

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Solvay Interox Limited
Baronet Road Chemicals
Baronet Road
Warrington
Cheshire
WA4 6HA

Variation application number

EPR/BS3824IJ/V007

Permit number

EPR/BS3824IJ

Baronet Road Chemicals

Permit number EPR/BS3824IJ

Introductory note

This introductory note does not form a part of the notice.

Under the Environmental Permitting (England & Wales) Regulations 2010 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies that all the conditions of the permit have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made and contains all conditions relevant to this permit. Only the variations specified in schedule 1 are subject to a right of appeal. Those conditions in schedule 2 that are not specified in schedule 1 were imposed under and refer to the PPC Regulations that were superseded by the EP Regulations and have effect as if they were made under the EP Regulations.

Purpose of Variation EPR/BS3824IJ/V007

The requirements of the Industrial Emissions Directive (IED) 2010/75/EU are given force in England through the Environmental Permitting (England and Wales) Regulations 2010 (the EPR) (as amended).

This Permit, for the operation of large combustion plant (LCP), as defined by articles 28 and 29 of the Industrial Emissions Directive (IED), is varied by the Environment Agency to implement the special provisions for LCP given in the IED, by the 1 January 2016 (Article 82(3)). The IED makes special provisions for LCP under Chapter III, introducing new Emission Limit Values (ELVs) applicable to LCP, referred to in Article 30(2) and set out in Annex V.

As well as implementing Chapter III of IED, the consolidated variation notice takes into account and brings together in a single document all previous variations that relate to the original permit issued.

The Operator has chosen to operate this LCP under the ELV compliance for CO and Transitional National Plan (TNP) for NO_x compliance route. For the parameters specified under the TNP the Operator is required to achieve IED standards by no later than June 2020. This is a change from the previous operating regime which was operation under emission limits determined by an assessment of the best available techniques (BAT).

The variation notice uses an updated LCP number in accordance with the most recent DEFRA LCP reference numbers. The LCP reference has changed as follows:

- LCP85 is changed to LCP330

Purpose of original permit

The rest of the installation is unchanged and continues to be operated as follows:

The operator manufactures hydrogen peroxide, sodium percarbonate and peracetic acid at the installation located to the south of Warrington (Grid Reference SJ 5974 8605). Production of the high volume products is in the order of 50,000 tonnes per annum for hydrogen peroxide (expressed as 100% active ingredient) and sodium percarbonate. The manufacture of hydrogen peroxide represents the principal listed activity on this installation. A significant proportion of the overall hydrogen peroxide production is consumed in other listed activities covered by this permit and by another operator on this site covered by another permit, EPR/PP3139XA.

The boiler plant has an overall net thermal input of 60.1 MWth comprising of two boilers rated at 29.646 MWth and 30.452 MWth which burn natural gas and are used to raise steam for direct process and space heating. Emissions from the boiler are released via two 40 m stacks within a common windshield. Cooling to quench boiler blowdown water is by borehole water. Gas oil is no longer used as secondary fuel in the event of interruptions in the gas supply.

The majority of the process effluent undergoes physico-chemical treatment on site prior to discharge into the sewer, this represents a listed activity under EPR. The discharge, subject to the requirements of a trade effluent consent, receives further treatment at Warrington North Wastewater Treatment Works prior to discharge into the River Mersey.

A direct discharge from the installation of the following lower risk effluent sources also takes place to the estuarial River Mersey: boiler plant blowdown, cooling tower blowdown and demineralised water plant effluent. The permit includes limits for the direct discharge to the estuarial River Mersey in order to ensure that the impact is minimised and to monitor the effectiveness of the measures in place to prevent abnormal releases.

Chemical manufacture uses a variety of liquid and solid raw materials that are delivered in bulk and semi bulk quantities and stored in accordance with the associated risk. In addition to these raw materials, borehole water from six locations is used for process cooling, potable water is used in the demineralisation plant and hydrogen is supplied via a dedicated pipeline to the Hydrogen Peroxide Plant.

Of the many releases to air from the chemical manufacturing processes, potentially significant emission points i.e. those fitted with abatement systems or those with larger mass emissions have been detailed in the permit. Particulate abatement systems minimise emissions associated with raw material / product storage, soda ash hoppers, vacuum cleaning, bagging machine, conveying / handling and drying / coating in the Sodium Percarbonate Plant. In the Hydrogen Peroxide Plant, emissions of volatile organic compounds are minimised through the use of carbon bed adsorption systems. Emission limits have been included in the permit to monitor the effectiveness of the carbon bed adsorption systems in the Hydrogen Peroxide Plant, the primary and coating drier system particulate arrestment systems in the Sodium Percarbonate Plant and the performance of the Combustion Plant.

The nearest designated habitat to the installation is Woolston Eyes (Site of Special Scientific Interest) at approximately 4km, while the nearest European site is Manchester Mosses (Special Area of Conservation) at approximately 8km.

The operator has an Environmental Management System in place and is party to a Climate Change Levy Agreement, in respect of the latter, a number of energy efficiency initiatives are being progressed.

The schedules specify the changes made to the permit.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status log		
Description	Date	Comments
Application BS3824IJ received	30/08/05	
Request for further information	19/05/06	Responses received 21/06/06 and 29/06/06
Permit BS3824IJ (A001)	30/06/06	Issued
Variation notice EP3439XZ (V002)	21/12/07	Issued
Partial transfer application PP3139XA	15/11/07	
Permit CP3538XF (partially transferred) (V003)	31/01/08	Issued
Variation notice MP3437XW (V004)	01/07/08	Issued
Variation determined EPR/BS3824IJ/V005	16/01/14	Agency variation issued to implement the changes introduced by Agency.
Application received for EPR/BS3824IJ/V006	07/07/15	Small increase in installation boundary and storage of hydrogen peroxide containers
Additional information received	15/09/15	Site condition report for new storage area
Variation determined EPR/BS3824IJ/V006 (PAS Billing ref: CP3537AH)	22/09/15	Varied permit issued for small increase in installation boundary and storage of hydrogen peroxide containers
Regulation 60 Notice sent to the Operator	31/10/14	Issue of a Notice under Regulation 60(1) of the EPR. Environment Agency Initiated review and variation to vary the permit under IED to implement the special provisions for LCP under Chapter III, introducing new Emission Limit

		Values (ELVs) applicable to LCP, referred to in Article 30(2) and set out in Annex V.
Regulation 60 Notice response	31/03/15	Response received from the Operator.
Additional information received	23/10/15	Clarification of Net Thermal Input
Variation determined EPR/BS3824IJ/V007 (PAS Billing ref: UP3334AA)	17/12/15	Varied permit issued for review of conditions resulting from the response to the Regulation 60(1) Notice of EPR.

Other Part A installation permits relating to this installation		
Operator	Permit number	Date of issue
Perstorp UK Limited	EPR/PP3139XA	31/01/08

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2010

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies and consolidates

Permit number

EPR/BS3824IJ

Issued to

Solvay Interox Limited (“the operator”)

whose registered office is

**Solvay House
Baronet Road
Warrington
Cheshire
WA4 6HA**

company registration number **01005238**

to operate a regulated facility at

**Baronet Road Chemicals
Baronet Road
Warrington
Cheshire
WA4 6HA**

to the extent set out in the schedules.

The notice shall take effect from 01/01/2016

Name	Date
Mike Jenkins	17 December 2015

Authorised on behalf of the Environment Agency

Schedule 1

The following conditions were varied as a result of an Environment Agency initiated variation:

Condition 1.1.1 refers to Table 1.1.1, *Activities* which is amended by the inclusion of new source descriptions for the LCP activity.

Condition 1.4.1 refers to Table 1.4.1 *Improvement Programme*, which is amended by the addition of IC14.

Condition 2.1.3 is added.

Condition 2.1.4 is added.

Condition 2.2.1.2 refers to Table 2.2.1, *Emission Points to Air* which is amended by the inclusion of new source descriptions for A8 and A9.

Condition 2.2.1.3 refers to Table 2.2.2, *Emission Limits to Air and Monitoring* which is amended by the inclusion of new criteria for A8 and A9.

Condition 2.2.1.4 refers to Table 2.2.3, *Annual Limits to Air (Excluding start up and shut down)* which is replaced by the following table 2.2.3.

Condition 2.2.8.1 is amended to remove the requirement to monitor smoke density.

Condition 2.7.4 is added.

Condition 2.10.11 is added.

Section 2.14 containing conditions 2.14.1 and 2.14.2 is added.

Conditions 4.1.2 and 4.1.3 refer to Table S2, *Reporting of monitoring data* which is amended by the inclusion of new criteria for A8 and A9.

Condition 4.1.3 is replaced with an updated version.

Condition 4.1.8 is deleted.

Condition 4.1.9 is added

Conditions 5.1.1 and 5.1.2 are replaced with an updated version.

Condition 5.1.9 is added.

Section *Interpretation* is replaced with an updated version.

Schedule 1 - Notification of abnormal emissions is replaced with an updated version.

Schedule 2 - Reporting of monitoring data is replaced with an updated version

Schedule 3 - Forms to be used is replaced with an updated version

Schedule 4 - Reporting of performance data is replaced with an updated version

Schedule 5 - Site Plan is replaced with an updated version

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number

EPR/BS3824IJ

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BS3824IJ/V007 authorising,

Solvay Interox Limited ("the operator"),

whose registered office is

**Solvay House
Baronet Road
Warrington
Cheshire
WA4 6HA**

company registration number **01005238**

to operate an installation at

**Baronet Road Chemicals
Baronet Road
Warrington
Cheshire
WA4 6HA**

to the extent authorised by and subject to the conditions of this permit.

Name	Date
Mike Jenkins	17 December 2015

Authorised on behalf of the Environment Agency

Conditions

General

1.1 Permitted Activities

1.1.1 The Operator is authorised to carry out the activities and the associated activities specified in Table

Table 1.1.1 activities		
Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
Section 4.1 Part A(1)(a)(ii) Producing organic compounds containing oxygen.	Manufacture of Peracetic Acid	From receipt of raw materials to the manufacture, storage and despatch of finished product.
Section 4.2 Part A(1)(a)(iv) Producing inorganic salts.	Manufacture of Sodium Percarbonate (by the addition of hydrogen peroxide to a saturated solution of sodium carbonate).	From receipt of raw materials to the manufacture, storage and despatch of finished product (including the cleaning of process plant, operation of particulate abatement systems and the storage and handling of waste arising from the process).
Section 4.2 Part A(1)(a)(v) Producing inorganic chemicals.	Manufacture of Hydrogen Peroxide by means of an organic auto-oxidation (AO) process.	From receipt of raw materials to the manufacture, storage and despatch of finished product (including cleaning of plant, operation of solvent abatement and recovery systems and the storage and handling of waste arising from the process).
Section 1.1 Part A(1)(a) Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.	LCP330: Boilers for production of steam including: Boiler 1 (B9100) and Boiler 2 (B9200)	From receipt and combustion of natural gas in boilers (1&2) to discharge of exhaust gases and the generation of steam for use on site.
Section 5.4 Part A(1)(a)(ii) Disposal of non-hazardous waste in a facility with a capacity exceeding 50 tonnes per day by physico-chemical treatment	Treatment of process effluent from the Sodium Percarbonate Plant, Peracetic Acid Plant and Hydrogen Peroxide Plant, and process effluent from the Caprolactone Monomer and Polymer Plants operated under permit PP3139XA.	From the collection and treatment of process effluent to discharge into public sewer.
Directly Associated Activities		
Directly Associated Activity	Demineralised Water Plant	From the production of demineralised water to process use in the Hydrogen Peroxide Plant and Combustion Plant (including resin regeneration).
Directly Associated Activity	Discharge of process effluent to surface water.	The monitoring and discharge into the estuarial River Mersey of the following: boiler plant blowdown, cooling tower blowdown, Demineralised Water Plant effluent, and once-through cooling water generated by the Caprolactone Monomer and Polymer Plants operated by permit PP3139XA.

Table 1.1.1 activities		
Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
Directly Associated Activity	Storage of Hydrogen Peroxide Isocontainers	From the receipt of up to 68 hydrogen peroxide isocontainers onto the storage area to the removal of the isocontainers for use elsewhere.

1.2 Site

1.2.1 The activities authorised under condition 1.1.1 shall not extend beyond the Site, being the land shown edged in red but excluding the areas shaded in blue and the area shaded in purple on the Site Plan at Schedule 5 to this Permit, which represents the extent of the installation covered by this Permit and that of the other Operator of the installation.

1.3 Overarching Management Condition

1.3.1 Without prejudice to the other conditions of this Permit, the Operator shall implement and maintain a management system, organisational structure and allocate resources that are sufficient to achieve compliance with the limits and conditions of this Permit.

1.4 Improvement Programme

1.4.1 The Operator shall complete the improvements specified in Table 1.4.1 by the date specified in that table, and shall send written notification of the date of completion of each requirement to the Agency within 14 days of the completion of each such requirement.

Table 1.4.1: Improvement programme		
Reference Note [1]	Requirement	Date
IC1	<p>The Operator shall review the performance of the particulate abatement systems operating on the primary and coating drier system exhausts that result in emissions to air via emission point A1. The review shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> • monitoring of total particulate matter in accordance with Monitoring Standards BS EN 13284-1 (unless otherwise agreed in writing with the Agency); • characterisation of the PM10 fraction of the total particulate matter; • the dispersion characteristics and location of emission point A1; and • an assessment of the impact of particulate matter and PM10 fraction in emissions from A1. <p>A summary of the review, including a timetable for the implementation of any improvements identified, shall be submitted in writing to the Agency.</p>	Complete
IC5	<p>The Operator shall, having regard to section 2.2.6 of Agency Guidance Note IPPC S4.03, undertake a review of the potential for odour associated with the effluent discharged from the AO plant to the public sewer system. The report shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> • the performance of the crude AO plant effluent treatment system, including the air stripping process; • the composition and the volume of the effluent discharged; • the treatment undertaken at the pump station; • the effect of sealing manholes; and • odour monitoring. <p>A report summarising the review and including details of any improvements identified shall be submitted in writing to the Agency along with a timetable for their implementation.</p>	Complete

IC11	The Operator shall, having regard to Agency Guidance Note M2 – Monitoring of Stack emissions to Air, submit a written plan to the Agency detailing proposals for the quantification of Volatile Organic Compounds – Total Class A (mg/m3) in releases to air from emission points A2 to A7. The plan, which shall include the proposed methodology and frequency of testing, shall be submitted to the Agency for approval.	Complete
IC12	The Operator shall, having regard to section 2.7 of Agency Guidance Note IPPC S4.03, review its energy management system which shall include, in particular, the monitoring of energy flows and targeting of areas. A report summarising the review and including details of any improvements identified shall be submitted in writing to the Agency along with a timetable for their implementation.	Complete
IC13	The Operator shall, having regard to section 2.4.2 and 2.4.3 of Agency Guidance Note IPPC S4.03, review its waste minimisation and water usage efficiency. A report summarising the review and including details of any improvements identified shall be submitted in writing to the Agency along with a timetable for their implementation.	Complete
IC14	For LCPD LCP85 (now LCP330 under IED). Annual emissions of dust, sulphur dioxide and oxides of nitrogen including energy usage for the year 01/01/2015 to 31/12/2015 shall be submitted to the Environment Agency using form AAE1 via the NERP Registry. If the LCPD LCP was a NERP plant the final quarter submissions shall be provided on the RTA 1 form to the NERP Registry.	28/01/16

Note [1]: Items not shown in this table (IC2, IC3, IC4, IC6, IC7, IC8, IC9 and IC10) were completed prior to 2008 when the partial transfer (referenced CP3538XF) took place.

- 1.4.2 Where the Operator fails to comply with any requirement by the date specified in Table 1.4.1 the Operator shall send written notification of such failure to the Agency within 14 days of such date.

1.5 Minor Operational Changes

- 1.5.1 The Operator shall seek the Agency's written agreement to any minor operational changes under condition 2.1.1 of this Permit by sending to the Agency: written notice of the details of the proposed change including an assessment of its possible effects (including waste production) on risks to the environment from the Permitted Installation; any relevant supporting assessments and drawings; and the proposed implementation date.
- 1.5.2 Any such change shall not be implemented until agreed in writing by the Agency. As from the agreed implementation date, the Operator shall operate the Permitted Installation in accordance with that change, and relevant provisions in the Application shall be deemed to be amended.
- 1.5.3 When the qualification "unless otherwise agreed in writing" is used elsewhere in this Permit, the Operator shall seek such agreement by sending to the Agency written notice of the details of the proposed method(s) or techniques.
- 1.5.4 Any such method(s) or techniques shall not be implemented until agreed in writing by the Agency. As from the agreed implementation date, the Operator shall operate the Permitted Installation using that method or technique, and relevant provisions in the Application (and the Site Protection and Monitoring Programme, as the case may be) shall be deemed to be amended.

1.6 Pre-Operational Conditions

- 1.6.1 There are no pre-operational conditions.

1.7 Off-site Conditions

- 1.7.1 There are no off-site conditions.

Operating conditions

2.1 In-Process Controls

2.1.1 The Permitted Installation shall, subject to the conditions of this Permit, be operated using the techniques and in the manner described in the documentation specified in Table 2.1.1, or as otherwise agreed in writing by the Agency in accordance with conditions 1.5.1 and 1.5.2 of this Permit.

Table 2.1.1: Operating techniques		
Description	Parts	Date Received
Application	The response to questions 2.1 and 2.2 provided in Sections B2.1 and B2.2 of the Permit Application, excluding any reference to the Caprolactone Monomer and Polymer Plants and Caprolactone Warehouse which is operated under Permit PP3139XA.	30/08/2005
Additional Information received from the Operator	References to potential interruptions to the natural gas supply, the configuration of the carbon adsorption beds, point releases to air from the Sodium Percarbonate plant, refrigeration systems and plans detailing emission points to the estuarial River Mersey, Manchester Ship Canal and public sewer.	21/06/2006 and 29/06/2006
Partial Transfer Application (PP3139XA)	Form IPPC 1 Part D and Section 3, Partial Transfer Application Supporting Information.	16/11/2007
Application for EPR/BS3824IJ/V006	The operating techniques described in the application.	07/07/2015
Response to Regulation 60 request for information	Compliance routes and operating techniques identified in response to questions 344 (compliance route), 346 (fuel type), 347 (net rated thermal input), 348 (MSUL/MSDL), 349 (proposed ELVs) and 351 (monitoring requirements).	31/03/2015

2.1.2 The Permitted Installation shall, subject to the other conditions of this Permit, be operated using the techniques and in the manner described in the Site Protection and Monitoring Programme submitted under condition 4.1.7 of this Permit (as amended from time to time under condition 4.1.7), or as otherwise agreed in writing by the Agency.

2.1.3 For the following activity referenced in Table 1.1.1: LCP330; without prejudice to condition 2.1.1, the activity shall be operated in accordance with the "Electricity Supply Industry IED Compliance Protocol for Utility Boilers and Gas Turbines" revision 1 dated February 2015 or any later version unless otherwise agreed in writing by the Environment Agency.

2.1.4 For the following activity referenced in Table 1.1.1: LCP330; the end of the start up period and the start of the shutdown period shall conform to the specifications set out in Table 2.1.1 and Table 2.1.2.

Table 2.1.2: Start-up and Shut-down thresholds for LCP330				
Unit Reference and parameter	Minimum shut-down conditions		Minimum start up conditions	
	Boiler 1 (B9100)	Boiler 2 (B9200)	Boiler 1 (B9100)	Boiler 2 (B9200)
Output Load (MW and % of rated power output)	3.508 MWth 11.4%	4.385 MWth 14.3%	3.508 MWth 11.4%	4.385 MWth 14.3%

2.2 Emissions

2.2.1 Emissions to Air, (including heat, but excluding Odour, Noise or Vibration) from Specified Points

2.2.1.1 This Part 2.2.1 of this Permit shall not apply to releases of odour, noise or vibration.

2.2.1.2 Emissions to air from the emission points in Table 2.2.1 shall only arise from the sources specified in that Table.

Table 2.2.1 : Emission points to air	
Emission point reference	Source
As detailed on the plan titled "Solvay Interox Site – Key Point Source Emissions to Air", received on 21/06/06	
A1	Sodium Percarbonate Plant: Primary Drier, Coating Drier System and Cooler Exhaust
A2	Hydrogen Peroxide Plant: A stream A75/1 Carbon Bed
A3	Hydrogen Peroxide Plant: A Stream A75/2 Carbon Bed
A4	Hydrogen Peroxide Plant: A Stream A75/3 Carbon Bed
A5	Hydrogen Peroxide Plant: B Stream B75/1 Carbon Bed
A6	Hydrogen Peroxide Plant: B Stream B75/2 Carbon Bed
A7	Hydrogen Peroxide Plant: B Stream B75/3 Carbon Bed
A8	LCP330 Boiler 1 Plant fired on natural gas via Multiflue Stack
A9	LCP330 Boiler 2 Plant fired on natural gas via Multiflue Stack
A10, A11	Sodium Percarbonate Plant: Soda Ash Silo
A12, A13, A14, A15	Sodium Percarbonate Plant: Soda Ash Dissolution Hoppers
A16	Sodium Percarbonate Plant Dedusting Local Exhaust Ventilation
A17, A18, A19	Sodium Percarbonate Plant: Product Silos
A20, A21	Sodium Percarbonate Plant: Vacuum System Exhausts
A22	Sodium Percarbonate Plant: Bagging Machine Exhaust

2.2.1.3 The limits for emissions to air for the parameters and emission points set out in Table 2.2.2 shall not be exceeded.

Table 2.2.2: Emission limits to air and monitoring				
Emission point reference	Parameter	Limit	Monitoring frequency	Monitoring method
A1	Particulate Matter	20 mg/m ³ (minimum ½ hour)	Quarterly	BS EN 13284-1
A2 to A7	Total Volatile Organic Compounds (expressed as carbon)	40 mg/m ³ (daily average)	Minimum of 25% of the total operating time of each carbon bed.	BS EN 13526
A2 to A4 Combined as Stream A	Volatile Organic Compounds Total Class A	25 mg/m ³ (24 hour running average)		
A5 to A7 Combined as Stream B	Volatile Organic Compounds Total Class A	25 mg/m ³ (24 hour running average)		
A8, A9 Note [1]	Oxides of Nitrogen, expressed as NO ₂	240 mg/m ³ (minimum 1 hour)	At least every 6 months	BS EN 14792
	Carbon Monoxide	110 mg/m ³	At least every 6 months	BS EN 15058

Table 2.2.2: Emission limits to air and monitoring				
Emission point reference	Parameter	Limit	Monitoring frequency	Monitoring method
	As required by the Method Implementation Document for BS EN 15259	--	Pre-operation and when there is a significant operational change	BS EN 15259
	Sulphur dioxide	35 mg/m ³	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
	Dust	5 mg/m ³	At least every 6 months	

Note [1]: Limits for A8 and A9 do not apply during start up or shut down of the LCP

2.2.1.4 Total emissions to air from emission points set out in Table 2.2.1 in any year of a substance listed in Table 2.2.3 shall not exceed the relevant limit in that Table.

Table 2.2.3 Annual limits to air (Excluding start up and shut down)			
Substance	Limit		Emission Points
Oxides of Nitrogen to Air	Assessment year	LCP TNP Limit	LCP330 Windshield for emission points A8 and A9
	01/01/16 and subsequent years until 31/12/19 and 01/06/20-30/06/20	Emission allowance figure shown in the TNP Register as at 30 April the following year	

2.2.2 Emissions to water (other than groundwater), including heat, from specified points

2.2.2.1 This Part 2.2.2 of this Permit shall not apply to releases of odour, noise or vibration or to releases to groundwater.

Emissions to water (other than sewer)

2.2.2.2 Conditions 2.2.2.3 - 2.2.2.6 shall not apply to emissions to sewer.

2.2.2.3 Emissions to water from the emission points specified in Table 2.2.4 shall only arise from the sources specified in that Table

Table 2.2.4: Emission point to water		
Emission Point Reference	Source	Receiving Water
W1	Surface water run-off, Demineralised Water Plant regeneration effluent, Combustion Plant blowdown effluent, AO Plant cooling tower blowdown effluent and emergency overflow from effluent system dump pit. Caprolactone plant once-through cooling water as operated by permit number PP3139XA.	Estuarial River Mersey
W2	AO Plant: emergency overflow from the effluent system dump pit.	Manchester Ship Canal

2.2.2.4 The limits for the emissions to water for the parameters and emission points set out in Table 2.2.5 shall not be exceeded.

Table 2.2.5: Emission limits to water and monitoring				
Emission point reference	Parameter	Limit	Monitoring frequency	Monitoring method
W1	Flow	17000 m ³ /day	Continuous	Flow meter
W1	Temperature	30 °C	Continuous	On-line measurement
W1	pH	5 – 10	Continuous	On-line measurement
W1	Hydrogen Peroxide	10 mg/l	Every week	Redox indicator strip.
W1	Chemical Oxygen Demand	125 mg/l	Every week	SCA Blue Book 97 ISBN 0117519154 [Note 1]
W1	Oil and Grease	None visible	Daily	Visual assessment
W1	Suspended Solids	50 mg/l	Every week	BS EN 872:1996 BS6068-2.54:1996 [Note 1]
W1	Mercury	1 µg/l	Every 6 months	BS EN 13506:2002 BS 6068-2.74:2002 [Note 1]
W1	Cadmium	5 µg/l	Every 6 months	BS EN ISO 5961:1995 BS 6068-2.21:1995 [Note 1]

[Note 1]: Monitoring shall be based on a weekly composite sample.

2.2.2.5 No condition applies

2.2.2.6 No condition applies.

Emissions to sewer

2.2.2.7 Emissions to sewer from the specified emission points in Table 2.2.7 shall only arise from the source specified in that Table. There are no specific controls imposed on emissions to sewer in this Part of the Permit.

Table 2.2.7 Emission points to sewer		
Emission point reference	Source	Sewer
S1	a) Hydrogen Peroxide Plant: Effluent Treatment Plant (IS6), Distillation Plant Effluent (IS1) and Tank Farm Bund Wastewater (IS3); b) Sodium Percarbonate Plant: Process Effluent, including spillages and washings from the Peracetic Acid Plant (IS4).	Baronet Road Sewer (to Warrington North Wastewater Treatment Works), United Utilities PLC.

2.2.2.8 No condition applies.

2.2.2.9 No condition applies.

2.2.2.10 No condition applies.

2.2.3 Emissions to groundwater

2.2.3.1 No emission from the Permitted Installation shall give rise to the introduction into groundwater of any substance in List I (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)).

2.2.3.2 No emission from within the Permitted Installation shall give rise to the introduction into groundwater of any substance in List II (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)) so as to cause pollution (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)).

2.2.3.3 For substances other than those in List I or II (as defined in the Groundwater Regulations 1998 (SI 1998 No.2746)), the Operator shall use BAT to prevent or where that is not practicable to reduce emissions to groundwater from the Permitted Installation provided always that the techniques used by the Operator shall be no less effective than those described in the Application.

2.2.4 Fugitive emissions of substances to air

2.2.4.1 The Operator shall use BAT so as to prevent or where that is not practicable to reduce fugitive emissions of substances to air from the Permitted Installation in particular from:

- storage areas
- buildings
- pipes, valves and other transfer systems
- open surfaces

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.2.5 Fugitive emissions of substances to water and sewer

2.2.5.1 Subject to condition 2.2.5.2 below, the Operator shall use BAT so as to prevent or where that is not practicable to reduce fugitive emissions of substances to water (other than Groundwater) and sewer from the Permitted Installation in particular from:

- all structures under or over ground
- surfacing
- bunding
- storage areas

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.2.5.2 There shall be no release to water that would cause a breach of an EQS established by the UK Government to implement the Dangerous Substances Directive 76/464/EEC.

2.2.6 Odour

2.2.6.1 The Operator shall use BAT so as to prevent or where that is not practicable to reduce odorous emissions from the Permitted Installation, in particular by:

- limiting the use of odorous materials
- restricting odorous activities
- controlling the storage conditions of odorous materials
- controlling processing parameters to minimise the generation of odour
- optimising the performance of abatement systems
- timely monitoring, inspection and maintenance
- employing, where appropriate, an approved odour management plan

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.2.6.2 No condition applies.

2.2.6.3 No condition applies.

2.2.7 Emissions to Land

- 2.2.7.1 This Part 2.2.7 of this Permit shall not apply to emissions to groundwater.
- 2.2.7.2 No condition applies.
- 2.2.7.3 No condition applies.

2.2.8 Equivalent Parameters or Technical Measures

- 2.2.8.1 The Operator shall comply with the requirements specified in Table 2.2.11, which supplement or replace emission limit values in accordance with Regulation 12(8) of the PPC Regulations.

Table 2.2.11 Equivalent parameters and technical measures	
Parameter or measure	Requirement or description of measure, and frequency if relevant
The monitoring of particulate matter abatement systems associated with emission points A10 to A22.	Electrodynamic particulate analysis for each emission point at a minimum frequency of 6 months.

2.3 Management

- 2.3.1 A copy of this Permit and those parts of the application referred to in this Permit shall be available, at all times, for reference by all staff carrying out work subject to the requirements of the Permit.

Training

- 2.3.2 The Permitted Installation shall be supervised by staff who are suitably trained and fully conversant with the requirements of this Permit.
- 2.3.3 All staff shall be fully conversant with those aspects of the Permit conditions which are relevant to their duties and shall be provided with adequate professional technical development and training and written operating instructions to enable them to carry out their duties.
- 2.3.4 The Operator shall maintain a record of the skills and training requirements for all staff whose tasks in relation to the Permitted Installation may have an impact on the environment and shall keep records of all relevant training.

Maintenance

- 2.3.5 All plant and equipment used in operating the Permitted Installation, the failure of which could lead to an adverse impact on the environment, shall be maintained in good operating condition.
- 2.3.6 The Operator shall maintain a record of relevant plant and equipment covered by condition 2.3.5 and for such plant and equipment:
- (a) a written or electronic maintenance programme; and
 - (b) records of its maintenance.

Incidents and Complaints

- 2.3.7 The Operator shall maintain and implement written procedures for:
- (a) taking prompt remedial action, investigating and reporting actual or potential non-compliance with operating procedures or emission limits; and
 - (b) investigating incidents, (including any malfunction, breakdown or failure of plant, equipment or techniques, down time, any short term and long term remedial measures and near misses) and prompt implementation of appropriate actions; and
 - (c) ensuring that detailed records are made of all such actions and investigations.

- 2.3.8 The Operator shall record and investigate complaints concerning the Permitted Installation's effects or alleged effects on the environment. The record shall give the date and nature of complaint, time of complaint, name of complainant (if given), a summary of any investigation and the results of such investigation and any actions taken.

2.4 Efficient use of raw materials

- 2.4.1 The Operator shall -
- (a) maintain the raw materials table or description submitted in response to Section 2.4 of the Application and in particular consider on a periodic basis whether there are suitable alternative materials to reduce environmental impact;
 - (b) carry out periodic waste minimisation audits and water use efficiency audits. If such an audit has not been carried out in the 2 years prior to the issue of this Permit, then the first such audit shall take place within 2 years of its issue. The methodology used and an action plan for increasing the efficiency of the use of raw materials or water shall be submitted to the Agency within 2 months of completion of each such audit and a review of the audit and a description of progress made against the action plan shall be submitted to the Agency at least every 4 years thereafter; and
 - (c) ensure that incoming water use is directly measured and recorded.

2.5 Waste Storage and Handling

- 2.5.1 The Operator shall design, maintain and operate all facilities for the storage and handling of waste on the Permitted installation such that there are no releases to water or land during normal operation and that emissions to air and the risk of accidental release to water or land are minimised.
- 2.5.2 No condition applies.

2.6 Waste recovery or disposal

- 2.6.1 Waste produced at the Permitted Installation shall be:
- (a) recovered to no lesser extent than described in the Application; and
 - (b) where not recovered, disposed of while avoiding or reducing any impacts on the environment provided always that this is not done in any way that would have a greater effect on the environment than that described in the Application.
- 2.6.1 The Operator shall maintain the waste recovery or disposal table or description submitted in response to Section 2.6 of the Application and in particular review the available options for waste recovery and disposal for the purposes of complying with condition 2.6.1 above.
- 2.6.2 The Operator shall maintain and implement a system which ensures that a record is made of the quantity, composition, origin, destination (including whether this is a recovery or disposal operation) and where relevant removal date of any waste that is produced at the Permitted Installation.
- 2.6.4 No condition applies.

2.7 Energy Efficiency

- 2.7.1 The Operator shall produce a report on the energy consumed at the Permitted Installation over the previous calendar year, by 31 January each year, providing the information required by condition 4.1.2.

- 2.7.2 The Operator shall maintain and update annually an energy management system which shall include, in particular, the monitoring of energy flows and targeting of areas for improving energy efficiency.
- 2.7.3 The Operator shall design, maintain and operate the Permitted Installation so as to secure energy efficiency, taking into account relevant guidance including the Agency's Energy Efficiency Horizontal Guidance Note as from time to time amended. Energy efficiency shall be secured in particular by:
- ensuring that the appropriate operating and maintenance systems are in place;
 - ensuring that all plant is adequately insulated to minimise energy loss or gain;
 - ensuring that all appropriate containment methods, (e.g. seals and self-closing doors) are employed and maintained to minimise energy loss;
 - employing appropriate basic controls, such as simple sensors and timers, to avoid unnecessary discharge of heated water or air;
 - where building services constitute more than 5% of the total energy consumption of the installation, identifying and employing the appropriate energy efficiency techniques for building services, having regard in particular to the Building services part of the Agency's Energy Efficiency Horizontal Guidance Note H2; and
- maintaining and implementing an energy efficiency plan which identifies energy saving techniques that are applicable to the activities and their associated environmental benefit and prioritises them, having regard to the appraisal method in the Agency's Energy Efficiency Horizontal Guidance Note H2.
- 2.7.4 For the activity referenced in table 1.1.1: LCP330. The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
 - (b) take appropriate measures to ensure the efficiency of energy generation at the permitted installation is maximised;

2.8 Accident prevention and control

- 2.8.1 The Operator shall maintain and implement when necessary the accident management plan submitted or described in response to Section 2.8 of the Application. The plan shall be reviewed at least every 2 years or as soon as practicable after an accident, whichever is the earlier, and the Agency notified of the results of the review within 2 months of its completion.

2.9 Noise and Vibration

- 2.9.1 The Operator shall use BAT so as to prevent or where that is not practicable to reduce emissions of noise and vibration from the Permitted Installation, in particular by:
- equipment maintenance, eg. of fans, pumps, motors, conveyors and mobile plant;
 - use and maintenance of appropriate attenuation, eg. silencers, barriers, enclosures;
 - timing and location of noisy activities and vehicle movements;
 - periodic checking of noise emissions, either qualitatively or quantitatively; and
 - maintenance of building fabric,
- provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.
- 2.9.2 No condition applies.
- 2.9.3 No condition applies.

2.10 On-site Monitoring

2.10.1 The Operator shall maintain and implement an emissions monitoring programme which ensures that emissions are monitored from the specified points, for the parameters listed in and to the frequencies and methods described in Tables 2.2.2 and 2.2.5, unless otherwise agreed in writing, and that the results of such monitoring are assessed. The programme shall ensure that monitoring is carried out under an appropriate range of operating conditions.

2.10.2 The Operator shall carry out environmental or other specified substance monitoring to the frequencies and methods described in Table 2.10.1

Table 2.10.1 : Other monitoring requirements				
Emission point reference or source or description of point of measurement	Substance or parameter	Monitoring frequency	Monitoring method	Other specifications
W1	Turbidity (ppm)	Continuous	Nephelometric measurement based on EN 27027.	
W1	Total Organic Carbon (mg/l)	Continuous	Instrumentation based on high temperature oxidation with non-dispersive infrared detector.	
W1	Total Organic Carbon (mg/l)	Every week	Instrumentation based on high temperature oxidation with non-dispersive infrared detector.	[Note 1]
W1	Arsenic ($\mu\text{g/l}$)	Quarterly	BS EN 26595:1993 BS 6068-2.1:1983 ISO 6595-1985.	[Note 1]
W1	Lead ($\mu\text{g/l}$)	Quarterly	BS 6068-2.29:1987 ISO 8288-1986	[Note 1]
W1	Chloride (mg/l)	Every week	Blue Book Methods for the Examination of Waters and Associated materials - Chloride in Waters, Sewage and Effluents 1981	
Sodium Percarbonate Plant Effluent (IS4)	Chloride (mg/l)	Every week	Blue Book Methods for the Examination of Waters and Associated materials - Chloride in Waters, Sewage and Effluents 1981	
Sodium Percarbonate Plant Effluent (IS4)	Boron (mg/l)	Every week	Inductively coupled plasma spectrophotometry	
Sodium Percarbonate Plant Effluent (IS4)	Flow (m^3/day)	Continuous	Flow meter	
AO Crude Plant Effluent (IS6)	Naphthalene ($\mu\text{g/l}$)	Every 6 months		UKAS accredited
AO Crude Plant Effluent (IS6)	Flow (m^3/day)	Continuous	Flow meter	
AO Crude Plant Effluent (IS6)	Hydrogen Peroxide (mg/l)	Every week	Redox indicator strip.	
S1	Flow (m^3/day)	Daily	[Note 2]	

Table 2.10.1 : Other monitoring requirements				
Emission point reference or source or description of point of measurement	Substance or parameter	Monitoring frequency	Monitoring method	Other specifications
S1	Chemical Oxygen Demand (mg/l)	Every week		UKAS accredited [Note 1]
S1	Suspended Solids (mg/l)	Every week		UKAS accredited [Note 1]
S1	Total Organic Carbon (mg/l)	Every week	Instrumentation based on high temperature oxidation with non-dispersive infrared detector.	[Note 1]
A1	Particulate Matter (mg/m ³)	Every week	Electrodynamic Particulate Analysis	
A8, A9	Oxides of Nitrogen, expressed as NO ₂ (mg/m ³)	Monthly	Electrochemical cell analyser	

[Note 1]: Monitoring shall be based on a weekly composite sample.

[Note 2]: Daily flow to be calculated from individual flow measurements for effluent streams IS1, IS3, IS4 and IS6, detailed in Table 2.2.7 of the Permit.

- 2.10.3 No condition applies.
- 2.10.4 No condition applies.
- 2.10.5 The Operator shall notify the Agency at least 14 days in advance of undertaking monitoring and/or spot sampling, where such notification has been requested in writing by the Agency.
- 2.10.6 The Operator shall maintain records of all monitoring taken or carried out (this includes records of the taking and analysis of samples instrument measurements (periodic and continual), calibrations, examinations, tests and surveys) and any assessment or evaluation made on the basis of such data.
- 2.10.7 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme in condition 2.10.1 of this Permit and the environmental or other monitoring specified in condition 2.10.2 shall have either MCERTS certification or MCERTS accreditation (as appropriate) unless otherwise agreed in writing.
- 2.10.8 There shall be provided:
- (a) safe and permanent means of access to enable sampling/monitoring to be carried out in relation to the emission points specified in Schedule 2 to this Permit, unless otherwise specified in that Schedule; and
 - (b) safe means of access to other sampling / monitoring points when required by the Agency.
- 2.10.9 The Operator shall carry out the on-going monitoring identified in the Site Protection and Monitoring Programme submitted under condition 4.1.7, unless otherwise agreed in writing by the Agency.
- 2.10.10 The Operator shall, within 6 months of the issue of this Permit, in accordance with and using the format given in the Land Protection Guidance:

- (a) collect the site reference data identified in the Site Protection and Monitoring Programme submitted under condition 4.1.7, and
 - (b) report that site reference data to the Agency,
 - unless otherwise agreed in writing by the Agency.
- 2.10.11 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

2.11 Closure and Decommissioning

- 2.11.1 The Operator shall maintain and operate the Permitted Installation so as to prevent or minimise any pollution risk, including the generation of waste, on closure and decommissioning in particular by:-
- (a) attention to the design of new plant or equipment;
 - (b) the maintenance of a record of any events which have, or might have, impacted on the condition of the site along with any further investigation or remediation work carried out; and
 - (c) the maintenance of a site closure plan to demonstrate that the installation can be decommissioned avoiding any pollution risk and returning the site of operation to a satisfactory state.
- 2.11.2 Notwithstanding condition 2.11.1 of this Permit, the Operator shall carry out a full review of the Site Closure Plan at least every 4 years.
- 2.11.3 The site closure plan shall be implemented on final cessation or decommissioning of the Permitted activities or part thereof.
- 2.11.4 The Operator shall give at least 30 days written notice to the Agency before implementing the site closure plan.
- 2.11.5 From 1st January 2008, the operator shall inform the Agency of the closure of a relevant LCP within 28 days of the date of closure.

2.12 Multiple Operator installations

- 2.12.1 There are no conditions as a result of the interactions of the Permits covering this installation

2.13 Transfer to effluent treatment plant

- 2.13.1 No transfers to effluent treatment plant are controlled under this part of the Permit.
- 2.13.2 No condition applies.

2.14 Monitoring for the purposes of the Industrial Emissions Directive Chapter III

- 2.14.1 For the activity referenced in Table 1.1.1: LCP330; all monitoring shall be carried out in accordance with the provisions of Annex V of the Industrial Emissions Directive.
- 2.14.2 If CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality shall be used, as agreed in writing with the Environment Agency.

Records

- 3.1 The Operator shall ensure that all records required to be made by this Permit and any other records made by it in relation to the operation of the Permitted Installation shall:-
- (a) be made available for inspection by the Agency at any reasonable time;
 - (b) be supplied to the Agency on demand and without charge;
 - (c) be legible;
 - (d) be made as soon as reasonably practicable;
 - (e) indicate any amendments which have been made and shall include the original record wherever possible;
 - (f) be retained at the Permitted Installation, or other location agreed by the Agency in writing, for a minimum period of 4 years from the date when the records were made, unless otherwise agreed in writing; and
 - (g) where they concern the condition of the site of the Installation or are related to the implementation of the Site Protection and Monitoring Programme, be kept at the Permitted Installation, or other location agreed by the Agency in writing, until all parts of the Permit have been surrendered.

Reporting

- 4.1.1 All reports and written and or oral notifications required by this Permit and notifications required by Regulation 16 of the PPC Regulations shall be made or sent to the Agency using the contact details notified in writing to the Operator by the Agency.
- 4.1.2 The Operator shall, unless otherwise agreed in writing, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:-
- (a) in respect of the parameters and emission points specified in Table S2 to Schedule 2;
 - (b) for the reporting periods specified in Table S2 to Schedule 2 and using the forms specified in Table S3 to Schedule 3;
 - (c) giving the information from such results and assessments as may be required by the forms specified in those Tables; and
 - (d) to the Agency within 28 days of the end of the reporting period.
- 4.1.3 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
 - (b) the annual production / treatment data set out in schedule 4 table S4.1;
 - (c) the performance parameters set out in schedule 4 tables S4.2(a) and 4.2(b) using the forms specified in table S3 of schedule 3.
- 4.1.4 The Operator shall review fugitive emissions, having regard to the application of Best Available Techniques, on an annual basis, or such other period as shall be agreed in writing by the Agency, and a summary report on this review shall be sent to the Agency detailing such releases and the measures taken to reduce them within 3 months of the end of such period.

- 4.1.5 Where the Operator has a formal environmental management system applying to the Permitted Installation which encompasses annual improvement targets the Operator shall, not later than 31 January in each year, provide a summary report of the previous year's progress against such targets.
- 4.1.6 The Operator shall, within 6 months of receipt of written notice from the Agency, submit to the Agency a report assessing whether all appropriate preventive measures continue to be taken against pollution, in particular through the application of the best available techniques, at the installation. The report shall consider any relevant published technical guidance current at the time of the notice which is either supplied with or referred to in the notice, and shall assess the costs and benefits of applying techniques described in that guidance, or otherwise identified by the Operator, that may provide environmental improvement.
- 4.1.7 The Operator shall, within two months of the date of this permit, submit a detailed Site Protection and Monitoring Programme, in accordance with and using the appropriate template format given in the Land Protection Guidance. The Operator shall implement and maintain the Site Protection and Monitoring Programme (SPMP) submitted under condition 4.1.7, and shall carry out regular reviews of it at a minimum frequency of every 2 years. The results of such reviews and any changes made to the SPMP shall be reported to the Agency within 1 month of the review or change.
- 4.1.8 No condition applies.
- 4.1.9 For the following activities referenced in schedule 1, table S1.1.1: LCP330. Unless otherwise agreed in writing with the Environment Agency, within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form IED RTA1, listed in table S4.4, the information specified on the form relating to the site's mass emissions.

Notifications

- 5.1.1 In the event:
- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
 - (b) of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
 - (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 5.1.2 Any information provided under condition 5.1.1(a)(i), or 5.1.1(b)(i) where the information relates to the breach of a condition specified in the permit, shall be confirmed by sending the information listed in schedule 1 to this permit within the time period specified in that schedule.
- 5.1.3 The Operator shall give written notification as soon as practicable prior to any of the following:-
- (a) permanent cessation of the operation of part or all of the Permitted Installation;
 - (b) cessation of operation of part or all of the Permitted Installation for a period likely to exceed 1 year; and

- (c) resumption of the operation of part or all of the Permitted Installation after a cessation notified under condition 5.1.3(b).
- 5.1.4 The Operator shall notify the Agency, as soon as reasonably practicable, of any information concerning the state of the Site which adds to that provided to the Agency as part of the Application or to that in the Site Protection and Monitoring Programme submitted under condition 4.1.7 of this Permit.
- 5.1.5 The Operator shall notify the following matters to the Agency in writing within 14 days of their occurrence:-
- (a) where the Operator is a registered company:-
- any change in the Operator's trading name, registered name or registered office address;
 - any change to particulars of the Operator's ultimate holding company (including details of an ultimate holding company where an Operator has become a subsidiary)
 - any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up;
- (b) where the Operator is a corporate body other than a registered company:
- any change in the Operator's name or address;
 - any steps taken with a view to the dissolution of the Operator.
- (c) In any other case: -
- the death of any of the named Operators (where the Operator consists of more than one named individual);
 - any change in the Operator's name(s) or address(es);
 - any steps taken with a view to the Operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case them being in a partnership, dissolving the partnership;
- 5.1.6 Where the Operator has entered into a Climate Change Agreement with the Government, the Operator shall notify the Agency within one month of:-
- (a) a decision by the Secretary of State not to re-certify that Agreement.
- (b) a decision by either the Operator or the Secretary of State to terminate that agreement.
- (c) any subsequent decision by the Secretary of State to re-certify such an Agreement.
- 5.1.7 Where the Operator has entered into a Direct Participant Agreement in the Emissions Trading Scheme which covers emissions relating to the energy consumption of the activities, the Operator shall notify the Agency within one month of:-
- (a) a decision by the Operator to withdraw from or the Secretary of State to terminate that agreement.
- (b) a failure to comply with an annual target under that Agreement at the end of the trading compliance period.
- 5.1.8 The Operator shall notify the Agency in writing, of any known or planned introduction or material emission from the permitted installation to sewer, that may increase the concentration of any "dangerous substance", as defined in List I and List II of the Dangerous Substances Directive, 76/464/EEC, and its daughter directives.
- 5.1.9 The operator shall inform the Environment Agency in writing of the closure of any LCP within 28 days of the date of closure.

Interpretation

6.1 In this Permit, the following expressions shall have the following meanings:

“Air Quality Risk Assessment” has the meaning given in Annex D of IED Compliance Protocol for Utility Boilers and Gas Turbines.

“Application” means the application for this Permit, together with any response to a notice served under Schedule 4 to the PPC Regulations and any operational change agreed under the conditions of this Permit.

“authorised officer” means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“background concentration” means such concentration of that substance as is present in:

- water supplied to the site; or
- where more than 50% of the water used at the site is directly abstracted from ground or surface water on site, the abstracted water; or
- where the Permitted Installation uses no significant amount of supplied or abstracted water, the precipitation on to the site.

“BAT” means best available techniques means the most effective and advanced stage of development of activities and their methods of operation which indicates the practical suitability of particular techniques to prevent and where that is not practicable to reduce emissions and the impact on the environment as a whole. For these purposes: “available techniques” means “those techniques which have been developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the cost and advantages, whether or not the techniques are used or produced inside the United Kingdom, as long as they are reasonably accessible to the operator”; “best” means “in relation to techniques, the most effective in achieving a high general level of protection of the environment as a whole” and “techniques” “includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.” In addition, Schedule 2 of the PPC Regulations has effect in relation to the determination of BAT.

“CEN” means Comité Européen de Normalisation.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“Fugitive emission” means an emission to air or water (including sewer) from the Permitted Installation which is not controlled by an emission or background concentration limit under conditions 2.2.1.3 or 2.2.2.4 of this Permit.

“Groundwater” means all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions.

“large combustion plant” or *“LCP”* is a combustion plant or group of combustion plants discharging waste gases through a common windshield or stack, where the total thermal input is 50 MW or more, based on net calorific value. The calculation of thermal input, excludes individual combustion plants with a rated thermal input below 15MW.

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

“Monitoring” includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys.

“MSDL” means minimum shut-down load as defined in Implementing Decision 2012/249/EU.

“MSUL” means minimum start-up load as defined in Implementing Decision 2012/249/EU.

"Natural gas" means naturally occurring methane with no more than 20% by volume of inert or other constituents.

"operational hours" are whole hours commencing from the first unit ending start up and ending when the last unit commences shut down.

"Permitted Installation" means the activities and the limits to those activities described in Table 1.1.1 of this Permit.

"PPC Regulations" means the Pollution, Prevention and Control (England and Wales) Regulations SI 2000 No.1973 (as amended) and words and expressions defined in the PPC Regulations shall have the same meanings when used in this Permit save to the extent they are specifically defined in this Permit.

"Sewer" means sewer within the meaning of section 219(1) of the Water Industry Act 1991.

"Staff" includes employees, directors or other officers of the Operator, and any other person under the Operator's direct or indirect control, including contractors.

"TNP Register" means the register maintained by the Environment Agency in accordance with regulation 4 of the Large Combustion Plants (Transitional National Plan) Regulations 2015 SI2015 No.1973.

"Year" means calendar year ending 31 December.

6.2 Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

6.3 Unless otherwise stated, any references in this Permit to concentrations of substances in emissions into air means:-

- in relation to gases from combustion processes, the concentration in dry air at a temperature of 273.15K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- in relation to gases from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content

6.4 Where any condition of this Permit refers to the whole or parts of different documents, in the event of any conflict between the wording of such documents, the wording of the document(s) with the most recent date shall prevail to the extent of such conflict.

Schedule 1 - Notification of abnormal emissions

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	EPR/BS3824IJ
Name of operator	Solvay Interlox Limited
Location of Facility	Solvay House, Baronet Road, Warrington, Cheshire, WA4 6HA
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
be taken, to stop the emission	
Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B – to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 2 - Reporting of monitoring data

Parameters for which reports shall be made, in accordance with conditions 4.1.2 and 4.1.3 of this Permit, are listed below.

Table S2: Reporting of monitoring data			
Parameter [Note 1]	Emission point	Reporting period	Period begins
Particulate Matter	A1	Quarterly	1 January, 1 April, 1 July, 1 October
Total Volatile Organic Compounds (expressed as C)	A2, A3, A4, A5, A6, A7		
Volatile Organic Compounds – Total Class A	A2, A3, A4, A5, A6, A7	Quarterly	1 January, 1 April, 1 July, 1 October
Volatile Organic Compounds – Total Class A (mass release)	A2, A3, A4, A5, A6, A7 (aggregated)	Annual	1 January
Total Volatile Organic Compounds (expressed as C) (mass release)	A2, A3, A4, A5, A6, A7 (aggregated)		
Oxides of Nitrogen, (as NO ₂),	A8, A9	Every 6 months	1 January, 1 July
Carbon Monoxide	A8, A9	Every 6 months	1 January, 1 July
Sulphur dioxide	A8, A9	Every 6 months	1 January, 1 July
Dust	A8, A9	Every 6 months	1 January, 1 July
Flow , Temperature, pH, Hydrogen Peroxide, Chemical Oxygen Demand, Oil and Grease, Suspended Solids, Turbidity, Total Organic Carbon, Arsenic, Lead and Chloride	W1	Quarterly	1 January, 1 April, 1 July, 1 October
Mercury, Cadmium (µg/l)	W1	Every 6 months	1 January, 1 July
Mercury, Cadmium (mass release) [Note 2]	W1	Annual	1 January
Mercury, Cadmium (mass release) [Note 3]	Demineralised Water Plant Effluent (IW1)	Annual	1 January
Chloride (mg/l), Boron (mg/l), Flow (m ³ /day)	Sodium Percarbonate plant effluent (IS4)	Quarterly	1 January, 1 April, 1 July, 1 October
Naphthalene (µg/l)	AO Crude Effluent (IS6)	Every 6 months	1 January, 1 July
Hydrogen Peroxide, Flow	AO Crude Effluent (IS6)	Quarterly	1 January, 1 April, 1 July, 1 October
Flow, Chemical Oxygen Demand, Total Organic Carbon, Suspended Solids	S1	Quarterly	1 January, 1 April, 1 July, 1 October
Refrigerant losses	Installation	Annual	1 January
Water consumption			
Energy consumption			
Waste disposal and/or recovery			

[Note 1]: Parameters as required by conditions 2.2.1.3 and 2.2.1.4, for emissions to air, condition 2.2.2.4 for emissions to water, condition 2.2.2.7, for emissions to sewer and condition 2.2.8.1 for equivalent parameters or technical measures.

- [Note 2]: Annual mass releases for mercury and cadmium shall be calculated from the mean concentration and mean flow over the reporting period.
- [Note 3]: Annual mass releases for mercury and cadmium shall be calculated from the maximum potential concentration of the metal present as contamination in a raw material multiplied by the volume of the chemicals used on site during the year. An allowance may be deducted for any proportion of the chemicals used that can be demonstrated not to have reached the emission point.

Schedule 3 - Forms to be used

Table S3: Reporting forms				
Media/ parameter	Reporting format	Starting Point	Agency recipient	Date of form
Air & Energy [1]	Form IED AR1 – SO ₂ , NO _x and dust mass emission and energy	01/01/16	National	31/12/15
Air [1]	Form IED RTA1 –TNP quarterly emissions summary log	01/01/16	National	31/12/15
LCP [1]	Form IED HR1 – operating hours	01/01/16	National	31/12/15
Air [1]	Form IED PM1 – discontinuous monitoring and load.	01/01/16	Area Office	31/12/15
Air [2]	Form A1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	21/12/07
Water [2]	Form W1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	21/12/07
Sewer [2]	Form S2 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	21/12/07
Energy [2]	Form E1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	21/12/07
Waste Return [2]	Form R1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	21/12/07
Water usage [2]	Form WU1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	21/12/07
Performance indicators [2]	Form PI1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	21/12/07

Note [1]: Forms relating to LCP operation; these are standardised forms and not all parameters listed may be applicable to this permit.

Note [2]: Forms relating to non-LCP or whole installation operation.

Schedule 4 - Reporting of performance data

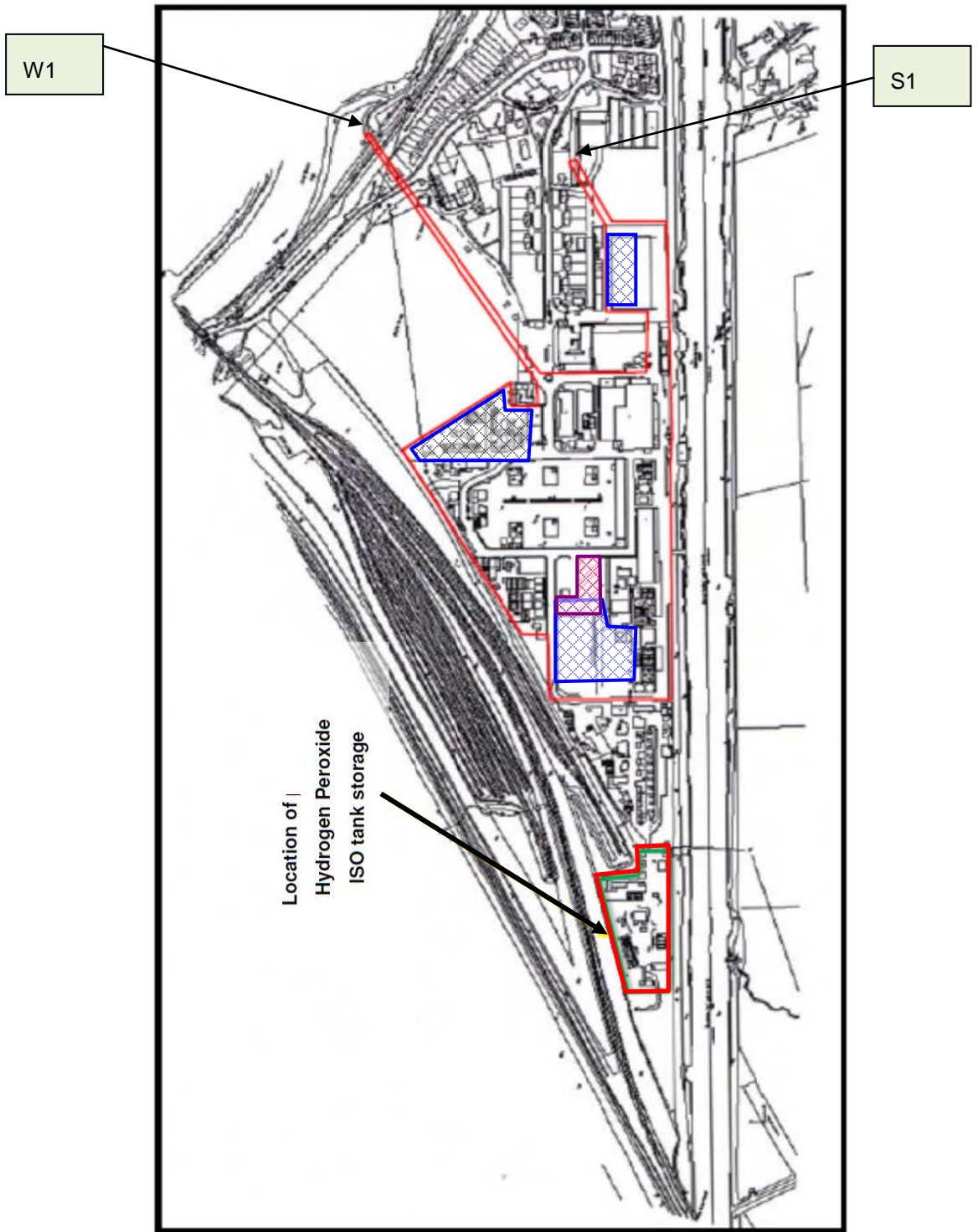
Data required to be recorded and reported by Condition 4.1.3. The data should be assessed at the frequency given and reported annually to the Agency.

Table S4.1: Annual Production/Treatment	
Production of Sodium Percarbonate	tonnes (t)
Production of Hydrogen Peroxide	tonnes (t)
Production of Peracetic Acid	tonnes (t)
Production of steam	GWh and tonnes (t)

Table S4.2(a): Performance parameters		
Parameter	Frequency of assessment	Performance indicator
Water consumption per tonne of Sodium Percarbonate	Annual	m ³ /t
Water consumption per tonne of Hydrogen Peroxide produced	Annual	m ³ /t
Energy consumption per tonne of Sodium Percarbonate produced	Annual	MWh/t
Energy consumption per tonne of Hydrogen Peroxide produced	Annual	MWh/t
Total emissions to air of CO for LCP	Annual	tonnes (t)

Table S4.2(b) Performance parameters for reporting to DEFRA		
Parameter	Frequency of assessment	Units
Thermal Input Capacity for each LCP	Annually	MW
Annual Fuel Usage for each LCP	Annually	TJ
Total Emissions to Air of NO _x for each LCP	Annually	t
Total Emissions to Air of SO ₂ for each LCP	Annually	t
Total Emissions to Air of particulate matter (dust) for each LCP	Annually	t
Operating Hours for each LCP	Annually	hr

Schedule 5 - Site Plan



Areas excluded from the permitted installation: office block, former combustion plant (purple shaded area), former organic sextates manufacturing plant, fire pump house, car park and on-site boreholes and areas operated by Perstorp UK Limited (blue shaded areas).

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