

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Victrex Manufacturing Limited
Victrex Polymer Production Hillhouse
Victrex Technology Centre
Hillhouse International
Thornton-Cleveleys
Lancashire
FY5 4QD

Variation application number

EPR/BU5640IA/V007

Permit number

EPR/BU5640IA

Victrex Polymer Production Hillhouse

Permit number EPR/BU5640IA

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 the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. Only the variations specified in schedule 1 are subject to a right of appeal.

Purpose of this variation EPR/BU5640IA/V007

Changes are required as follows:

- the addition of a new Polymer Innovation Centre (PIC) plant, which will be a small scale facility, intended to enable the development of:-
 - new products,
 - production methods, and
 - improve process optimisation.

Some of these may be further scaled up for use in the main production powder plants, PPP1 to PPP3.

- consent limits for existing points W1 and W3 are combined to a single point identified as W5. The operator is required to monitor the contribution from the individual sources, W1 and W3, that comprise W5, which has a single combined consent limit applied at the main outfall to the estuary of the River Wyre.
- to make a minor change to the installation boundary around the blending plant.

The main purpose of the activities at the installation

The Victrex manufacturing facility produces various grades of high performance thermo-plastics, including polyaryletherketones (PAEK). The manufacturing facility has a production capacity of approximately 7,200 tonnes per annum (tpa) within three Powder Plant facilities, referred to as PPP1, PPP2 and PPP3.

The Polymer Innovation Centre (PIC) plant, is a small scale facility, with a production capacity of approximately 30 tpa. The purpose of this plant is for the development of new products, production methods and to improve process optimisation.

The solid raw materials are stored in the distribution warehouses and are delivered to the plant as required. Acetone and process intermediates, such as aqueous mixtures, are stored in bunded storage tanks. Molten solvent is stored in tanks, which, due to the nature of the material (solid at room temperature), do not require bunding. Granulated solid product is stored in plastic bins and packaged for sale or for further processing.

The plastics manufacturing process consists of five production streams:

PPP1 - Lines 1 and 3

PPP2 - Line 5

PPP3 - Lines 7 and 9

Each stream is essentially the same, each consisting of raw material hoppers with loss-in-weight feeders, polymerisation vessels, a granulator, washers and a fluidised air-bed drier. Solvent recovery systems are fitted to each plant.

Steam is supplied to the process from a central boiler house, which normally operates on natural gas. The boiler house also supplies demineralised water for the process. Natural gas fired heaters are also used to supply hot oil for heating within the process. The emissions from the combustion appliances have been assessed and it was considered that the emissions are unlikely to have a significant environmental effect.

A number of process vents have the potential to release plastic particulates or raw materials to the atmosphere. These releases are controlled by the use of abatement systems (e.g. filtration systems and condensers).

Process drainage and surface water drainage are kept separate in order to minimise the potential for fugitive emissions to ground water. The drainage systems are combined on site before being released to the River Wyre through the main Hillhouse site outfall. There is the facility to divert some of the process effluent to be treated at the Fleetwood Marsh Wastewater Treatment plant. Ecological studies carried out on the River Wyre have demonstrated that the effluent from the Victrex operations is not having a discernible effect on the estuary.

The manufacturing operations have appropriate operational and maintenance procedures in place. Health, Safety and Environmental procedures are in place for environmentally significant activities. Victrex operate a Quality Management System and are ISO 9001 registered and the Compounding Plant has ISO 14001 accreditation.

Energy use is monitored and the performance is tracked. The installation has a Climate Change Levy agreement that sets stringent targets for the minimisation of energy use.

The majority of the manufacturing operations take place in enclosed buildings that minimise the potential for off-site noise impacts.

A comprehensive assessment of the potential for ground contamination across the site has been made, taking into account the historic use of the site for chemicals manufacture. Procedures and systems are in place in order to prevent the future contamination of the site.

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 of the permit		
Description	Date	Comments
Application BU5640IA (EPR/BU5640IA/A001)	Duly made 23/03/06	
Permit determined	02/10/06	Determination complete
Permit BU5640IA issued (EPR/BU5640IA)	03/11/06	Issued/Effective date
Variation Application EPR/BU5640IA/V002 (HP3035GG)	Duly made 28/11/07	To extend the installation boundary to include Victrex Warehouse 3.
Variation HP3035GG issued (EPR/BU5640IA/V002)	25/11/08	Effective Date 30/11/08
Variation Application EPR/BU5640IA/V003 (UP3434ZY)	Duly made 04/01/13	To install a new polymer blender, relocate an existing polymer blender and add storage.
Variation issued EPR/BU5640IA/V003	17/01/13	
Variation Application EPR/BU5640IA/V004 (NP3838NA)	Duly Made 11/06/13	To install a third Polymer Production facility (PPP3).
Provision of additional information	15/08/13	Additional site plans showing the installation boundary. 290-00-00-014 RevA / 290-00-00-015
Variation issued EPR/BU5640IA/V004	06/09/13	Variation and Consolidation
Variation Application EPR/BU5640IA/V005 (LP3034WB)	Duly made 28/10/14	Application to modify installation boundary, effluent segregation at main outfall and two emission points at compounding plant.
Variation issued EPR/BU5640IA/V005	07/11/14	Varied permit issued.
Variation Application EPR/BU5640IA/V006 (NP3232RJ)	Duly Made 04/12/15	To install a third processing line in Compounding Plant and a minor change to installation boundary.
Variation issued EPR/BU5640IA/V006	09/02/16	Variation and Consolidation
Variation Application EPR/BU5640IA/V007	Duly Made 01/09/16	To install a PIC plant, replace the discharge limits at W1 and W3 with a combined water discharge limit and a minor change to installation boundary.
Variation issued EPR/BU5640IA/V007 (Billing Ref: QP3338DB)	21/11/16	Variation and Consolidation

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/BU5640IA

Issued to

Victrex Manufacturing Limited ("the operator")

whose registered office is

**Victrex Technology Centre
Hillhouse International
Thornton-Cleveleys
Lancashire
FY5 4QD**

company registration number **02845018**

to operate a regulated facility at

**Victrex Polymer Production Hillhouse
Victrex Technology Centre
Hillhouse International
Thornton-Cleveleys
Lancashire
FY5 4QD**

to the extent set out in the schedules.

The notice shall take effect from 21/11/2016

Name	Date
SIMON HEWITT	21/11/2016

Authorised on behalf of the Environment Agency

Schedule 1

The following conditions were varied as a result of the application made by the operator:

Condition 2.1.1 refers to Table S1.1 which is amended.

Condition 2.2.1 refers to site plans in Schedule 7. The first site plan is updated in accordance with Drawing number 290-00-00-014 RevD, provided with this application, for the minor amendment to the installation boundary.

Condition 2.3.1 refers to Table S1.2, *Operating techniques* which is amended.

Condition 2.4.1 refers to Table S1.3, *Improvement Programme requirements*, which is amended.

Condition 2.5.1 and Table S1.4 for *Pre-operational measures* added to include provision for future changes.

Condition 3.1.1 refers to Table S3.1, *Point source emissions to air*, which is amended.

Condition 3.1.1 refers to Table S3.2, *Point source emissions to water*, which is amended.

Condition 3.1.4 is amended.

Condition 3.3.1 refers to Table S3.5, *Process monitoring requirements*, which is amended.

Condition 3.3.4 is amended.

Condition 4.2.3 refers to Table S4.1, *Process monitoring requirements*, which is amended.

Condition 4.2.3 refers to Table S4.2, *Reporting forms*, which is amended.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number

EPR/BU5640IA

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BU5640IA/V007 authorising,

Victrex Manufacturing Limited ("the operator"),

whose registered office is

**Victrex Technology Centre
Hillhouse International
Thornton-Cleveleys
Lancashire
FY5 4QD**

company registration number **02845018**

to operate an installation at

**Victrex Polymer Production Hillhouse
Victrex Technology Centre
Hillhouse International
Thornton-Cleveleys
Lancashire
FY5 4QD**

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

Name	Date
SIMON HEWITT	21/11/2016

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; and
 - (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.

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 plans at schedule 7 to this permit.

2.3 Operating techniques

- 2.3.1
- (a) 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.
 - (b) 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.
- 2.3.2 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

- 2.3.3 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.
- 2.3.4 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.

2.5 Pre-operational conditions

- 2.5.1 The operations specified in schedule 1 table S1.4 shall not commence until the measures specified in that table have been completed.

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 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 point(s) set out in schedule 3 tables S3.1, S3.2 and S3.3 of a substance listed in schedule 3 table S3.4 shall not exceed the relevant limit in table S3.4.
- 3.1.4 The high fluoride effluent (HFE) from plants PPP2 and PPP3 released at emission point S1 as defined in table S3.3 of this permit, can be released at point W4 as defined in table S3.2 of this permit, when the sewerage undertaker has restricted the availability of emission point S1 or under other circumstances by agreement with the Environment Agency.
- 3.1.5 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 Monitoring

- 3.3.1 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 and S3.3;
 - (b) process monitoring specified in table S3.5.
- 3.3.2 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.
- 3.3.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.3.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.3.4 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, S3.3 and S3.5 unless otherwise agreed in writing by the Environment Agency.

3.4 Odour

3.4.1 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.

3.4.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to 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.

3.5 Noise and vibration

3.5.1 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.

3.5.2 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.

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;
- 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 S4.2 ; 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 (a) In the event 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) in the event 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) in the event 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 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, 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.

In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
- (b) any change in the operator's name(s) or address(es); and
- (c) 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 of them being in a partnership, dissolving the partnership.

- 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 "immediately", in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1.1 Activities		
Activity listed in Schedule 1 of the PPC Regulations	Description of specified activity	Limits of specified activity
<p>Section 4.1 A(1) (a) (viii)</p> <p>Producing organic chemicals such as - plastic materials (for example polymers, synthetic fibres and cellulose-based fibres).</p>	<p>Producing organic chemicals: Production of high performance thermo-plastics (polymers).</p>	<p>From receipt of raw materials to storage of finished product.</p> <p>Three powder plants (PPP1, PPP2 and PPP3) with each line consisting of two polymerisation vessels.</p> <p>PPP1 – lines 1 and 3 PPP2 – line 5 PPP3 – lines 7 and 9</p> <p>PIC with a single polymerisation vessel.</p> <p>Solvent recovery by distillation for re-use in the process for the powder plants and the PIC.</p>
Directly Associated Activities		
<p>Steam generation</p>	<p>2 x 8.2MWth natural gas boilers.</p> <p>1 x 11MWth natural gas boiler</p>	<p>Combustion plant operating on natural gas to provide steam for use in the process.</p> <p>Includes oil receipt and storage (back-up fuel), demineralised water plant, boiler feed water dosing systems and condensate recovery systems.</p>
<p>Compounding</p>	<p>Production of compounded pellets consisting of polymer and fillers.</p>	<p>From production of compounded pellets to despatch.</p>

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application BU5640IA (EPR/BU5640IA/A001)	The responses to sections B2.1 and B2.2 of the Application form, given in sections B2.1 and B2.2 of the Application supporting information.	23/03/06
Application EPR/BU5640IA/V003	Operating Techniques document Ref: EAVar.BPP/OT dated December 2012 Supporting Information document Ref: EAVar.BPP/SI dated December 2012	04/01/13
Application EPR/BU5640IA/V004	The response to section 3a on Operating techniques / Technical standards given in Table 3 in Part C3 of the Application form. Environmental Permit Variation PPP3 Project Supporting Information: Section 4 – In Process Controls (the Main Activities) – includes process controls for the tidal discharge via W4 (Section 4.3.15) Section 5 – Emissions Control and Abatement Section 12 – Emissions Monitoring Section 19.1 – Annual review to be conducted to assess the capacity and availability of United Utilities Fleetwood Marsh Wastewater Treatment Works to accept additional high fluoride effluent (HFE) from the installation (discharged via emission point S1 instead of W1 and W4). Section 19.2 – Continuation of the biennial River Wyre Habitats Survey Habitats Survey requirements set out in Ecospan Environmental Report number ER13-188 (Ecological monitoring of the Wyre estuary adjacent to the Hillhouse industrial complex: July 2012), or otherwise agreed in writing by the Environment Agency.	11/06/13
Application EPR/BU5640IA/V006	The response to section 3a on Operating techniques / Technical standards given in Table 3 in Part C3 of the Application form. Supporting Information	04/12/15
Application EPR/BU5640IA/V007	The response to section 3a on Operating techniques / Technical standards given in Table 3 in Part C3 of the Application form. Supporting Information Section 9 of the Application Supporting Information (Management Techniques)	01/09/16
Table S1.4 Pre-operational measures for future development	Approved Management system and risk assessment procedures provided in response to PO1 specified in Table S1.4 of this permit.	In accordance with Table S1.4 of this permit

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IC1	<p>The Operator shall submit a written report to the Environment Agency on the operation and performance of the PIC plant.</p> <p>The report shall summarise the operation and the environmental performance of the plant, including emissions to air, against the design parameters and predicted emissions set out in the Application and where necessary propose future monitoring of emissions. The report shall also include the number of batches/campaigns and how these are representative of the operation and performance of the plant.</p>	Within 18 months of normal operation of the PIC plant

Table S1.4 Pre-operational measures for future development

Reference	Operation	Pre-operational measures
PO1	Prior to commissioning of the PIC plant.	<p>The Operator shall submit for approval a summary of the management system and risk assessment procedures required to adequately assess and classify any impacts associated with the following:</p> <ul style="list-style-type: none"> • The introduction of new raw materials and/or changes in processing conditions. • The scale-up to the PIC (from laboratory) or the main powder plants PPP1 to PPP3 (from PIC). <p>The management and risk assessment procedures shall include, but not necessarily be limited to consideration of the following:</p> <ul style="list-style-type: none"> • The chemical nature and environmental risks associated with the raw materials proposed for use and the intermediates and products produced by the process; • Storage, handling and processing of raw materials; • Alterations to reaction processes and implications on process efficiency, energy use and plant modification; • Changes to emissions to air, water and sewer and the associated impact; • Changes to waste generation and contingency measures; • Potential incident and accident risks; • Potential impacts from odour and noise; • Potential changes to the permit; • The circumstances that initiate notifying the Environment Agency; • The circumstances that initiate a review of management procedures.
PO2	Prior to scale-up from PIC to the main powder plants PPP1 to PPP3	The Operator shall notify the Environment Agency 14 days before the planned scale-up date of any campaign.

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Gas oil (standby fuel for steam generation)	<0.1% sulphur content

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location ^{Note 6}	Parameter	Source	Limit (including unit)	Reference Period ^{Note 1}	Monitoring frequency	Monitoring standard or method
Plants PPP1 & PPP2						
A1	No parameters set	Polymer Handling and Drying PPP1 RPG, RPH, RP13, RP14, RP17 and RP19 PPP2 RP207, RP208, RP209 and RP210	No limit set	--	--	--
A2	Acetone	Secondary Acetone Scrubber RPJ vent	1.5kg/day	Day	Continuous ^{Note 2}	MCERTS approved CEMs BS EN 15267-3
A3	Hydrogen Fluoride	Raw Material Charging & Polymerisation ^{Note 3} PPP1 RPM and RP1 PPP2 RP201	No limit set	Note 4	Annual Report ^{Note 5}	MCERTS
A3	Diphenylsulphone		No limit set	Note 4	Annual Report ^{Note 5}	MCERTS
A3	4,4-Difluorobenzo phenone		No limit set	Note 4	Annual Report ^{Note 5}	MCERTS
A3	Hydroquinone		No limit set	Note 4	Annual Report ^{Note 5}	MCERTS
A3	Particulate		--	--	--	--

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location <small>Note 6</small>	Parameter	Source	Limit (including unit)	Reference Period <small>Note 1</small>	Monitoring frequency	Monitoring standard or method
A4	No parameters set	Diphenylsulphone (DPS) Recovery PPP1 RP22 and RP25 PPP2. RP214	No limit set	--	--	--
A5	No parameters set	Combustion Sources <u>Hot oil system</u> PPP2 RP215 <u>Oil storage</u> RP32 and RPP <u>Boilers</u> RPB1 and RPB2	No limit set	--	--	--
A6	Particulates	Local Exhaust Ventilation PPP1 RP3 PPP2 RP203	No limit set	--	--	--
A7	No parameters set	All other process vents	No limit set	--	--	--

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location ^{Note 6}	Parameter	Source	Limit (including unit)	Reference Period ^{Note 1}	Monitoring frequency	Monitoring standard or method
Polymer Blending and Packaging Plant						
A8	Particulates	Process Vents RP29, RP30, RPBPP4 RPBPP1, 2, 3 RP33, RPBPP5	No limit set	--	--	--
Plant PPP3						
A9	Acetone	Secondary Acetone Scrubber RP314	1.5kg/day	Day	Continuous ^{Note 2}	MCERTS approved CEMs BS EN 15267-3
A10	Hydrogen Fluoride	Raw Material Charging & Polymerisation ^{Note 3} RP301 stream 7 RP302 stream 9	No limit set	Note 4	Annual Report ^{Note 5}	MCERTS
A10	Diphenylsulphone		No limit set	Note 4	Annual Report ^{Note 5}	MCERTS
A10	4,4-Difluorobenzophenone		No limit set	Note 4	Annual Report ^{Note 5}	MCERTS
A10	Hydroquinone		No limit set	Note 4	Annual Report ^{Note 5}	MCERTS
A10	Particulate		No limit set	--	--	--
A11	No parameters set	Polymer Handling and Drying RP308, RP310 stream 7 RP309, RP311 stream 9	No limit set	--	--	--
A12	No parameters set	Diphenylsulphone (DPS) Recovery RP315 to RP319	No limit set	--	--	--

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location <small>Note 6</small>	Parameter	Source	Limit (including unit)	Reference Period <small>Note 1</small>	Monitoring frequency	Monitoring standard or method
A13	No parameters set	Combustion Sources <u>Hot oil system</u> RP320 stream 7 RP321 stream 9 RP322 and RP323 <u>Boiler</u> RPB8	No limit set	--	--	--
A14	Particulates	Local Exhaust Ventilation RP303	No limit set	--	--	--
A15	No parameters set	All other process vents RP306, RP307, RP313, RP324, RP325, RP326	No limit set	--	--	--
Compounding Plant						
A16	No parameters set	RP VCP1 to RP VCP11	No limit set	--	--	--

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location <small>Note 6</small>	Parameter	Source	Limit (including unit)	Reference Period <small>Note 1</small>	Monitoring frequency	Monitoring standard or method
PIC Plant						
A17	Hydrogen Fluoride	Polymerisation vessel vent stack RP PIC1	No limit set	Note 4	Note 7	MCERTS
A17	Monomers <small>Note 8</small>		No limit set	Note 4	Note 7	MCERTS
A17	Reaction solvent <small>Note 8</small>		No limit set	Note 4	Note 7	MCERTS
A17	Particulates		No limit set	Note 4	Note 7	MCERTS
A18	Acetone	Secondary Acetone Scrubber RP PIC7	No limit set	Note 4	Note 7	MCERTS
A19	No parameters set	All other process vents RP PIC2, RP PIC3, RP PIC4, RP PIC5, RP PIC6, RP PIC8	No limit set	--	--	--

Note 1: See Schedule 6 for reference conditions.

Note 2: The release of acetone from emission points A2 and A9 shall be measured continuously. When appropriate, alternative monitoring arrangements may be agreed in writing by the Environment Agency.

Note 3: The monitoring is applicable to each source (RPM, RP1, RP201, RP301 and RP302).

Note 4: The reference period shall relate to the sample collection over a suitable period of time, during a period of normal operation covering a full cycle.

Note 5: Annual programme of monitoring to be agreed in writing by the Environment Agency.

Note 6: Drawing numbers 290-00-00-014 Issue D, ENV-BPP001 RevA (PPP1, PPP2, blending and compounding), 290-00-00-019 Issue B (Compounding) and SHE-PIC-001 RevA.

Note 7: Monitoring shall be undertaken as agreed through IC1 in table S1.3 of this permit.

Note 8: Monitoring of these parameters shall be undertaken in accordance with the management of change procedure agreed through PO1 in table S1.4 of this permit.

Table S3.2 Point Source emissions to water (Wyre Estuary) – emission limits and monitoring requirements

Emission point ref. & location <small>Note 1</small>	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
Polymer Blending and Packaging Plant						
W2	Suspended Solids	Process and surface water drainage	10mg/l	Spot sample	1 batch every 3 months <small>Note 6</small>	In-house method
Plants PPP2 and PPP3 – HFE - Tidal discharge <small>Note 4</small>						
W4	Acetone	Combined HFE from plants PPP2 and PPP3	500mg/l	Duration of tidal discharge - flow proportional sample <small>Note 5</small>	During tidal discharge	In-house method
W4	Chemical Oxygen Demand		1250mg/l	Duration of tidal discharge - flow proportional sample <small>Note 5</small>	During tidal discharge	In-house method
W4	Suspended Solids		200mg/l <small>Note 2</small>	Duration of tidal discharge - flow proportional sample <small>Note 5</small>	During tidal discharge	In-house method
W4	Fluorides (expressed as Fluoride, F ⁻)		6000mg/l	Duration of tidal discharge - flow proportional sample <small>Note 5</small>	During tidal discharge	In-house method
W4	pH minimum pH maximum		6 12	Duration of tidal discharge - flow proportional sample <small>Note 5</small>	During tidal discharge	In-house method
W4	Temperature		<40°C	<small>Note 3</small>	Continuous over tidal discharge	Temperature sensor
W4	Flow/Volume		180m ³ /tide	Duration of tidal discharge - flow proportional sample <small>Note 5</small>	Continuous over tidal discharge	MCERTs Flow meter

Table S3.2 Point Source emissions to water (Wyre Estuary) – emission limits and monitoring requirements

Emission point ref. & location <small>Note 1</small>	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
Combined W1 and W3 effluent (identified as W5) – main outfall to the River Wyre <small>Note 7</small> Combined Plant PPP1/2 and PPP3 Effluent Pits (excludes High Fluoride Effluent- HFE- from PPP2/3)						
W5	Acetone	Process and surface water drainage from PPP1/2 and PPP3 effluent pits	700mg/l	-	-	Calculation <small>Note 7</small>
W5	Chemical Oxygen Demand		2000mg/l	-	-	Calculation <small>Note 7</small>
W5	Suspended Solids		300mg/l	-	-	Calculation <small>Note 7</small>
W5	Fluorides (expressed as Fluoride, F ⁻)		2,400mg/l	-	-	Calculation <small>Note 7</small>
W5	pH minimum pH maximum		6 12	-	-	Calculation <small>Note 7</small>
W5	Temperature		<40°C	-	-	Calculation <small>Note 7</small>
W5	Flow		-	-	-	Calculation <small>Note 7</small>
W5	Mercury		0.001mg/l	Based on mass balance calculation <small>Note 8</small>	Annual	Calculation
W5	Cadmium		0.001mg/l	Based on mass balance calculation <small>Note 8</small>	Annual	Calculation

Note 1: Drawing number 290-00-00-014 RevD provided with this application EPR/BU5640IA/V007 and 290-00-00-015 provided with application EPR/BU5640IA/V004. Locations identified on site plans in Schedule 7 of this permit.

Note 2: As a 95th percentile.

Note 3: The temperature limit is applicable to the ten-minute rolling average of the W1 and W3 monitoring, whichever is the greater.

Note 4: Discharge via W4 will only be permitted over a 4 hour window beginning 30 minutes after the high water measured or calculated locally and when the river flow rate is above 700m³/s (Incorporated in table S1.2 of this permit). Release via W4 shall only be undertaken in accordance with condition 3.1.4 of this permit.

Note 5: This period is defined in the PPP3 Operating Instructions Manual (instruction 3.17.4).

Note 6: Monitoring schedule to be agreed in writing by the Environment Agency and may be reduced with prior written agreement.

Note 7: Process monitoring carried out at W1 and W3 as specified in table S3.5 of this permit shall be used to determine compliance with the limit at W5 as follows:

The mass of acetone, COD, fluoride (as F-) and suspended solids from process monitoring points W1 and W3 shall be calculated using the existing MCERTS flow meters and the measured concentrations.

The concentration of acetone, COD, fluoride (as F-) and suspended solids at the River Wyre's main outfall, release point W5, shall be calculated based on the total mass release and the total volume of effluent released at process monitoring points W1 and W3.

The minimum pH, maximum pH and maximum temperature (10 min rolling average) at process monitoring points W1 and W3 shall be assumed for the combined release from release point W5.

Note 8: See Schedule 6 of this permit for details of "Mass balance calculation".

Table S3.3 Point source emissions to sewer ^{Note 3} – emission limits and monitoring requirements						
Emission point ref. & location ^{Note 1}	Parameter	Source	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
S1	Flow rate (m ³ /day)	Combined HFE from plants PPP2 and PPP3	No limit set	24-hour flow proportional sample ^{Note 2}	Note 2	--
S1	Chemical Oxygen Demand		No limit set	24-hour flow proportional sample ^{Note 2}	Note 2	--
S1	Suspended Solids		No limit set	24-hour flow proportional sample ^{Note 2}	Note 2	--
S1	Fluorides (expressed as Fluoride, F ⁻)		No limit set	24-hour flow proportional sample ^{Note 2}	Note 2	--

Note 1: Drawing number 290-00-00-014 RevD provided with this application EPR/BU5640IA/V007 and 290-00-00-015 provided with application EPR/BU5640IA/V004. Locations identified on site plans in Schedule 7 of this permit.

Note 2: In accordance with the sampling requirements specified by United Utilities.

Note 3: Eventual receiving water is Morecambe Bay (Lune Deeps).

Table S3.4 Annual limits		
Substance	Medium	Limit (including unit)
Mercury	Water	13.5 g ^{Note 1}
Cadmium	Water	5 g ^{Note 1}

Note 1: Compliance based on mass balance calculation defined in Schedule 6 of this permit.

Table S3.5 Process monitoring requirements						
Emission point ref. & location Note 1	Parameter	Source	Intervention Level (incl. unit) Note 3	Reference period	Monitoring frequency	Monitoring standard or method
Plant PPP1 Effluent Pit Note 4						
W1	Acetone	Process and surface water drainage from PPP1/2 effluent pit	900mg/l	24-hour flow proportional sample	Daily	In-house method
W1	Acetone		No level set	24-hour flow proportional sample	Annual	MCERTs
W1	Chemical Oxygen Demand		2400mg/l	24-hour flow proportional sample	Daily	In-house method
W1	Chemical Oxygen Demand		No level set	24-hour flow proportional sample	Annual	BS 6068-2.34
W1	Suspended Solids		300mg/l	24-hour flow proportional sample	Daily	In-house method
W1	Suspended Solids		No level set	24-hour flow proportional sample	Annual	BS EN 872
W1	Fluorides (expressed as Fluoride, F ⁻)		2800mg/l	24-hour flow proportional sample	Daily	In-house method
W1	Fluorides (expressed as Fluorides)		No level set	24-hour flow proportional sample	Annual	Fluoride ion selective electrode (FIA). Blue book: Fluoride in Waters, effluents, sludges, plants and soils 1982 HMSO
W1	pH minimum pH maximum		6 12	24-hour flow proportional sample	Daily	In-house method
W1	Temperature		<40°C	Note 2	Continuous	Temperature sensor
W1	Flow	No level set	Daily average	Continuous	MCERTs Flow meter	

Table S3.5 Process monitoring requirements

Emission point ref. & location Note 1	Parameter	Source	Intervention Level (incl. unit) Note 3	Reference period	Monitoring frequency	Monitoring standard or method
Plant PPP3 Effluent Pit – excludes High Fluoride Effluent (HFE) Note 4						
W3	Acetone	Process and surface water drainage from PPP3 effluent pit	300mg/l	24-hour flow proportional sample	Daily	In-house method
W3	Chemical Oxygen Demand		850mg/l	24-hour flow proportional sample	Daily	In-house method
W3	Suspended Solids		300mg/l	24-hour flow proportional sample	Daily	In-house method
W3	Fluorides (expressed as Fluoride, F ⁻)		200mg/l	24-hour flow proportional sample	Daily	In-house method
W3	pH minimum pH maximum		6 12	24-hour flow proportional sample	Daily	In-house method
W3	Temperature		<40°C	Note 2	Continuous	Temperature sensor
W3	Flow		-	Daily average	Continuous	MCERTs Flow meter

Table S3.5 Process monitoring requirements						
Emission point ref. & location Note 1	Parameter	Source	Intervention Level (incl. unit) Note 3	Reference period	Monitoring frequency	Monitoring standard or method
Effluent pits	pH	PPP1/2 and PPP3	-	-	Continuous	pH meter (Alarms and trips to prevent out of specification discharge)
Acetone column vents	Temperature	PPP1 PPP2 PPP3	-	-	Continuous	Not applicable
Flash vessel vent	Temperature	PPP1 PPP2 PPP3	-	-	Continuous	Not applicable

Note 1: For W1 and W3, refer to drawing number 290-00-00-014 RevD provided with this application EPR/BU5640IA/V007 and 290-00-00-015 provided with application EPR/BU5640IA/V004. Locations identified on site plans in Schedule 7 of this permit.

Note 2: The temperature intervention level is applicable to the ten-minute rolling average.

Note 3: Intervention levels indicating potentially abnormal process releases requiring investigation.

Note 4: Process monitoring carried out at W1 and W3 shall be used to determine compliance with the limit at W5 as specified in Table S3.2 of this permit. The calculations and methods used are specified in Note 7 to table S3.2 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 3.3.1.	A2, A3, A9, A10	Annually	1 January
Emissions to water Parameters as required by condition 3.3.1	W1, W2, W3, W4, W5	Quarterly Annually	1 January
Emissions to sewer Parameters as required by condition 3.3.1	S1	Quarterly	1 January

Table S4.2 Reporting forms		
Media/parameter	Reporting format	Date of form
Air	Form Air 1 or other form as agreed in writing by the Environment Agency	2013
Water	Forms Water 1 to Water 5 or other form as agreed in writing by the Environment Agency	2016
Sewer	Form Sewer 1 or other form as agreed in writing by the Environment Agency	2013

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	EPR/BU5640IA
Name of operator	Victrex Manufacturing Limited
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 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.

“*commissioning period*” for PIC commences on start-up of the listed activity [Section 4.1 A(1)(a)(viii)] and ends on handover to production.

“*emissions to land*” includes emissions to groundwater.

“*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.

“*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.

“*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.

“*Mass balance calculation*” means that for the purposes of demonstrating compliance or non-compliance with a specified limit the release shall be calculated. The annual mass release for Mercury and Cadmium shall be calculated from the maximum potential concentration of the metal present as contamination in the chemical (i.e. Hydrochloric Acid/Sodium Hydroxide) multiplied by the volume of that chemical 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. The concentration of Mercury and Cadmium shall be calculated from the annual mass release and the volume of effluent discharged during the Year.

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

“*Normal operation*” starts on completion of the ‘commissioning period’ as defined above.

“*quarter*” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“*year*” means calendar year ending 31 December.

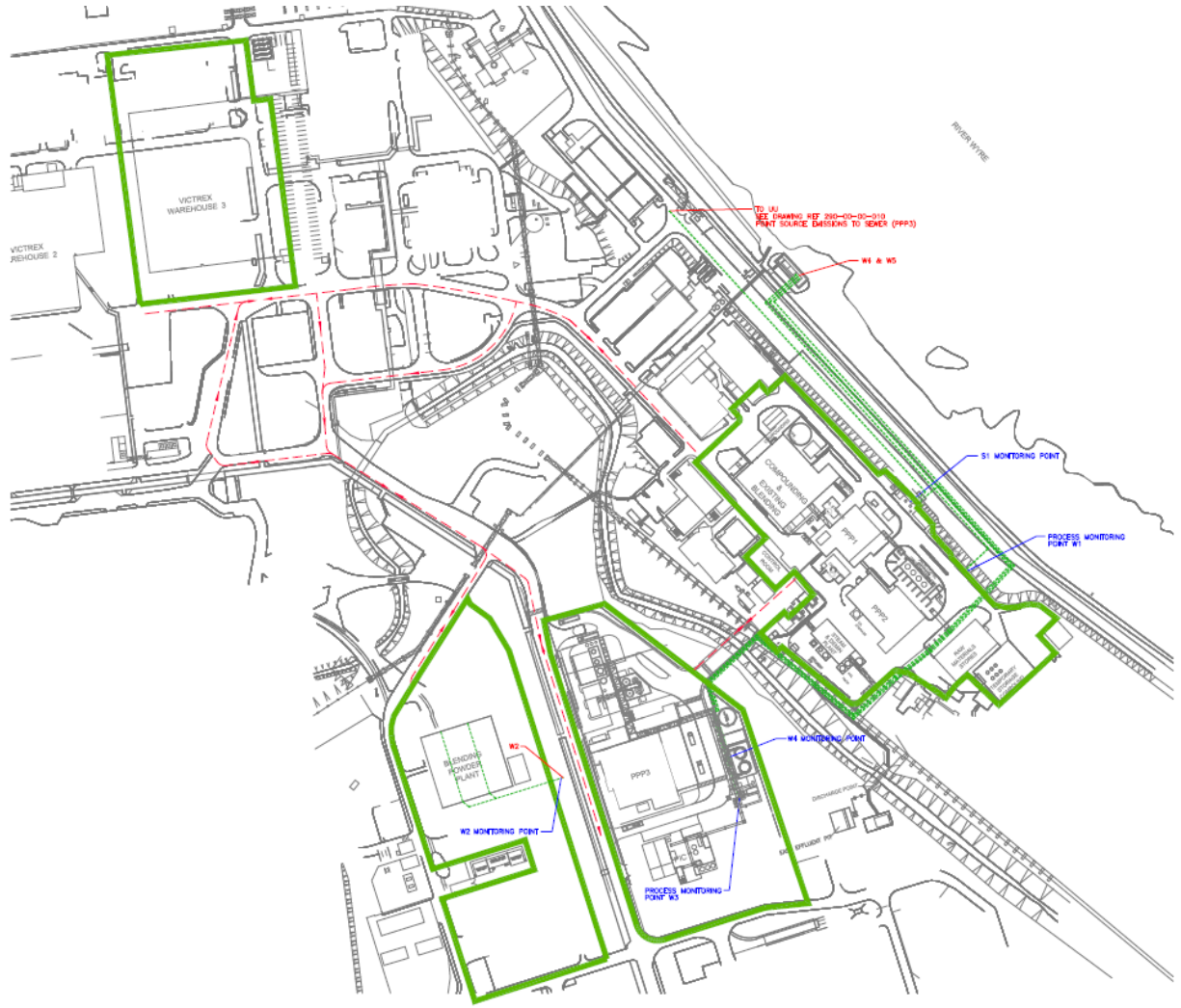
“*24-hour flow proportional sample*” means that sample collected by a continuous automatic sampler, with an input from a continuous flow monitor to proportion sample taken against flow, over a 24 hour period.

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.

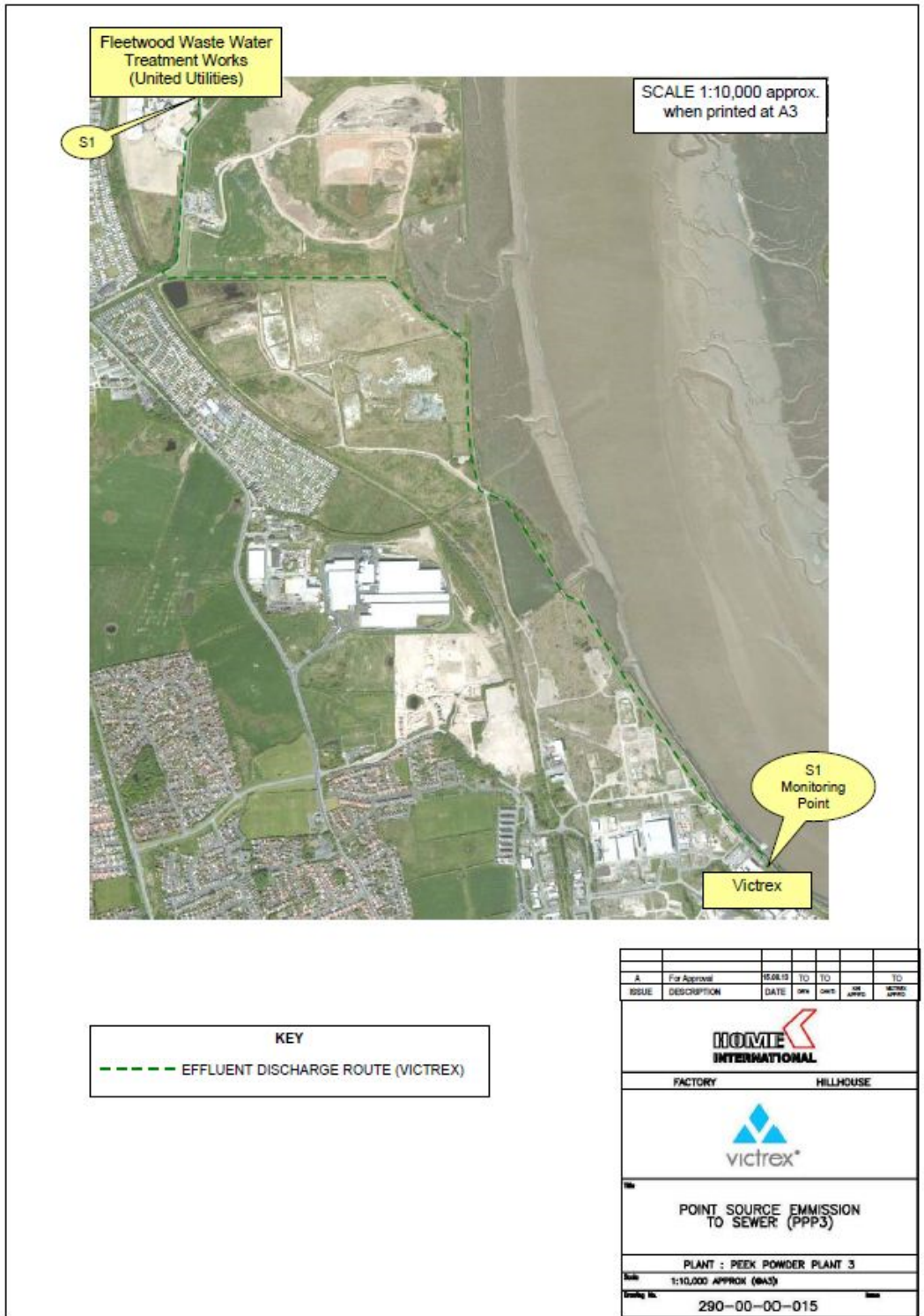
Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- (a) 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; and/or
- (b) 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.

Schedule 7 – Site Plans



Drawing number 290-00-00-014, Issue D



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END OF PERMIT

Permit Number: EPR/BU5640IA

Operator: Victrex Manufacturing Limited

Facility: Victrex Polymer Production Hillhouse

Form Number: Air1 / 2013

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

Emission Point	Substance / Parameter	Emission		Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
		Limit Value						
A2	Acetone	1.5 kg/day						
A3	Hydrogen Fluoride	-						
A3	Diphenylsulphone	-						
A3	4,4-Difluorobenzophenone	-						
A3	Hydroquinone	-						
A9	Acetone	1.5 kg/day						
A10	Hydrogen Fluoride	-						
A10	Diphenylsulphone	-						
A10	4,4-Difluorobenzophenone	-						
A10	Hydroquinone	-						

- [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
(Authorised to sign as representative of Operator)

Date.....

Permit Number: EPR/BU5640IA

Operator: Victrex Manufacturing Limited

Facility: Victrex Polymer Production Hillhouse

Form Number: Water1 / 2016

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		Intervention Level mg/l		Contribution to W5	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
W1	Acetone		900							
W1	Acetone		-							
W1	COD		2400							
W1	COD		-							
W1	Suspended Solids		300							
W1	Suspended Solids		-							
W1	Fluorides		2800							
W1	Fluorides		-							
W1	pH min	pH max	6	12						
W1	Temperature		<40°C							
W1	Flow		-							

- [1] The result given is the maximum value (or the minimum value in the case of a level that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the intervention level. Where the intervention level 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
(Authorised to sign as representative of Operator)

Date.....

Permit Number: EPR/BU5640IA

Operator: Victrex Manufacturing Limited

Facility: Victrex Polymer Production Hillhouse

Form Number: Water2 / 2013

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

Emission							
Emission Point	Substance / Parameter	Limit Value mg/l	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
W2	Suspended solids	10					

- [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
(Authorised to sign as representative of Operator)

Date.....

Permit Number: EPR/BU5640IA

Operator: Victrex Manufacturing Limited

Facility: Victrex Polymer Production Hillhouse

Form Number: Water3 / 2016

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	Intervention Level mg/l	Contribution to W5	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
W3	Acetone	300						
W3	COD	850						
W3	Suspended Solids	300						
W3	Fluorides	200						
W3	pH min pH max	6 12						
W3	Temperature	<40°C						
W3	Flow	-						

- [1] The result given is the maximum value (or the minimum value in the case of a level that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the intervention level. Where the intervention level 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
 (Authorised to sign as representative of Operator)

Date.....

Permit Number: EPR/BU5640IA

Operator: Victrex Manufacturing Limited

Facility: Victrex Polymer Production Hillhouse

Form Number: Water4 / 2013

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

Emission									
Emission Point	Substance / Parameter		Limit Value mg/l		Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
W4	Acetone		500						
W4	COD		1,250						
W4	Suspended Solids		200						
W4	Fluorides		6000						
W4	pH min	pH max	6	12					
W4	Temperature		<40°C						
W4	Flow/Volume		180m³/tide						

- [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
(Authorised to sign as representative of Operator)

Date.....

Permit Number: EPR/BU5640IA

Operator: Victrex Manufacturing Limited

Facility: Victrex Polymer Production Hillhouse

Form Number: Water5 / 2016

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		Calculated Limit mg/l		Result ^[1] except mercury and cadmium as defined in schedule 6 of the permit
W5	Acetone		700		
W5	COD		2,000		
W5	Suspended Solids		300		
W5	Fluorides		2,400		
W5	pH min	pH max	6	12	
W5	Temperature		<40°C		
W5	Flow		-		
W5	Mercury		0.001		
W5	Cadmium		0.001		

[1] The concentration at W5 shall be calculated from process monitoring carried out at W1 and W3 as specified in table S3.5 of this permit.

Signed
(Authorised to sign as representative of Operator)

Date.....

Permit Number: EPR/BU5640IA

Operator: Victrex Manufacturing Limited

Facility: Victrex Polymer Production Hillhouse

Form Number: Sewer1 / 2013

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

Emission Point	Substance / Parameter	Emission		Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
		Limit Value						
S1	Flow rate	-						
S1	COD	-						
S1	Suspended Solids	-						
S1	Fluorides	-						

- [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
(Authorised to sign as representative of Operator)

Date.....