Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Mitsubishi Chemical UK Limited

Saltend EVOH Plant
Soarnol House
Saltend Chemical Park
Saltend
Hull
HU12 8DS

Variation application number

EPR/KP3706LM/V002

Permit number

EPR/KP3706LM

Saltend EVOH Plant

Permit number EPR/KP3706LM

Introductory note

This introductory note does not form a part of the notice

Under the Environmental Permitting (England & Wales) Regulations (EPR) 2016 (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.

Changes introduced by this variation notice/statutory review

This variation has been issued to update some of the conditions following a statutory review of the permits in the industry sector for the production of large volume organic chemicals (LVOC). The opportunity has also been taken to consolidate the original permit and subsequent variations.

The Industrial Emissions Directive (IED) came into force on 07 January 2014 with the requirement to implement all relevant Best Available Techniques (BAT) Conclusions as described in the Commission Implementing Decision. The BAT Conclusions for production of LVOC were published on 07 December 2017 in the Official Journal of the European Union (L323) following a European Union wide review of BAT, implementing decision 2017/2117/EU of 21 November 2017.

Where appropriate, we also considered other relevant BAT Conclusions published prior to this date but not previously included in a permit review for the Installation:-

Common waste water and waste gas treatment/management systems in the chemical sector, published 09 June 2016.

The BAT Conclusions for this installation which apply from 07 December 2021 are:

Production of LVOC:
General BAT Conclusions 2, 8 to 11, 14 and 16 to 19.

BAT Conclusions 20 to 90 in the subsector specific sections are not applicable to the activities carried out at the installation.

Common waste water and waste gas treatment/management systems in the chemical sector:
BAT Conclusions 1 to 5, 7 to 13, 15 to 20, 22 and 23.

The schedules specify the changes made to the permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. All the conditions of the permit have been varied and are subject to the right of appeal.

Brief Description of the process

The facility is located within the southern area of the Saltend Chemicals Park site, 250 metres to the west of the Hedon Haven creek and on the eastern outskirts of Hull at national grid reference 516250, 427530.

This permit relates to the manufacture of ethylene vinyl alcohol co-polymer (EVOH), which is an EPR listed activity falling under:

Section 4.1 Part A(1)(a)(viii) - producing organic chemicals such as plastic material (polymers)

The process is designed to produce 25,000 tonnes of EVOH annually.

EVOH is manufactured by a continuous operation via the following process steps:

- Polymerisation
- Separation
- Alcoholysis
- Pelletising, washing and drying
- Product packaging
- Solvent recovery

Ethylene and vinyl acetate monomer (VAM) are reacted continuously in the presence of methanol to produce ethylene vinyl acetate (EVAc) polymer using an initiator and high pressure conditions.

EVAc polymer then passes to the separation process where unreacted ethylene and VAM are separated (and recycled), and EVAc polymer is diluted with methanol. The resulting solution is fed to the alcoholysis process step, where EVOH methanol solution is formed. The EVOH methanol solution is solidified in the strand forming section and pelletised. Pellets are then washed, dried and packed.

The methyl acetate and methanol (MAM) solution formed in the alcoholysis reaction process is sent to the solvent recovery process, where methanol is recovered for recycling back into the process and MAM is recovered for re-use by Ineos Acetyls UK Limited on the Saltend Chemicals Park.

No emissions to groundwater are expected from the EVOH process. Process effluent, water from the classification pit and storm water (when required) are discharged to sewer at emission point S1. ‘Light’ effluent comprising run-off/wash water from the plant area, steam trap condensate, cooling tower blow-down, tank farm drainage and storm water is discharged to the PX Aquarius site effluent system via emission point E1.

Atmospheric emissions from the process are restricted to methanol, acetic acid and particulate matter. In the context of ambient concentrations and of Environmental Assessment Levels for releases to air, incremental ground level concentrations are considered insignificant.

Off-gases, which primarily result from process vessels and discharges resulting from product grade changeover are routed to the Ineos Manufacturing (Hull) Limited flare stack authorised by permit EPR/HP3235CG.

Process waste from distillation columns is used as a secondary fuel on a Saltend Chemicals Park Limited site boiler. Other wastes (off-specification product and waste polymer solution from vessel/pipe flushings from product grade changeover) are disposed of at off-site licensed premises.

The risk of accidental emission of raw materials, products and waste materials is minimised via plant design and procedures.

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

Status log of the permit		
Description	**Date**	**Comments**
Application EPR/BR6643IR/A001	23/12/2002	Duly made
Additional information (request dated 24/01/2003)	14/03/2003	Response dated
Additional information (request dated 03/04/2003)	15/05/2003	Response dated
Permit issued EPR/BR6643IR	09/07/2003	
Variation application EPR/BR6643IR/V002	05/09/2011	Duly made Normal variation to increase capacity
Variation issued EPR/BR6643IR/V002	05/10/2011	
Regulation 61 Notice dated 04/05/2018 (Notice requiring information for statutory review of permit)	09/08/2018	Response received Technical standards detailed in response to the information notice
Additional information (request sent 05/10/2018) (information for statutory review of permit)	28/11/2018	Response received Technical standards for LVOC BAT Conclusion 2 & CWW BAT Conclusions 5 & 13, site condition and hazardous pollutants
Transfer application EPR/KP3706LM/T001 (full transfer of permit EPR/BR6643IR)	04/02/2021	Duly made Application to transfer the permit in full to Mitsubishi Chemical UK Limited
Transfer determined EPR/KP3706LM	01/04/2021	Full transfer of permit effective
Additional information (request sent 18/02/2021) (information for statutory review of permit)	04/03/2021	Response received Technical standards LVOC BAT Conclusion 2 & 18, CWW BAT Conclusions 1, 3, 4, 13 and H1 WFD
Additional information/clarification (request sent 09/03/2021) (information for statutory review of permit)	29/04/2021	Response received Technical standards CWW BAT Conclusions 1, 3, 4 and 15 to 23
Additional information/clarification (request sent 10/05/2021) (information for statutory review of permit)	20/05/2021	Response received Technical standards CWW BAT Conclusions 3 and 4
Additional information requested 01/06/2021	22/06/2021	Site plan with emission points
EPR/KP3706LM/V002 Environment Agency initiated variation (Billing Ref: HP3800MV)	05/07/2021	Statutory review of permit occasioned by LVOC BAT Conclusions published 07 December 2017 Varied and consolidated permit issued

Other Part A installation permits relating to this installation		
Operator	**Permit number**	**Date of issue**
Saltend Chemicals Park Ltd.	EPR/VP3834YU	15/03/2018
Ineos Manufacturing (Hull) Ltd.	EPR/HP3235CG	23/02/2012
Ineos Acetyls UK Ltd.	EPR/JP3707SC	01/01/2021

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies

Permit number

EPR/KP3706LM

Issued to

Mitsubishi Chemical UK Limited ("the operator")

whose registered office is

Cassel Works
New Road
Billingham
TS23 1LE

company registration number **3830161**

to operate a regulated facility at

Saltend EVOH Plant
Soarnol House
Saltend Chemical Park
Saltend
Hull
HU12 8DS

to the extent set out in the schedules.

The notice shall take effect from 05/07/2021

Name	Date
Anne Lloyd	**05/07/2021**

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of an Environment Agency initiated variation.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/KP3706LM

This is the consolidated permit referred to in the variation and consolidation notice for application

EPR**/**KP3706LM**/**V002 authorising,

Mitsubishi Chemical UK Limited ("the operator"),

whose registered office is

Cassel Works
New Road
Billingham
TS23 1LE

company registration number **3830161**

to operate an installation at

Saltend EVOH Plant
Soarnol House
Saltend Chemical Park
Saltend
Hull
HU12 8DS

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

Name	Date
Anne Lloyd	**05/07/2021**

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

(a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and

(b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Energy efficiency

1.2.1 The operator shall:

(a) take appropriate measures to ensure that energy is used efficiently in the activities;

(b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and

(c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

1.3.1 The operator shall:

(a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;

(b) maintain records of raw materials and water used in the activities;

(c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and

(d) take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

1.4.1 The operator shall take appropriate measures to ensure that:

(a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities;

(b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and

(c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

1.5 Multiple operator installations

1.5.1 For the activities referenced in schedule 1, table S1.1, where the operator notifies the Environment Agency under condition 4.3.1 (a) or 4.3.1 (c), the operator shall also notify without delay the other operator(s) of the installation of the same information.

2 Operations

2.1 Permitted activities

2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the "activities").

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

2.3 Operating techniques

2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.

2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation ("plan") specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan , and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.

2.3.3 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

2.3.4 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:

(a) the nature of the process producing the waste;

(b) the composition of the waste;

(c) the handling requirements of the waste;

(d) the hazardous property associated with the waste, if applicable; and

(e) the waste code of the waste.

2.3.5 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.4 Improvement programme

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

3 Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2, S3.2a and S3.3.

3.1.2 The limits given in schedule 3 shall not be exceeded.

3.1.3 Total annual emissions from the emission points set out in schedule 3 tables S3.1, of a substance listed in schedule 3 table S3.4 shall not exceed the relevant limit in table S3.4.

3.1.4 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.

3.2 Emissions of substances not controlled by emission limits

3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;

(b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.3.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;

(b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;

(b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:

(a) point source emissions specified in tables S3.1, S3.2, S3.2a and S3.3; and

(b) process monitoring specified in table S3.5.

3.5.2 The operator shall maintain records of all monitoring required by this permit including 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.

3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.

3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.2, S3.2a and S3.3 unless otherwise agreed in writing by the Environment Agency.

4 Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

(a) be legible;

(b) be made as soon as reasonably practicable;

(c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and

(d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:

(i) off-site environmental effects; and

(ii) matters which affect the condition of the land and groundwater.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.2.2 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 S4.2; and

(c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, 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 schedule 4 table S4.1;

(b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4 ; and

(c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.3 Notifications

4.3.1 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.

4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

(a) any change in the operator's trading name, registered name or registered office address; and

(b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

(c) any change in the operator's name or address; and

(d) any steps taken with a view to the dissolution of the operator.

4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

(a) the Environment Agency shall be notified at least 14 days before making the change; and

(b) the notification shall contain a description of the proposed change in operation.

4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.3.7 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:

(a) a decision by the Secretary of State not to re-certify the agreement;

(b) a decision by either the operator or the Secretary of State to terminate the agreement; and

(c) any subsequent decision by the Secretary of State to re-certify such an agreement.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made “without delay”, in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
AR1	**Section 4.1 Part A(1)(a)(viii)** Producing organic chemicals such as plastic material (polymers)	Manufacture of ethylene vinyl alcohol co-polymer (EVOH)	From receipt of raw materials to final product dispatch (up to 25,000 tonnes per year) and discharge of air from non-routine operations (e.g. off-gases, which primarily result from process vessels and discharges resulting from product grade changeover) routed to the Ineos Manufacturing (Hull) Limited flare stack authorised by permit EPR/HP3235CG.
	Directly Associated Activity		
AR2	Water discharges to foul sewer	Discharge of process water	From trade effluent tank to point of entry to sewer
AR3	Water discharges to Saltend Chemicals Park Ltd. effluent system (PX Aquarius) or to foul sewer	Run-off from plant area, wash water from plant area, steam trap condensate, cooling tower blow-down, tank farm drainage and storm water.	From light effluent classification pit, to point of entry to Saltend Chemicals Park Limited. (EPR/VP3834YU) effluent system or to foul sewer.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application EPR/BR6643IR/A001	The response to question 2.2 given in Section B.2.2 of the application (excluding Section B2.2.3) The response to question 2.3 given in Section B2.3 of the application The response to questions 2.4 given in Section B.2.4 of the application The response to question 2.5 given in Section B.2.6 of the application The response to question 2.6 given in Section B.2.2.3 of the application The response to question 2.7 given in Section B.2.7 of the application The response to question 2.8 given in Annex II of the application The response to question 2.9 given in Section B.2.9 of the application The response to question 2.11 given in Section B.2.11 of the application The response to question 2.12 given in Section B.2.12 of the	23/12/2002

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
	application	
Response to Schedule 4 Part 1 Notice (Dated 24/01/2003)	Response to questions 6 to 52	14/03/2003
Response to Schedule 4 Part 1 Notice (Dated 03/04/2003)	Response to questions 1-4	15/05/2003
Variation application (EPR/BR6643IR/V002)	Response to questions 3a and 3b of application form C3 Section C3 Appendix 2	05/09/2011
Regulation 61 Notice – request for information dated 04/05/2018	Technical standards in relation to Best available techniques as described in BAT conclusions under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions for: Production of Large Volume Organic Chemicals BAT Conclusions: 2, 8 to 11, 14, 16 to 19 Common waste water and waste gas treatment/management systems in the chemical sector BAT Conclusions: 1 to 5, 7, 8, 9, 11, 12 and 13	09/08/2018
Regulation 61 Notice – request for further information dated 05/10/2018	Technical standards in relation to Best available techniques as described in BAT conclusions under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions for: Production of Large Volume Organic Chemicals BAT Conclusion 2 Common waste water and waste gas treatment/management systems in the chemical sector BAT Conclusions: 5 and 13	28/11/2018
Regulation 61 Notice – request for further information dated 18/02/2021	Technical standards in relation to Best available techniques as described in BAT conclusions under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions for: Production of Large Volume Organic Chemicals BAT Conclusions: 2 and 18 Common waste water and waste gas treatment/management systems in the chemical sector BAT Conclusions: 1, 3, 4 and 13.	04/03/2021
Regulation 61 Notice – request for further information dated 09/03/2021	Technical standards in relation to Best available techniques as described in BAT conclusions under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions for: Common waste water and waste gas treatment/management systems in the chemical sector BAT Conclusions: 1, 3, 4, and 15 to 23	29/04/2021

Table S1.3 Improvement programme requirements		
Reference Note 1	**Requirement**	**Date**
IC1	The operator shall submit, for approval by the Environment Agency, a report setting out how the following 'Narrative' BAT requirements shall be achieved for the Common waste water and waste gas treatment / management systems in the chemical sector: **BAT Conclusion 4** for monitoring of the effluent discharge at emission point E1. The report shall include, but not be limited to, the following: • Methodology for achieving BAT • Associated targets / timelines for reaching compliance Refer to BAT Conclusions for a full description of the BAT requirement. The proposals shall be implemented in accordance with the Environment Agency's written approval.	30/09/2021
IC2	The operator shall submit, for approval by the Environment Agency, a report setting out the acetic acid mass balance and calculation of the annual limit in table S3.4 of this permit.	31/12/2021
Note 1: Improvement conditions 9.1 to 9.15 are deleted due to completion or being met by the requirements of conditions of variation EPR/KP3706LM/V002.		

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
-	-

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location Note 3	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A2	Strand forming and filter press scrubber	Methanol	0.7 kg/hour	-	6 monthly (4 months minimum interval between monitoring)	CEN TS 13649
A3	Washing brine tank	No parameters set	-	-	-	-
A4	Fluidised bed drier	No parameters set	-	-	-	-
A5	Hopper drier scrubber system	No parameters set	-	-	-	-
A6a & A6b	Packaging bag filters	Dust	-	-	Once every year	EN 13284-1 Note 1
A6c	Packaging bag filter	Dust	-	-	-	Notes 1 & 2
A7	Sulphuric acid tank vent	No parameters set	-	-	-	-
Note 1: Monitoring shall apply from 07 December 2021. Note 2: Results from monitoring at A6a and A6b shall be used to determine a mass load of particulate emissions from A6c. Note 3: Emission point A1 no longer exists and is removed by variation EPR/KP3706LM/V002.						

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements shall apply to 06 December 2021						
Emission point ref. & location	**Source**	**Parameter**	**Limit (incl. unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
E1[Note 1]	Run-off from plant area, wash water from plant area, steam trap condensate, cooling tower blow-down, tank farm drainage and storm water	pH maximum pH minimum	9 6	Instantaneous	Continuous	BS ISO 10523
		TOC	50 mg/l	Instantaneous	Continuous	BS EN 1484
Note 1: On site plan in schedule 7 of this permit, emission to the Saltend Chemicals Park Ltd. (EPR/VP3834YU) effluent system.						

Table S3.2a Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements shall apply from 07 December 2021						
Emission point ref. & location Note 1	**Source**	**Parameter**	**Limit (incl. unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
E1	Run-off from plant area, wash water from plant area, steam trap condensate, cooling tower blow-down, tank farm drainage and storm water	Total organic carbon (TOC)	33 mg/l Note 4	Instantaneous	Continuous Note 2	EN 1484
		Total suspended solids (TSS)	35 mg/l Note 4	24-hour flow proportional composite sample Note 2	Daily Notes 2 & 3	EN 872
		pH maximum pH minimum	9 6	Instantaneous	Continuous	BS ISO 10523
E1	Run-off from plant area, wash water from plant area, steam trap condensate, cooling tower blow-down, tank farm drainage and storm water	Flow	-	24-hour total	Continuous	MCERTs self-monitoring flow scheme

Note 1: On site plan in schedule 7 of this permit, emission to the Saltend Chemicals Park Ltd. (EPR/VP3834YU) light effluent system, for final discharge to the Humber.

Note 2: Monitoring shall be required in accordance with IC1 in table S1.3 of this permit.

Note 3: The monitoring frequency may be reduced by written agreement with the Environment Agency if the data clearly demonstrates sufficient stability.

Note 4: Prior to the completion of IC1, monitoring from the classification pit shall be used to demonstrate compliance with the limits, as detailed in table S3.5 of this permit.

Table S3.3 Point source emissions to sewer - emission limits and monitoring requirements						
Emission point ref. & location Note 1	**Source**	**Parameter**	**Limit (incl. Unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
S1	Process effluent from decanter, methanol column, hopper dryer scrubber, water bath scrubber and pellet wash, along with washings, laboratory waste water, and gas holder pit water and classification pit and storm water when required	No parameters set Note 2	-	-	-	-
Note 1: On site plan in schedule 7 of this permit, emission to Yorkshire Water waste water treatment works (YW WWTW). Note 2: Refer to table S4.3 in this permit.						

Table S3.4 Annual limits		
Substance	**Medium**	**Limit (including unit)**
Methanol	Air	4,100 kg
Acetic acid	Air	3,150 kg (by calculation) Note 1
Particulate matter	Air	300 kg
Note 1: Refer to IC2 in table S1.3 of this permit.		

Table S3.5 Process monitoring requirements shall apply from 07 December 2021						
Emission point reference or source or description of point of measurement	**Parameter**	**Limit (incl. Unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Classification pit	Total organic carbon (TOC)	Note 1	24-hour flow proportional composite sample	Daily	EN 1484	Notes 1 & 2
Classification pit	Total suspended solids (TSS)	Note 1	24-hour flow proportional composite sample	Daily	EN 872	Notes 1 & 2
Note 1: Evidence shall be provided to demonstrate compliance with the limits at emission point E1 in table S3.2a of this permit. Note 2: Monitoring requirements shall cease following the completion of IC1 in table S1.3 of this permit.						

Schedule 4 – Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
Emissions to air Parameters as required by condition 3.5.1.	A2, A6a to A6c Air	Every 12 months	1 January
Emissions to water Parameters as required by condition 3.5.1	E1 Classification pit Note 1	Every 6 months	1 January, 1 July
Note 1: Reporting requirements for the classification pit shall cease following the completion of IC1 in table S1.3 of this permit.			

Table S4.2: Annual production/treatment	
Parameter	**Units**
Total hydrocarbon production	tonnes

Table S4.3 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Water usage	Annually	m^3
Energy usage	Annually	MWh
Total raw material used	Annually	tonnes
CWW and WGT BAT Conclusions 17 and 18 • Number of flaring events (minutes and dates of operation) • Materials flared/gas composition • Reasons for flaring (routine, non-routine, nature of plant operations) • Any actions taken in the previous 12 months to minimise the impact of flaring	Annually	Durations (minutes)
Effluent treatment at YW WWTW (emission point S1)	Annually	No change/change Note 1
Note 1: Confirm whether there have been any significant changes at the installation or at YW WWTW that may affect whether treatment off-site at YW WWTW is BAT and provides an equivalent level of protection of the environment as if the effluent were treated on-site.		

Table S4.4 Reporting forms		
Media/parameter	**Reporting format**	**Date of form**
Emissions to Air	Form Air1 or other form as agreed in writing by the Environment Agency	July 2021
Emissions to Water	Form Water1 or other form as agreed in writing by the Environment Agency	July 2021
Water usage	Form Waterusage1 or other form as agreed in writing by the Environment Agency	July 2021
Energy usage and efficiency	Form Energy1 or other form as agreed in writing by the Environment Agency	July 2021
Other environmental performance indicators	Form Performance1 or other form as agreed in writing by the Environment Agency	July 2021

Schedule 5 – Notification

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	
Name of operator	
Location of Facility	
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 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 breach of permit conditions not related to limits	
To be notified within 24 hours of detection	
Condition breached	
Date, time and duration of breach	
Details of the permit breach i.e. what happened including impacts observed.	
Measures taken, or intended to be taken, to restore permit compliance.	

(d) 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 6 – Interpretation

“accident” means an accident that may result in pollution.

“annually” means once every year.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“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.

“BAT-AELs” means BAT-associated emission levels, i.e. the emission levels associated with the best available techniques for emissions to air and/or water, as set out in

“Common waste water and waste gas treatment/management systems in the chemical sector BAT Conclusions or CWW” means Commission Implementing Decision (EU) 2016/902 of 30 May 2016 establishing Best Available Techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for Common Waste Water And Waste Gas Treatment/ Management Systems in the Chemical Sector as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016

“diffuse emissions” means non-channelled emissions which can result from ‘area’ sources (e.g. tanks) or ‘point’ sources (e.g. pipe flanges).

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission limit.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission limit.

“flaring” means high-temperature oxidation to burn combustible compounds of waste gases from industrial operations with an open flame.

“fugitive emissions” means diffuse VOC emissions from ‘point’ sources.

“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.

“Hazardous property” has the meaning in Annex III of the Waste Framework Directive as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“Hazardous waste” has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 (as amended).

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016

“Large Volume Organic Chemicals BAT Conclusions or LVOC” means The Commission Implementing Decision (EU) 2017/2117 of 21 November 2017 establishing Best Available Techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the Production of Large

Volume Organic Chemicals as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

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

“Total Organic Carbon” means Total Organic Carbon. In respect of releases to air this means the gaseous and vaporous organic substances, expressed as TOC.

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.

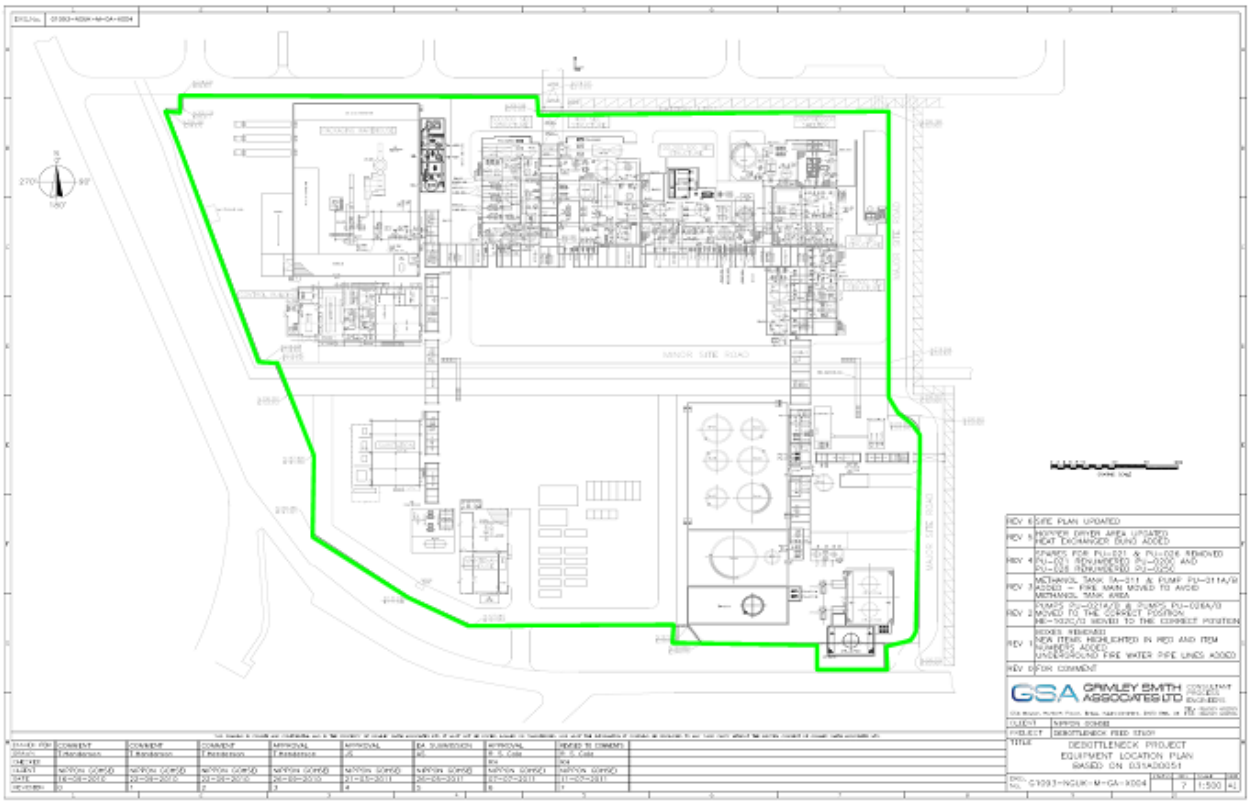
Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, 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.
- in relation to emissions 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.

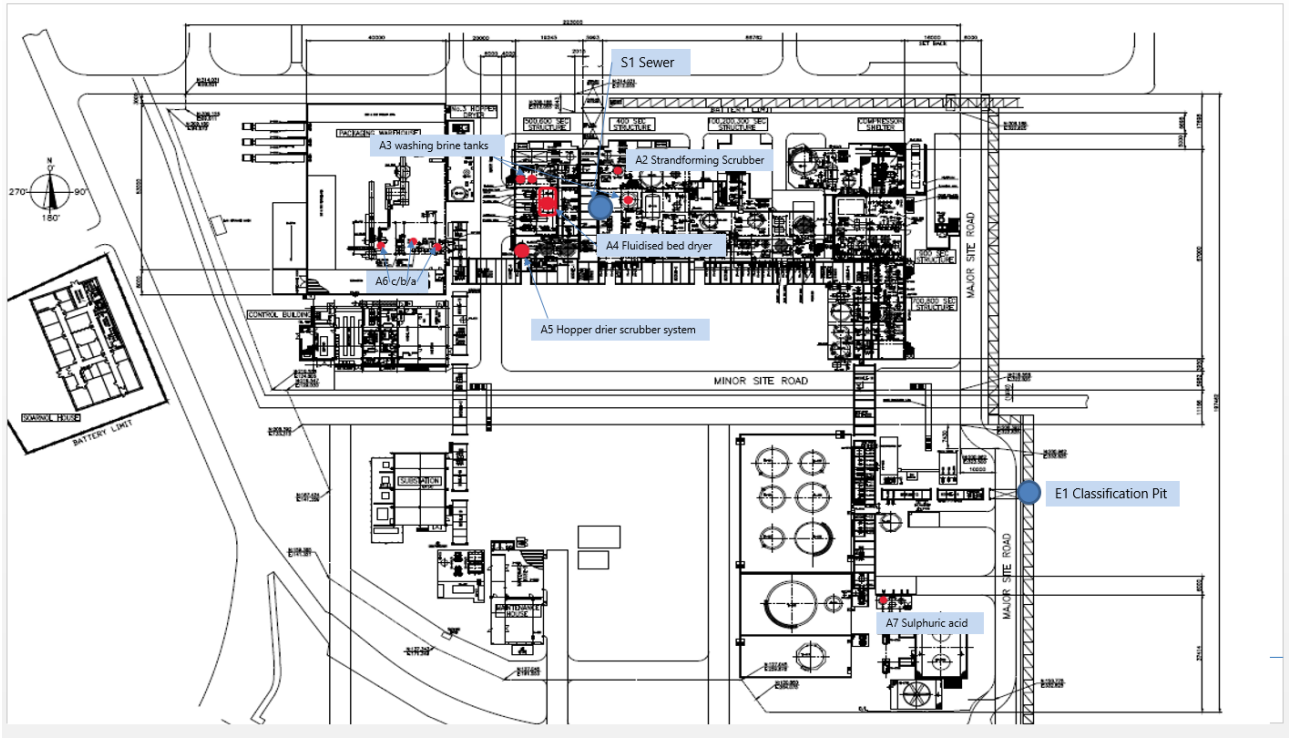
“year” means calendar year ending 31 December.

Schedule 7 – Site plan

Installation boundary



Emission points



END OF PERMIT

Permit Number: AB1234XY **Operator:** Operator Name

Facility: Site Name **Form Number:** Air1 July 2021

Reporting of emissions to air for the period from DD/MM/YYYY **to** DD/MM/YYYY

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result [1]	Test Method [2]	Sample Date and Times [3]	Uncertainty [4]
Quarterly reporting	Include all substances monitored including those with mass limits						
A1							
A2							
Annual reporting							
A1							

1. The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
2. Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
3. For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
4. The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed ……. Date……..

(Authorised to sign as representative of Operator)

Permit Number: AB1234XY **Operator:** Operator Name

Facility: Site Name **Form Number:** Water1 July 2021

Reporting of emissions to water (other than to sewer) and land for the period from DD/MM/YYYY **to** DD/MM/YYYY

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result [1]	Test Method [2]	Sample Date and Times [3]	Uncertainty [4]
Quarterly reporting	Include all substances monitored including those with mass limits						
W1							
Annual reporting							
W2							

1. The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
2. Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
3. For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
4. The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed ……. Date……..

(Authorised to sign as representative of Operator)

Permit Number: AB1234XY **Operator:** Operator Name

Facility: Site Name **Form Number: WaterUsage1 July 2021**

Reporting of Water Usage for the year YYYY

Water Source	Usage (m^3/year)	Specific Usage (m^3/unit output)
Mains water		
Site borehole		
River abstraction		
Other (specify)		
TOTAL WATER USAGE		

Trends in Mains Water Usage		
Year	**Total Water Usage**	**Specific Usage (m^3/unit output)**

Operator's comments:

Signed ……. Date……..

(authorised to sign as representative of Operator)

Permit Number: AB1234XY **Operator:** Operator Name

Facility: Site Name **Form Number: Energy1 July 2021**

Reporting of Energy Usage and Energy Efficiency for the year YYYY

Energy Source	Quantity Used	Primary Energy Usage (MWh)	CO2 produced (tonnes)
Electricity*	MWh		
Natural gas	t		
Diesel	t		
Other (Specify)	**t**		
Total	**--**		

* Conversion factor for delivered electricity to primary energy = 2.4

Year	Production (tonnes)	Primary Energy usage (MWh)	Total Primary Energy usage per unit output (MWh/t)	Primary Energy Electricity Usage per unit output (MWh/t)	Primary Energy Gas Usage per unit output (GJ/t)*	CO2 produced (tonnes)	CO2 tonnes per tonne unit output

* Energy in natural gas conversion factor used = (GJ/t)

Operator's comments:

Signed ……. Date……..

(authorised to sign as representative of Operator)

Permit Number: AB1234XY **Operator:** Operator Name

Facility: Site Name **Form Number: Performance1 July 2021**

Reporting of Environmental Performance for the year YYYY

Parameter (tonnes pa)	Result
VOC released to Air	
CO2 released to air	
Carbon monoxide released to air	
Oxides of nitrogen released to air	
TOC released to water	

		Trends in Environmental Performance Parameter (per unit production)						
Year	Production (tonnes pa)	VOC/t	CO2/t	GWP/t	CO/t	NO2/t	TOC/t	Waste hazard Score

Operator's comments:

Signed …… Date…… (authorised to sign as representative of Operator)