvements	Review of energy variables	energy audit	n/a	Ongoing	Energy Team Leader	Ongoing	Ongoing
18/04/2014	Opportunities for Improvements	Use of a 1-page sheet for SEUs	energy audit	n/a	Ongoing	Energy Team Leader	Ongoing	Ongoing

Table R5: Power Generation: Where power is generated onsite (e.g. power generation facilities/food and drink industry) please complete the following information

	Unit ID	Unit ID	Unit ID	Unit ID	Station Total
Technology	Trial Wind Mast				
Primary Fuel	Wind				
Thermal Efficiency	n/a				
Unit Date of Commission	23-Dec-14				
Total Starts for year	n/a				
Total Running Time	n/a				
Total Electricity Generated (GWH)	trial				
House Load (GWH)	n/a				
KWH per Litre of Process Water	n/a				
KWH per Litre of Total Water used on Site					

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Complaints and Incidents summary template Lic No: P0643-02 Year 2014

Complaints Additional information

Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below

No

Table 1 Complaints summary							
Date	Category	Other type (please specify)	Brief description of complaint (Free txt <20 words)	Corrective action < 20 words	Resolution status	Resolution date	Further information
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
Total complaints open at start of reporting year							
Total new complaints received during reporting year							
Total complaints closed during reporting year							
Balance of complaints end of reporting year							

Incidents Additional information

Have any incidents occurred on site in the current reporting year? Please list all incidents for current reporting year in Table 2 below

Yes

*For information on how to report and what constitutes an incident [What is an incident](#)

Table 2 Incidents summary														
Date of occurrence	Incident nature	Location of occurrence	Incident category* please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurrence
06-Feb-14	Monitoring equipment offline	Licensed discharge point (SE-1)	1. Minor	Sewer	Plant or equipment issues		Normal activities	EPA	New	Tubing was blocked so equipment replaced with 1 day	Additional tubing ordered and maintained in stock in case of recurrence	Complete	07/02/2014	Low
23-Jun-14	Monitoring equipment offline	Licensed discharge point (A2-1(a))	1. Minor	Air	Plant or equipment issues		Routine maintenance	EPA	New	TO shut down, vendor on-site, premapure sample drying system replaced	Assigned once root cause analysis and investigation completed by the Vendor	Complete	30/05/2014	Low

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Complaints and Incidents summary template													Lic No:	P0643-02	Year	2014
19-Sep-14	Monitoring equipment offline	Licenced discharge point (SE-1)	1. Minor	Sewer	Plant or equipment issues		Normal activities	EPA	New	pH probe in SE-1 to be located in the correct location of the drain	SE-1 to be permanently secured to restrict displacement/movement during periods of high flow	Complete	29/09/2014	Low		
15-Oct-14	Breach of ELV	Licenced discharge point (SE-1)	1. Minor	Sewer	Plant or equipment issues		Normal activities	EPA	New	Review of tank recirculation process, verify mixing time required and check for blockages	pH meter installed at outlets	Complete	07/11/2014	Low		
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT		
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT		
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT		
Total number of incidents current year														4		
Total number of incidents previous year														4		
% reduction/increase														0%		

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WASTE SUMMARY	Lic No:	P0643-02	Year	2014
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SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES [PRTR facility login](#) dropdown list click to see options

SECTION B- WASTE ACCEPTED ONTO SITE-TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES

Additional Information

1 Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting)
 If yes please enter details in table 1 below

2 Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information

3 Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information

Table 1 Details of waste accepted onto your site for recovery, disposal or treatment (do not include wastes generated at your site, as these will have been reported in your PRTR workbook)

Licensed annual tonnage limit for your site (total tonnes/annum)	EWC code European Waste Catalogue EWC codes	Source of waste accepted	Description of waste accepted Please enter an accurate and detailed description - which applies to relevant EWC code European Waste Catalogue EWC codes	Quantity of waste accepted in current reporting year (tonnes)	Quantity of waste accepted in previous reporting year (tonnes)	Reduction/ Increase over previous year +/- %	Reason for reduction/ increase from previous reporting year	Packaging Content (%)- only applies if the waste has a packaging component	Disposal/Recovery or treatment operation carried out at your site and the description of this operation	Quantity of waste remaining on site at the end of reporting year (tonnes)	Comments -

SECTION C-TO BE COMPLETED BY ALL WASTE FACILITIES (waste transfer stations, Composters, Material recovery facilities etc) EXCEPT LANDFILL SITES

4 Is all waste processing infrastructure as required by your licence and approved by the Agency in place? If no please list waste processing infrastructure required on site

5 Is all waste storage infrastructure as required by your licence and approved by the Agency in place? If no please list waste storage infrastructure required on site

6 Does your facility have relevant nuisance controls in place?

7 Do you have an odour management system in place for your facility? If no why?

8 Do you maintain a sludge register on site?

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

Waste types permitted for disposal	Authorised/licenced annual intake for disposal (tpa)	Actual intake for disposal in reporting year (tpa)	Remaining licensed capacity at end of reporting year (m3)	Comments

Table 3 General information-Landfill only

Area ID	Date landfilling commenced	Date landfilling ceased	Currently landfilling	Private or Public Operated	Inert or non-hazardous	Predicted date to cease landfilling	Licence permits asbestos	Is there a separate cell for asbestos?	Accepted asbestos in reporting year	Total disposal area occupied by waste	Lined disposal area occupied by waste	Unlined area	Comments on liner type
										SELECT UNIT	SELECT UNIT	SELECT UNIT	
Cell 8													

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WASTE SUMMARY Lic No: P0643-02 Year 2014

Table 4 Environmental monitoring-landfill only [Landfill Manual-Monitoring Standards](#)

Was meteorological monitoring in compliance with Landfill Directive (LD) standard in reporting year +	Was leachate monitored in compliance with LD standard in reporting year	Was Landfill Gas monitored in compliance with LD standard in reporting year	Was SW monitored in compliance with LD standard in reporting year	Have GW trigger levels been established	Were emission limit values agreed with the Agency (ELVs)	Was topography of the site surveyed in reporting year	Has the statement under S53(A)(5) of WMA been submitted in reporting year	Comments

+ please refer to Landfill Manual linked above for relevant Landfill Directive monitoring standards

Table 5 Capping-Landfill only

Area uncapped*	Area with temporary cap	Area with final cap to LD Standard m2 ha. a	Area capped other	Area with waste that should be permanently capped to date under licence	What materials are used in the cap	Comments
SELECT UNIT	SELECT UNIT					

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9 Is leachate from your site treated in a Waste Water Treatment Plant?

SELECT

10 Is leachate released to surface water? If yes please complete leachate mass load information below

SELECT

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

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[Guidance to completing the PRTR workbook](#)

AER Returns Workbook

Version 1.1.18

REFERENCE YEAR	2014
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1. FACILITY IDENTIFICATION

Parent Company Name	Abbott Ireland
Facility Name	Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations
PRTR Identification Number	P0643
Licence Number	P0643-02

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Manorhamilton Road
Address 2	Sligo
Address 3	
Address 4	
	Sligo
Country	Ireland
Coordinates of Location	-8.45312 54.2850
River Basin District	IEWE
NACE Code	2120
Main Economic Activity	Manufacture of pharmaceutical preparations
AER Returns Contact Name	Lorraine Gillespie
AER Returns Contact Email Address	lorraine.gillespie@abbvie.com
AER Returns Contact Position	EHS Team Leader
AER Returns Contact Telephone Number	071-9137785
AER Returns Contact Mobile Phone Number	-
AER Returns Contact Fax Number	-
Production Volume	0.0
Production Volume Units	
Number of Installations	1
Number of Operating Hours in Year	8760
Number of Employees	202
User Feedback/Comments	
Web Address	

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2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
4(e)	Installations using a chemical or biological process for the production on an industrial scale of basic pharmaceutical products

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

Is it applicable?	
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4. WASTE IMPORTED/ACCEPTED ONTO SITE

[Guidance on waste imported/accepted onto site](#)

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities) ?	
--	--

This question is only applicable if you are an IPPC or Quarry site

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

[PRTR#: P0643 | Facility Name : Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations | Filename : Abbvie AER 2014_DRAFT.xls | Return Year : 2014 |

31/03/2015 14:11

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR					Please enter all quantities in this section in KGs							
POLLUTANT		METHOD			A1-1 & A1-2		A2-1(a)			QUANTITY		
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year			
11	Sulphur oxides (SOx/SO2)	M	OTH	Continuous by Infrared Analyser	26.28	524.16	550.44	0.0	0.0			
08	Nitrogen oxides (NOx/NO2)	M	OTH	Continuous by Infrared Analyser	1007.0	1966.0	2973.0	0.0	0.0			

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO AIR					Please enter all quantities in this section in KGs							
POLLUTANT		METHOD			A1-1 & A1-2		A2-1(a)			QUANTITY		
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year		
02	Carbon monoxide (CO)	M	OTH	Continuous by Infrared Analyser	175.2	458.64	0.0	633.84	0.0	0.0	0.0	

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

RELEASES TO AIR					Please enter all quantities in this section in KGs									
POLLUTANT		METHOD			A1-1 & A1-2		A2-1(a)	A2-1(b)	A2-3	A2-4	A2-5	QUANTITY		
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4	Emission Point 5	Emission Point 6	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
244	Total Particulates	M	OTH	Adsorption, absorption and GCMS	31.4	0.0	0.0	0.0	0.0	0.0	131.4	0.0	0.0	0.0
202	2-methoxyethanol	M	OTH	VDI 3481 Adsorption, absorption and GCMS	0.0	13.1	1.31	0.0	0.0	0.0	14.41	0.0	0.0	0.0
230	TA Luft organic substances class 1	M	OTH	US EPA Method 18	0.0	13.1	1.31	0.0	0.0	0.0	14.41	0.0	0.0	0.0
231	TA Luft organic substances class 2	M	OTH	Adsorption, absorption and GCMS	0.0	19.66	0.22	0.0	0.0	0.0	19.88	0.0	0.0	0.0
209	Dimethylformamide	M	OTH	Adsorption, absorption and GCMS	0.0	13.1	1.31	0.0	0.0	0.0	14.41	0.0	0.0	0.0
351	Total Organic Carbon (as C)	M	OTH	Continuous using flame ionisation detector	0.0	13.1	0.22	0.0	0.0	0.0	13.32	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill: Please enter summary data on the quantities of methane flared and / or utilised					Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations				
T (Total) kg/Year		M/C/E	Method Code	Designation or Description	Facility Total Capacity m3 per hour				
Total estimated methane generation (as per site model)		0.0			N/A				
Methane flared		0.0			0.0 (Total Flaring Capacity)				
Methane utilised in engine/s		0.0			0.0 (Total Utilising Capacity)				
Net methane emission (as reported in Section A above)		0.0			N/A				

4.2 RELEASES TO WATERS

[Link to previous years emissions data](#)

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT		Method Used			QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT		Method Used			QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT		Method Used			QUANTITY			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

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4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

| PRTR# : P0643 | Facility Name : Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations |

31/03/2015 14:14

SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	SE-1 Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
06	Ammonia (NH3)	M	OTH	Spectrophotometry Lab is on the Register of Quality Approved Labs submitting Data to EPA	138036.0	138036.0	0.0	0.0
13	Total phosphorus	M	OTH	APHA/AWWA/WEF Titration APHA/AWWA/WEF Standard Method 4500-Cl B. Lab is on the Register of Quality Approved Labs submitting Data to EPA	75292.0	75292.0	0.0	0.0
79	Chlorides (as Cl)	M	OTH		46221045.0	46221045.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	SE-1 Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
306	COD	M	OTH	5 Day Incubation & DO Probe. Lab is on the Register of Quality Approved Labs submitting Data to EPA.	3450893.0	3450893.0	0.0	0.0
303	BOD	M	OTH	Ion-selective electrode, spectrophotometry. Lab is on the Register of Quality Approved Labs submitting Data to EPA.	1275785.0	1275785.0	0.0	0.0
240	Suspended Solids	M	OTH	Digestion & Spectrophotometry. Lab is on the Register of Quality Approved Labs submitting Data to EPA.	2063564.0	2063564.0	0.0	0.0
362	Kjeldahl Nitrogen	M	OTH	Ion Selective Electrode. Lab is on the Register of Quality Approved Labs submitting Data to EPA.	388313.0	388313.0	0.0	0.0
327	Nitrate (as N)	M	OTH		304655.0	304655.0	0.0	0.0
372	Nitrite (as N)	M	OTH	Spectrophotometry. Lab is on the Register of Quality Approved Labs submitting Data to EPA.	12549.0	12549.0	0.0	0.0
343	Sulphate	M	OTH	Turbidimetry. Lab is on the Register of Quality Approved Labs submitting Data to EPA.	5437770.0	5437770.0	0.0	0.0
314	Fats, Oils and Greases	M	OTH		697150.0	697150.0	0.0	0.0
330	Organic solvents	M	OTH		2517.0	2517.0	0.0	0.0
308	Detergents (as MBAS)	M	OTH		21612.0	21612.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

4.4 RELEASES TO LAND

[Link to previous years emissions data](#)

| PRTR# : P0643 | Facility Name : Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations | Filename : P0643_2014_(DRAFT).xls | Return \

31/03/2015 14:15

SECTION A : PRTR POLLUTANTS

POLLUTANT		RELEASURES TO LAND			Please enter all quantities in this section in KGs		
POLLUTANT		METHOD			QUANTITY		
No. Annex II	Name	M/C/E	Method Code	Method Used Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

POLLUTANT		RELEASURES TO LAND			Please enter all quantities in this section in KGs		
POLLUTANT		METHOD			QUANTITY		
Pollutant No.	Name	M/C/E	Method Code	Method Used Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

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5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# : P0643 | Facility Name : Abbott Ireland trading as Abbott Ireland Pharmaceutical Operations | Filename : P0643_2014_(DRAFT).xls | Return Year : 2014 |

31/03/2015 14:15

Please enter all quantities on this sheet in Tonnes

35

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						MC/E	Method Used					
To Other Countries	06 01 02	Yes	0.584	hydrochloric acid	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium	Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium
To Other Countries	06 01 06	Yes	0.711	other acids	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium	Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium
To Other Countries	06 02 05	Yes	0.703	other bases	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium	Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium
To Other Countries	07 05 01	Yes	385.16	aqueous washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	AVG (Abfall Verwertungs Gesellschaft GmbH,B01VS0013 B01CA0012 B01BA0286,Borsignstrasse 2,,Hamburg,22113,Germany	Borsignstrasse 2,,Hamburg,22113,Germany
To Other Countries	07 05 01	Yes	1521.924	aqueous washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium	Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium
To Other Countries	07 05 01	Yes	119.38	aqueous washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	Indaver ARF,AP4_07_2009,ZI La Soudiere,Route de Soissons,02300 Chauny,,France	ZI La Soudiere,Route de Soissons,02300 Chauny,,France
To Other Countries	07 05 03	Yes	48.71	organic halogenated solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium	Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium
To Other Countries	07 05 04	Yes	63.72	other organic solvents, washing liquids and mother liquors	R2	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	Tradebe Solvent Recycling Ltd,BL7302ID,Middleton Road,Morecambe,Lancashire,LA3 3JW ,United Kingdom	Middleton Road,Morecambe,Lancashire,LA3 3JW ,United Kingdom
To Other Countries	07 05 04	Yes	180.746	other organic solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium	Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium
Within the Country	07 05 04	Yes	189.79	other organic solvents, washing liquids and mother liquors	R1	M	Weighed	Offsite in Ireland	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland
To Other Countries	07 05 13	Yes	28.102	solid wastes containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium	Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium

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To Other Countries	08 04 09	Yes	0.287	waste adhesives and sealants containing organic solvents or other dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	AVG (Abfall Verwertungs Gesellschaft GmbH,B01VS0013 B01CA0012 B01BA0286,Borsignstrasse 2,,Hamburg,22113,Germany Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium
To Other Countries	13 01 13	Yes	0.139	other hydraulic oils	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	AVG (Abfall Verwertungs Gesellschaft GmbH,B01VS0013 B01CA0012 B01BA0286,Borsignstrasse 2,,Hamburg,22113,Germany Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium
Within the Country	13 03 10	Yes	5.546	other insulating and heat transmission oils	R10	M	Weighed	Offsite in Ireland	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	AVG (Abfall Verwertungs Gesellschaft GmbH,B01VS0013 B01CA0012 B01BA0286,Borsignstrasse 2,,Hamburg,22113,Germany Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium
Within the Country	15 01 01	No	6.508	paper and cardboard packaging	R3	M	Weighed	Offsite in Ireland	Teoranta,W0106-02	Road Galway,,Ireland	
Within the Country	15 01 06	No	20.99	mixed packaging	R3	M	Weighed	Offsite in Ireland	Bruscar Bhearna Teoranta,W0106-02	Carrowbrowne,,Headford Road Galway,,Ireland	
To Other Countries	15 01 10	Yes	0.022	packaging containing residues of or contaminated by dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	AVG (Abfall Verwertungs Gesellschaft GmbH,B01VS0013 B01CA0012 B01BA0286,Borsignstrasse 2,,Hamburg,22113,Germany Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium
To Other Countries	15 01 10	Yes	22.778	packaging containing residues of or contaminated by dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	AVG (Abfall Verwertungs Gesellschaft GmbH,B01VS0013 B01CA0012 B01BA0286,Borsignstrasse 2,,Hamburg,22113,Germany Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium
To Other Countries	15 02 02	Yes	33.268	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	AVG (Abfall Verwertungs Gesellschaft GmbH,B01VS0013 B01CA0012 B01BA0286,Borsignstrasse 2,,Hamburg,22113,Germany Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium
Within the Country	16 02 13	Yes	1.956	discarded equipment containing hazardous components (16) other than those mentioned in 16 02 09 to 16 02 12	R4	M	Weighed	Offsite in Ireland	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	AVG (Abfall Verwertungs Gesellschaft GmbH,B01VS0013 B01CA0012 B01BA0286,Borsignstrasse 2,,Hamburg,22113,Germany Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium
To Other Countries	16 03 03	Yes	1.172	inorganic wastes containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	AVG (Abfall Verwertungs Gesellschaft GmbH,B01VS0013 B01CA0012 B01BA0286,Borsignstrasse 2,,Hamburg,22113,Germany Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium
To Other Countries	16 05 04	Yes	0.034	gases in pressure containers (including halons) containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	AVG (Abfall Verwertungs Gesellschaft GmbH,B01VS0013 B01CA0012 B01BA0286,Borsignstrasse 2,,Hamburg,22113,Germany Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium
To Other Countries	16 05 06	Yes	1.126	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	AVG (Abfall Verwertungs Gesellschaft GmbH,B01VS0013 B01CA0012 B01BA0286,Borsignstrasse 2,,Hamburg,22113,Germany Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV/bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium

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To Other Countries	16 05 06	Yes	0.069	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	AVG (Abfall Verwertungs Gesellschaft GmbH,B01VS0013 B01CA0012 B01BA0286,Borsignstrasse 2,,Hamburg,22113,Germany Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium SRCL Limited,W0054-02,430 Beech Road ,Western Industrial Estate Naas Road,Dublin,12,Ireland	Borsignstrasse 2,,Hamburg,22113,Germany Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium 430 Beech Road ,Western Industrial Estate Naas Road,Dublin,12,Ireland
To Other Countries	16 05 07	Yes	1.042	discarded inorganic chemicals consisting of or containing dangerous substances	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium SRCL Limited,W0054-02,430 Beech Road ,Western Industrial Estate Naas Road,Dublin,12,Ireland	Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium 430 Beech Road ,Western Industrial Estate Naas Road,Dublin,12,Ireland
Within the Country	16 09 04	Yes	0.146	oxidising substances, not otherwise specified	D10	M	Weighed	Offsite in Ireland	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium SRCL Limited,W0054-02,430 Beech Road ,Western Industrial Estate Naas Road,Dublin,12,Ireland	Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium 430 Beech Road ,Western Industrial Estate Naas Road,Dublin,12,Ireland
Within the Country	18 01 03	Yes	0.5	wastes whose collection and disposal is subject to special requirements in order to prevent infection	D9	M	Weighed	Offsite in Ireland	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium SRCL Limited,W0054-02,430 Beech Road ,Western Industrial Estate Naas Road,Dublin,12,Ireland	430 Beech Road ,Western Industrial Estate Naas Road,Dublin,12,Ireland
Within the Country	20 01 08	No	2.508	biodegradable kitchen and canteen waste	R3	M	Weighed	Offsite in Ireland	Bruscar Bheama Teoranta,W0106-02	Carrowbrowne,,Headford Road Galway,,Ireland	Irish Lamp Recycling Co Ltd.,WFP-KE-14-0072-01,Woodstock Industrial Estate,Kilkenny Road,Athy,Co. Kildare,Ireland	Woodstock Industrial Estate,Kilkenny Road,Athy,Co. Kildare,Ireland
Within the Country	20 01 21	Yes	0.128	fluorescent tubes and other mercury-containing waste	R4	M	Weighed	Offsite in Ireland	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium	Woodstock Industrial Estate,Kilkenny Road,Athy,Co. Kildare,Ireland
Within the Country	20 01 38	No	2.2	wood other than that mentioned in 20 01 37	R3	M	Weighed	Offsite in Ireland	Bruscar Bheama Teoranta,W0106-02	Carrowbrowne,,Headford Road Galway,,Ireland	Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium	
Within the Country	20 01 39	No	0.53	plastics	R3	M	Weighed	Offsite in Ireland	Bruscar Bheama Teoranta,W0106-02	Carrowbrowne,,Headford Road Galway,,Ireland	Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium	
Within the Country	20 01 40	No	1.34	metals	R4	M	Weighed	Offsite in Ireland	Bruscar Bheama Teoranta,W0106-02	Carrowbrowne,,Headford Road Galway,,Ireland	Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium	
To Other Countries	06 01 04	Yes	0.307	phosphoric and phosphorous acid	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium	Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium
To Other Countries	06 02 04	Yes	0.281	sodium and potassium hydroxide	D10	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,,Ireland	Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium	Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium
Within the Country	07 05 04	Yes	22.42	other organic solvents, washing liquids and mother liquors	R1	M	Weighed	Offsite in Ireland	Lagan Cement Limited,P0487-06	Killaskillen,,Kinnegad,Co. Meath,Ireland	Lagan Cement Limited,P0487-06,Killaskillen,,Kinnegad,Co. Meath,Ireland	Killaskillen,,Kinnegad,Co. Meath,Ireland
Within the Country	20 01 02	No	0.22	glass	R5	M	Weighed	Offsite in Ireland	Bruscar Bheama Teoranta,W0106-02	Carrowbrowne,,Headford Road Galway,,Ireland	Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium	
Within the Country	20 03 01	No	32.557	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Bruscar Bheama Teoranta,W0106-02	Carrowbrowne,,Headford Road Galway,,Ireland	Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium	
Within the Country	20 03 07	No	17.9	bulky waste	R1	M	Weighed	Offsite in Ireland	Bruscar Bheama Teoranta,W0106-02	Carrowbrowne,,Headford Road Galway,,Ireland	Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium Indaver NV,MLAV1/9800000485/MV /bd ,Poldervlietweg 5,Haven 550 2030,Antwerp,,Belgium	

* Select a row by double-clicking the Description of Waste then click the delete button

[Link to previous years waste data](#)
[Link to previous years waste summary data & percentage change](#)
[Link to Waste Guidance](#)

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AbbVie Ireland NL B.V.

Solvent Management Plan
2014

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1. EXECUTIVE SUMMARY:

A Solvent Management Plan was prepared for the AbbVie Ireland NL B.V. at Manorhamilton Road Sligo, in order to comply with Condition 6.11 of the AbbVie Ireland NL B.V. Integrated Pollution and Prevention Control Licence (IPPC) Register No. P0643-02. This report is intended to comply with the requirements outlined in Condition 6.11 of the AbbVie Ireland NL B.V. IPPCL (referred to as the Directive from this point forward).

This report documents a solvent mass balance for the AbbVie Ireland NL B.V. installation and compares the calculated VOC emissions to determine solvent emissions from the installation and verify compliance with the stated limits in the Directive.

In summary;

- The installation uses two VOC compound, 2-Methoxyethanol (H360) and 1-Methyl-2-Pyrrolidinone (H360) which has the specified hazard statements indicated. Monitoring results of stack emissions indicate that emission concentrations do not exceed the emission limit value of 2 mg/Nm³ at mass flow rates of greater than 10 g/hour that is listed in the Annex VII Part 4 (1) of the Directive. No other compounds used by AbbVie Ireland NL B.V. have the H340, H350, H350i, H360D, H360F, H341 or H351 Hazard Statements
- The installation's VOC emissions consist of one compound Methylene Chloride with the risk phrase H351 and halogenated. Monitoring results of stack emissions indicate that emission concentrations do not exceed the emission limit value of 20 mg/Nm³ at mass flow rates of greater than 0.1 kg/hour that is listed in Annex VII Part 4 (2) of the Directive;
- The total AbbVie Ireland NL B.V. solvent emission, at 0.77%, is within the Total Emission Limit Value of 5% stated in Annex IIA Thresholds and Emissions Control to the Directive.

AbbVie Ireland NL B.V. has therefore demonstrated full compliance with Condition 6.10 of the AbbVie Ireland NL B.V. IPPC Licence i.e. *"6.10 Fugitive emissions to atmosphere shall not exceed 5% of solvent input on an annual basis."*

Consequently, no future solvent reduction scheme is required to reduce the VOC emissions in accordance with in Part 5 of Annex VII.

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2. INTRODUCTION

The AbbVie Ireland NL B.V. installation is located in the townland of Ballinode on the Manorhamilton Road in County Sligo. The Installation is a subsidiary of AbbVie.

Installation and Licence Details

This statement has been produced in compliance with the following condition of IPPC Licence Register No. P0643-02:

- 6.11 *“The Licensee shall prepare a solvent management plan in accordance with any relevant guideline in Annex III of Council Directive 1999/13/EC or as may be issued by the Agency from time to time. The solvent management plan shall be used to demonstrate compliance with fugitive emission limit value. The SMP shall be submitted as part of the AER”.*

Council Directive 1999/13/EC has been recast in Directive 2010/75/EU. Annex VII of the directive specifies emission limit values, timeframe for implementation plan and the procedure to evaluate emissions deriving from an installation, during activities defined in the Annex VII Part 1 of the Directive in so far they are operated above the solvent consumption threshold listed in Annex VII Part 2 of the same Directive.

3. SCOPE

The activities carried out at the installation fall within the scope of Annex VII Part 1 of Council Directive 2010/75/EU i.e.:

- *The chemical synthesis, fermentation, extraction, formulation and finishing of pharmaceutical products and manufacture of intermediate product.*

Solvent consumption is above the threshold defined in item 20 of ‘Annex VII Part 2 Thresholds and Emission Controls’ of the Directive i.e.:

- *Manufacturing of pharmaceutical product with a solvent consumption threshold > 50 tonnes/year.*

The scope of this statement, in accordance with AbbVie Ireland IPPC Licence, is the annual review of compliance with the total emission limit value reported in Annex VII Part 2 to the Directive reporting the Solvent Management Plan.

4. METHODOLOGY

The AbbVie Ireland Solvent Management Plan was prepared in accordance with Annex VII of the Directive is reproduced in Appendix A. It contains a detailed breakdown of solvent inputs and outputs during the reported year using the approved methodology.

The following notation and formulae were employed in the preparation of this report:

a) Organic solvent input (I):

- I1.** The quantity of organic solvents or their quantity in preparations purchased which are used as input into the process in the time frame over which the mass balance is being calculated.
I2. The quantity of organic solvents or their quantity in preparation recovered and reused as solvent input into the process. (The recycled solvent is counted every time it is used to carry out the activity.)

b) Organic solvent output (O):

- O1.** Emissions in waste gases
O2. Organic solvents lost in water, if appropriate taking into account waste water treatment when calculating O5
O3. The quantity of organic solvents which remains as contamination or residue in products output from the process.
O4. Uncaptured emissions of organic solvents to air. This includes the general ventilation of rooms, where air is released to the outside environment via windows, doors, vents and similar openings.

O5. Organic solvents and/or organic compounds lost due to chemical or physical reactions (including for example those which are destroyed, e.g. by incineration or other waste gas or waste water treatment, or captured, e.g. by adsorption, as long as they are not counted under O6, O7, or O8).

O6. Organic solvents contained in collected waste.

O7. Organic solvents or organic solvents contained in preparations, which are sold or are intended to be sold as a commercially valuable product.

O8. Organic solvents contained in preparations recovered for reuse but not as input into the process, as long as not counted under O7.

Calculation Methodology

a) The fugitive emission can be calculated according the following equation:

$$F = I1 - O1 - O5 - O6 - O7 - O8$$

b) Total emission (E) can be calculated according to the following equation:

$$E = F + O1$$

c) Consumption can be calculated according the following equation:

$$C = I1 - O8$$

d) Solvent input can be calculated according the following equation:

$$I = I1 + I2.$$

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5. RESULTS

The solvents listed in Table 1 below are those used by the installation in 2014 and any specified hazard statements are indicated.

Name of solvents (specified Hazard Statements if applicable)	CAS #	Solvent Consumption (tonnes / year)		
		Hazard Statements H340,H350,H350i,H360D or H360F	Specified Hazard Statements H341 or H351	Other
Acetone	67-64-1			0
Methanol	67-56-1			222.264
Ethanol	64-17-5			14.397
Ethyl Acetate	141-78-6			143.073
Glacial Acetic Acid	64-19-7			0
Hexanes	110-54-3			0.76
Isopropyl Alcohol	67-63-0			98.338
Methylene Chloride (H351) –halogenated)	75-09-2		7.694	
N-(Tetrahydrofuroyl)Piperazine	63074-07-7			0
1-Propanephosphonic Anhydride	68957-94-8			0
2- Methoxyethanol (H360)	109-86-4			
1-Methyl-2-pyrrolidinone H360	872-50-4	3.645		
Pyridine	110-86-1			0
Tetrahydrofuran, Anhydrous	109-99-9			72.27
2-Methyltetrahydrofuran	96-47-9			0
Triethylamine	121-44-8			2.355
Isopropyl Acetate	108-21-4			17.829
4 Methylmorpholine	109-02-4			0.103
DMSO	67-68-5			3.526
Misc	na			109.9
Subtotals		3.645	7.694	673.4
Total				684.7

Table 1 Solvent Consumption at AbbVie Ireland NL B.V. in 2014

EMISSION QUALITY AND QUANTITY

AbbVie Ireland NL B.V. carries out stack emissions monitoring in accordance with Schedule C of IPPCL Register No. P0643-02 and reports these to the Agency via the Annual Environmental Report (AER). All monitoring results were examined for compliance with IPPC Licence limits. The results obtained at each stack monitoring event show that emissions were in compliance with limits specified in IPPCL Register No. P0643-02. Monitoring results of stack emissions indicate that emission concentrations do not exceed the emission limit values listed in the Directive. Therefore AbbVie Ireland NL B.V. meets the Emission Limit Values in waste gases without the need for further abatement. Refer to Appendix A for all calculations pertaining to the AbbVie Ireland NL B.V. 2014 Solvent Management Plan in accordance with Annex III of the Directive.

Table 2 below summarises the key findings from the Solvent Management Plan.

Type of emission	Unit	Total
F (Fugitive emission)	<i>Tonnes per annum</i>	5.2
E (total emission)	<i>Tonnes per annum</i>	5.25
C (solvent consumption)	<i>Tonnes per annum</i>	684.7
I (solvent input)	<i>Tonnes per annum</i>	684.7
E/I (total emission ratio)	<i>%</i>	0.77

Table 2 Summary of key data from the Solvent Management Plan

The Total Emission Ratio or Fugitive Emissions value has been calculated at 0.77% as described in Table 2 above. Council Directive 1999/13/EC 'Annex IIA Thresholds and Emissions Control' specifies a Total Emission Limit Value of 5%. The calculated fugitive emission threshold value for the AbbVie Ireland NL B.V. installation i.e. 0.77% indicates that the AbbVie Ireland NL B.V. installation is in compliance with Condition 6.10 of IPPC Licence Register No. P0643-02.

6. CONCLUSION

The following conclusions are made after consideration of the data in the preceding Sections 1 and 2 and the Solvent Management Plan in Appendix A to this report:

1. The installation uses 1-Methoxyethanol (H360) and 1-Methyl-2-Pyrrolidinone (H360) which has the specified hazard statement indicated. Monitoring results of stack emissions indicate that emission concentrations do not exceed the emission limit value of 2 mg/Nm³ at mass flow rates of greater than 10 g/hour that is listed in the Annex VII Part 4 (1) of the Directive. No other compounds used by AbbVie Ireland NL B.V. have the H340, H350, H350i, H360D, H360F, H341 or H351 Hazard Statements
2. The installation's VOC emissions consist of one compound Methylene Chloride with the hazard statement H351 and halogenated. Monitoring results of stack emissions indicate that emission concentrations do not exceed the emission limit value of 20 mg/Nm³ at mass flow rates of greater than 0.1 kg/hour that is listed in Annex VII Part 4 (2) of the Directive;
3. The total AbbVie Ireland NL B.V. solvent emission, at 0.77% is within the Total Emission Limit Value of 5% stated in Annex IIA Thresholds and Emissions Control to the Directive.

Consequently, no future solvent reduction scheme is required to reduce the VOC emissions in accordance with Part 5 of Annex VII

2. Condition 6.10 of the AbbVie Ireland NL B.V. IPPC licence requires that Fugitive Emissions to atmosphere shall not exceed 5% of solvent input on an annual basis. Condition 6.11 requires AbbVie Ireland NL B.V. to demonstrate compliance with the Fugitive emission value by means of a Solvent Management Plan. Therefore, the generating and documenting of this Solvent Management Plan fulfils the requirement of Condition 6.11. The outcome of the solvent management plan, indicating the total AbbVie Ireland NL B.V. solvent fugitive emission is 0.77%, is within the limit of 5% in condition 6.10.

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Appendix A

ABBVIE IRELAND NL B.V. SOLVENT MANAGEMENT PLAN 2014

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Table A1 ABBVIE IRELAND NL B.V. 2014 SOLVENT MANAGEMENT PLAN

SOLVENT INPUT <i>(tonnes / year)</i>		Description
I=I1+I2=	684.7	Total solvent used is given by the difference of fresh solvent inventories plus the purchased during the year plus the recovered and reused solvent
I1=	684.7	Fresh solvent used is given by the difference of solvent inventories plus the purchased quantity during the year. e.g. for 2014 it is given from: inventory at 31/12/2013+ purchased solvents - inventory at 31/12/2014.
I2=	0.0	Organic solvents quantity recovered and reused in the processes
SOLVENT OUTPUT <i>(tonnes / year)</i>		
		Description
O1=	0.05	Emissions in waste gases. - Quantity of solvents lost in air emission through Thermal Oxidiser stack, A2-1. Engineering estimate based on typical TO loading and VOC destruction efficiency (>99.9%). CEMS data for VOC in TO stack indicates VOC figure of 3.5kg/yr. For purposes of this report the more conservative figure based on engineering estimates is adopted.
O2=	0.0	Organic solvents lost in water, if appropriate taking into account waste water treatment when calculating O5 - emissions to SE1 and SW1
O3=	0.0	The quantity of organic solvents which remains as contamination or residue in products output from the process.
O4=	0.0	Uncaptured emissions of organic solvents to air. This includes the general ventilation of rooms, where air is released to the outside environment via windows, doors, vents and similar openings.
O5=	77.45	Organic solvents and/or organic compounds lost due to chemical or physical reactions (including for example those which are destroyed, e.g. by incineration or other waste gas or waste water treatments, or captured, e.g. by adsorption, as long as they are not counted under O6, O7 or O8) - Organic solvents treated by Thermal Oxidiser are engineering estimates based on typical TO VOC loading from process ventilation and VOC destruction efficiency (>99.9%)
O6=	602	Organic solvents contained in collected waste.- Organic solvents contained in liquid or solid wastes sent outside for disposal
O7=	0.0	Organic solvents, or organic solvents contained in preparations, which are sold or are intended to be sold as a commercially valuable product.
O8=	0.0	Organic solvents contained in preparations recovered for reuse but not as input into the process, as long as not counted under O7.
O9=	0.0	Organic solvents released in other ways.
FUGITIVE EMISSION <i>(tonnes / year)</i>		
		Description
F= I1-O1-O5-O6-O7-O8=	5.2	Fugitive Emissions after accounting for solvent inputs and solvent outputs
TOTAL EMISSION <i>(tonnes / year)</i>		
		Description
E=F+O1=	5.25	Total solvent emissions from the ABBVIE IRELAND NL B.V. installation.
Consumption <i>-(tonnes / year)</i>		
C=I1-O8	684.7	
Total emission Value as % of solvent input		
=E/I	0.77%	Note: threshold limit value = 5%

Note: F denotes fugitive emissions E denotes Total emissions C denotes Consumption
I denotes Solvent input