

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

PQ Silicas UK Limited
Warrington Silicas Installation
Bank Quay
4 Liverpool Road
Warrington
Cheshire
WA5 1AQ

Variation application number

EPR/RP3233GW/V007

Permit number

EPR/RP3233GW

Warrington Silicas Installation

Permit number EPR/RP3233GW

Introductory note

This introductory note does not form a part of the notice

Under the Environmental Permitting (England & Wales) Regulations 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.

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.

This variation is for the following changes:

- Replacement of three existing 27.7 MWth boilers with two new 16.5 MWth boilers.
- Installation of a second gel plant 'ES2' to increase amorphous silica (gels) production capacity.
- Replacement of the Gasil washers, with an increase in production capacity.
- Replacement and relocation of a bulk sulphuric acid storage tank.

These changes require additional land to be included in the installation site boundary and there are three new emission points (A37 for the ES2 spray dryer, A38 for the new boilers and S7 for a new emission to sewer).

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

The Installation is located at national grid reference SJ 597 879 close to Warrington town centre and is bisected by the River Mersey and a public footpath. It has been involved in the manufacture of chemicals for over 200 years.

The installation comprises a number of chemical processing plants, which include the manufacture of:

- sodium silicate and other silicates (lithium and potassium silicates).
- crystalline aluminosilicates (zeolites).
- non-crystalline (hydrated amorphous) silicon dioxides.
- Sodium silicates are produced in the 'Silicate Plant'. These are either further processed on other plants or are sold as product. Sodium silicate is produced in two ways. In the first route, sand and soda ash are combined at high temperature in a furnace to produce a solid, soluble sodium silicate. This solid material is then dissolved, and in some cases blended with other materials according to customer requirements. The silica producing plants principally use this material. The second route reacts sand and caustic soda under specified conditions to produce silicates with a different chemical composition and physical structure. This material is principally transferred to the Zeolite process, or sold as final product, but can also be used as a raw material for silica production.
- The zeolites process requires sodium silicate produced via the second route and alumina trihydrate, both of which are prepared in the plant before transfer to reaction vessels for production of zeolite. The resulting slurry is filtered and washed, and caustic material is recovered by evaporation for re-use in the aluminate preparation stage. Wash liquor is also used to neutralise some of the primary acidic effluent on other areas of the installation. Following ring drying, material is transferred to silos for storage prior to dispatch.

- Amorphous silica is produced through one of two routes on the installation. The precipitation route reacts sodium silicate with sulphuric acid in a two stage reaction process. The precipitated silica is filtered, washed and ring dried, before milling and classification. The Precips area also handles silica intermediate feedstocks, which are micronised and packed before transfer to the warehouse as finished product. The gel formation route uses sodium silicate and sulphuric acid to produce silica gel. This is formed on a gel belt. Gel washing and drying techniques depend on the product requirements, as do the further processing operations.
- Lithium and potassium silicates are also produced on a small scale and speciality materials, such as highly specified catalysts are produced in the speciality catalysts plants.
- Principle raw materials used at the site are sand (solid), sodium hydroxide liquor (caustic soda), sulphuric acid (liquor), aluminium tri-hydrate (solid), sodium carbonate (soda ash) and sodium chloride liquor (brine). Waste handling for the site is managed centrally, waste is stored by type in clearly identified areas and where feasible is segregated for recycling.
- Oxides of nitrogen, particulates and sulphur dioxide are emitted to air. Emissions of particulates are abated through bag filters, wet scrubbers, cyclones and cassette filters.
- Process effluent is discharged to the River Mersey via two effluent treatment plants, with a further five emission points to the River Mersey, which discharge process water, cooling water and uncontaminated rainwater. There are five emission points to sewer, which discharge to Warrington North STW.
- The Operator is a participant in the Underlying Climate Change Levy Agreement for the Chemical Sector. The Installation operates an Environmental Management System (EMS) certified to ISO 14001.
- The nearest sites with statutory nature conservation designations are Manchester Mosses and Rixton Clay Pits Special Areas of Conservation (SACs) and Mersey Estuary Special Protection Area (SPA).

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 BM0354IP	Received 12/08/05	
Schedule 4 notice for more information issued	Request dated 07/03/06	Response received 10/04/06
Request for further information	Request dated 05/04/06	Response received 13/04/06
Request for further information	Request dated 25/04/06	Response received 28/04/06
Revised emission point plan and site plan showing installation boundary	Received 27/06/06	
Revised site plan showing installation boundary	Received 13/06/06	
Permit issued	30/06/06	
Variation notice CP3335MN issued	18/10/06	To amend temperature limit at W1

Status log of the permit		
Description	Date	Comments
Variation notice FP3139XK issued	17/12/07	To implement the National Emissions Reduction Plan (NERP)
Application EPR/RP3233GW/T001 (full transfer of permit EPR/BM0354IP)	Duly made 25/09/08	Full transfer of permit From INEOS Silicas Limited To PQ Silicas UK Limited
Request for further information	Requested 24/11/08	Response received 24/11/08
Transfer determined EPR/RP3233GW/T001	25/11/08	
Variation application EPR/RP3233GW/V002	Duly Made 22/02/10	To amend conditions for the discharge to the River Mersey
Additional Information	Requested 01/06/10	Received 01/06/10
Variation EPR/RP3233GW/V002 issued	07/06/10	
Variation application EPR/RP3233GW/V003	Duly Made 06/07/11	To improve the heat exchange between the hot filtrate and incoming cooler water and to increase the volume of effluent to the River Mersey
Variation EPR/RP3233GW/V003 issued	28/09/11	
Application EPR/RP3233GW/V004	Withdrawn	Application received 19/11/12 and later withdrawn by operator. Resulted in numbering error at next variation.
Regulation 60 Notice sent to the Operator	31/10/14	Issue of a Notice under Regulation 60(1) of the EPR. Environment Agency Initiated review and variation to vary the permit under IED to implement the special provisions for LCP under Chapter III, introducing new Emission Limit Values (ELVs) applicable to LCP, referred to in Article 30(2) and set out in Annex V.
Regulation 60 Notice response	25/03/15	Response received from the Operator.
Variation determined EPR/RP3233GW/V004 (NB. Error – should have had V005 suffix)	17/12/15	Varied and consolidated permit issued. Variation effective from 01/01/16
Application EPR/RP3233GW/V006	Withdrawn	The proposed changes to the boiler plant will be combined with the upcoming application planned for the ES2 Gels plant.
Application EPR/RP3233GW/V007 (variation and consolidation)	Duly made 10/05/17	Application to vary the permit to include replacement boilers, gasil washers and acid storage tank, plus the installation of a second gels plant and updating the permit to modern conditions.
Additional Information	Received 15/09/17	Further detail on containment, the combustion plant, the ES2 gels plant, emissions to water and sewer, a site condition report, noise assessment, flood risk assessment and updated site plans.
Additional Information	Received 24/10/17	Confirmation of 16.5 MWth input per boiler.
Additional Information	Received 16/11/17	Updated site plan and monitoring details.
Additional Information	Received 27/11/17	Clarification detail on the boiler operating regime.

Status log of the permit		
Description	Date	Comments
Variation determined EPR/RP3233GW (Billing ref: PP3338YY)	06/12/17	Consolidated and varied permit issued.

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/RP3233GW

Issued to

PQ Silicas UK Limited (“the operator”)

whose registered office is

**Bank Quay
4 Liverpool Road
Warrington
Cheshire
WA5 1AQ**

company registration number **06458647**

to operate a regulated facility at

**Warrington Silicas Installation
Bank Quay
4 Liverpool Road
Warrington
Cheshire
WA5 1AQ**

to the extent set out in the schedules.

The notice shall take effect from 06/12/2017

Name	Date
Philip Lamb	06/12/2017

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of the application made by the operator.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/RP3233GW

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/RP3233GW/V007 authorising,

PQ Silicas UK Limited (“the operator”),

whose registered office is

**Bank Quay
4 Liverpool Road
Warrington
Cheshire
WA5 1AQ**

company registration number **06458647**

to operate an installation at

**Warrington Silicas Installation
Bank Quay
4 Liverpool Road
Warrington
Cheshire
WA5 1AQ**

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

Name	Date
Philip Lamb	06/12/2017

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 shaded in light blue and the technical connections shown as green, red or blue lines 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.

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 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 and S3.3

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 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.

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 (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.

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.

In any other case:

- (e) the death of any of the named operators (where the operator consists of more than one named individual);
- (f) any change in the operator's name(s) or address(es); and
- (g) 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 reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR1	Section 1.1 A(1) (a) Burning any fuel in an appliance with a rated thermal input of 50 or more megawatts.	Two natural gas fired boilers, each with a net thermal input of 16.5 MW (total 33 MW). Silicate plant furnace, with a net thermal input of 20MW. Dryers (ring, rotary, flash spray) on the precips plant, gels plants and A24 plant not exceeding a combined net thermal input of 30 MW.	Combustion plant providing steam and compressed air to the installation. Operation of gas fired furnace. Dryers of >1MWth serving the precips, gels and A24 plants. From receipt of natural gas to discharge of exhaust gases.
AR2	Section 4.2 part A(1)(a)(iv) Producing inorganic chemicals such as salts (for example ammonium chloride, potassium chlorate, potassium carbonate, sodium carbonate, perborate, silver nitrate, cupric acetate, ammonium phosphomolybdate).	The production of lithium silicate, potassium silicate and sodium silicate.	Operation of steam-heated silicate hydrothermal reactor to react sand and sodium hydroxide to produce sodium silicate (alkaline silicate). Operation of silicate mixing tank to produce lithium silicate and potassium silicate.

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR3	Section 4.2 Part A(1)(a)(v) Producing inorganic chemicals such as non-metals, metal oxides, metal carbonyls or other inorganic compounds (for example calcium carbide, silicon, silicon carbide, titanium dioxide).	The production of silica, sodium aluminate (zeolites) and calcium silicate.	Operation of eight steam-heated crystallisers to produce sodium aluminosilicate (zeolite) from sodium silicate and sodium aluminate. Operation of three 2-stage batch reactors in the production of a range of silica products. Production of precipitated silicate products by mixing sodium silicate with sulphuric acid and other bulk materials. Downstream processing including filtration, drying, size reduction and packaging. Operation of three gel-making belts (one each in gels gasil, ES1 and ES2 plants); sulphuric acid is mixed with sodium silicate to produce silica gel. Batch processes to produce silica products via washers, dryers, size reduction and packaging.
AR4	Section 4.7 Part A(1)(a) Any activity for the manufacture of a chemical which may result in the release of ammonia into the air, other than an activity in which ammonia is only used as a refrigerant.	Processes within the Speciality Catalysts Plant leading to emissions of ammonia.	The operation of the Nautamixer in the silanisation of silica and disilazane.
AR5	Section 5.4 Part A(1)(a)(ii) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving physico-chemical treatment.	Precips Effluent Treatment Plant Dedicated plant for the treatment of effluent generated by the Precips Plant prior to discharge to the River Mersey.	From receipt of effluent to discharge of treated effluent.
AR6	Section 5.4 Part A(1)(a)(ii) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving physico-chemical treatment.	Gels Effluent Treatment Plant Dedicated plant for the treatment of effluent generated by the Silicate Plant, A24 Plant and the ES1 and ES2 Gels Plants prior to discharge to the River Mersey.	From receipt of effluent to discharge of treated effluent.
Directly Associated Activity			

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR7	Directly associated activity	Boiler plant water treatment.	From receipt of incoming towns water into raw water tank to introduction into boiler.
AR8	Directly associated activity	Storage of raw materials	From receipt of raw materials to despatch of final or intermediate product.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	The response to questions 2.1 and 2.2 given in pages 15 to 47 of the core application and Appendices A to F of the application.	12/08/05
Further information	Section on maintenance and testing regime for Silicate plant, A24 plant, Precips plant and Gels Plant	10/04/06
Document titled Warrington Precipitates Filter Press Replacement Project June 2011 submitted as part of Variation Application EPR/RP3233GW/V003	Sections 1 and 2	06/07/11
Application	Permit Variation Supporting Information Pack (proposed changes, site description, operating techniques, raw materials, energy efficiency, waste management, noise, management system, monitoring). Documents referenced in application form Part C3 - Section 3 on Operating Techniques, Table 3 Technical Standards. Document: Evidence to underpin Appointment of PQ Silicas UK Limited as Legal Operator of the New Boiler Plant at their Warrington Manufacturing Site	Duly Made 10/05/17
Response to Schedule 5 Notice dated 25/07/17	Response to: <ul style="list-style-type: none"> • Item 1, detailing containment. • Item 2.2b, regarding the operation of the combustion plant. • Item 3.1, regarding monitoring of the ES2 spray dryer. • Item 5b, a risk assessment for potentially polluting substances (Table 1 of the Site Condition Report). • Item 7, regarding flood risk management. 	15/09/17
Response to request for further information dated 23/11/17	e-mail response with clarified description of the operational strategy of 2 nd boiler on hot standby with short periods of simultaneous operation for spiked peak demand.	27/11/17

Reference	Requirement	Date
1	The Operator shall develop a documented system for maintaining, servicing and calibrating the continuous monitors for emission points A1, A2, A3, A3b, A6, A12 and A14 having regard to BS EN 14181. The Operator shall provide written confirmation to the Agency when this action has been implemented.	Complete
2	The Operator shall carry out monitoring of sulphur dioxide emissions from the Lucilite Plant, having regard to Agency Guidance Notes M1 and M2. The Operator shall carry out an impact assessment on the emission of sulphur dioxide, using Environment Agency guidance note H1 or equivalent methodology. The Operator shall submit a written summary of the monitoring and the impact assessment to the Environment Agency.	Complete
3	The Operator shall submit a written report to the Agency detailing proposed methods for gathering monitoring data to identify and quantify emissions of volatile organic compounds from emission points A29 to A34 and ammonia from emission points A31. The report shall take into account the requirements of the Agency Technical Guidance Notes M1 and M2.	Complete
4	The Operator shall review the provision of MCERTS accreditation for the monitoring equipment, personnel and organisations employed for the emissions monitoring programme in condition 2.10.1 and propose a timetable for achieving this standard for any elements that are not MCERTS certified.	Complete
5	The Operator shall identify measures for reducing the level of ammonia in the emission from W2 to 5mg/l or lower. The Operator shall submit a summary of the measures identified in writing to the Environment Agency with a timescale for implementing the measures.	Complete
6	The Operator shall undertake an assessment of the options available to reduce emissions of suspended solids from emission points W1 and W2. The operator shall submit a report to the Agency detailing the preferred options with an implementation plan. The preferred options shall be implemented by the operator from the date of approval by the Agency.	Complete
7	The Operator shall undertake an assessment of options to reduce emissions of nitrogen dioxide from emission point A1. The Operator shall provide a report to the Environment Agency detailing the preferred options with an implementation plan. The preferred options shall be implemented by the operator from the date of approval by the Agency.	Complete
8	The Operator shall undertake monitoring of releases of particulates from emission points A7, A8, A9, A10, A11, A13, A14, A17, A18 and A19 having regard to Section 2.10 of Agency Guidance Note S4.03. The Operator shall carry out an impact assessment on the emission of particulates, using Environment Agency guidance note H1 or equivalent methodology. The Operator shall submit a written summary of the monitoring and the impact assessment to the Environment Agency.	Complete

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
9	<p>The Operator shall undertake an assessment of options to reduce emissions of particulates from the Silicate Furnace (A1). The Operator shall provide a report to the Agency detailing the preferred options with an implementation plan.</p> <p>The preferred options shall be implemented by the operator from the date of approval by the Agency.</p>	Complete
10	<p>The Operator shall undertake a review of the following pollution prevention features:</p> <ul style="list-style-type: none"> i) Bunding; ii) Surfacing; iii) Loading/unloading areas; iv) Raw material storage areas; v) Waste storage areas; vi) Containment of materials being transferred via pipelines; vii) High level alarms; viii) Delivery and loading/unloading procedures. <p>This review will have regard to the Agency Guidance PPG11 – Preventing Pollution on Industrial Sites. The operator shall provide a report to the Agency summarising the findings with a proposed timetable to implement any improvements identified. The improvements shall be implemented by the operator from the date of approval by the Agency.</p>	Complete
11	<p>The Operator shall develop a written Site Closure Plan with regard to the requirements set out in the Agency Guidance Note IPPC S4.03. The Operator shall submit a copy of the plan to the Environment Agency.</p>	Complete
12	<p>The Operator shall submit a report to the Agency estimating fugitive emissions of volatile organic compounds from the transfer of solvents from barrels, and ammonia from the purging or blanketing of tanks with nitrogen, at the Speciality Catalyst Plant. The report shall include the methodology used and any options proposed to reduce the emissions. The options shall be implemented by the operator from the date of approval by the Agency.</p>	Complete
13	<p>The Operator shall review the condition of the steam distribution systems in order to identify where improvements to energy efficiency can be made.</p> <p>A summary report of the findings with a timescale for implementing improvements shall be submitted to the Environment Agency.</p> <p>The improvements shall be implemented by the operator from the date of approval by the Agency.</p>	Complete
14	<p>The Operator shall submit a written report to the Environment Agency for approval on the commissioning of the replacement filter presses for S232 and S234.</p> <p>The report shall summarise the environmental performance of the equipment and instrumentation as installed against the design parameters set out in the Application. This shall include a review of the effect of the improved heat exchange on the W1 effluent outfall temperature and equipment noise impact checking.</p> <p>The report shall further include any improvements implemented during commissioning for achieving and demonstrating compliance with permit conditions.</p>	Complete

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
15	<p>The operator shall submit a written report to the Environment Agency for approval covering the results of a thermal survey of the River Mersey around the W1 outfall.</p> <p>This report must include (but is not restricted to):</p> <ul style="list-style-type: none"> a) compare the values used in the modelling submitted as part of the application for variation EPR/RP3233GW/V003 against temperatures measured in a representative range of tidal conditions when the plant is running as close to the worst case conditions for temperature and discharge rate as it is likely to achieve. b) Consider the effect of the outfall not being into the water directly at lower tide times. c) Measure the effect of other outfalls on the background water temperature. d) Consider the effect of changes in water temperature on eels as well as salmon. <p>Until the report has been approved and any actions arising from it have been successfully implemented the W1 outfall discharge rate is restricted to 3000 m³/day during the months of March/April/May (eel migration) and August/September/October (salmon upstream migration).</p>	Complete
16	<p>For LCPD LCP 82 (now LCP 254 under IED); annual emissions of dust, sulphur dioxide and oxides of nitrogen including energy usage for the year 01/01/2015 to 31/12/2015 shall be submitted to the Environment Agency using form AAE1 via the NERP Registry. If the LCPD LCP was a NERP plant the final quarter submissions shall be provided on the RTA 1 form to the NERP Registry.</p>	Complete
17	<p>The operator shall submit a written report to the Environment Agency describing the performance and optimisation of the boiler plant combustion settings to minimise oxides of nitrogen (NOx) emissions within the emission limit values described in this permit. The report shall include an assessment of the level of NOx emissions that can be achieved under optimum operating conditions.</p>	31/03/18
18	<p>The operator shall submit a report to the Environment Agency on the baseline conditions of soil and groundwater at the new land added to the installation boundary under EPR/RP3233GW/V007. The report shall contain the information necessary to determine the state of soil and groundwater contamination so as to make a quantified comparison with the state upon definitive cessation of activities provided for in Article 22(3) of the IED. The report shall contain information, supplementary to that already provided in the Site Condition Report (September 2017), needed to meet the information requirements of Article 22(2) of the IED.</p>	30/04/18
19	<p>The operator shall update the Site Condition Report (SCR) for the entire expanded installation, including stages 1 to 3 of the risk assessment in the European Commission Guidance concerning baseline reports under Article 22(2) of Directive 2010/75/EU on industrial emissions. The report shall also include a drainage and a surfacing plan, with any updates as necessary. The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission to the Environment Agency of the SCR and drainage and surfacing plans.</p>	30/04/18

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
20	The operator shall complete a review of their site surfacing and drainage systems and their potential to cause fugitive emissions to surface water, groundwater and soil. This shall include a video survey to assess the integrity of any subsurface drains. The operator shall submit a written report to the Environment Agency following this review. The report shall take into account the requirements in the sections on 'emissions to water' and 'leaks from containers' in https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit . The report shall include details of any necessary improvements or maintenance to ensure the integrity of the site surfacing and drainage system, with timescales for agreement with the Environment Agency. The report shall also include a drainage & surfacing plan, with any updates as necessary. The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report and drainage & surfacing plan.	30/04/18
21	The operator shall carry out a noise monitoring survey and impact assessment in accordance with BS 4142:2014 to review the actual noise levels from the new boiler plant and ES2 gels plant and their impact at local noise-sensitive receptors. The methodology and scope shall be agreed with the Environment Agency in advance. The operator shall provide a report to the Environment Agency detailing the noise survey results and whether any further noise attenuation measures are necessary and/or available, with timescales for their implementation. The operator must implement the measures as agreed, and from the date stipulated by the Environment Agency. The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report.	Within 3 months of completion of commissioning of Phase 2 of the ES2 Gels Plant.
22	The operator shall complete a water efficiency audit, to include an investigation into the reuse of cleaner wash water from the gel washing cycle in the more concentrated part of the process. The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the findings to the Environment Agency.	Within 3 months of completion of commissioning of Phase 3 of the ES2 Gels Plant.

Table S1.4 Pre-operational measures for future development		
Reference	Operation	Pre-operational measures
PO1	Phase 1 of the ES2 Gel Plant	The operator shall provide notification to the Environment Agency at least two weeks before the start of Phase 1 operations. The notification should include details of which processes will become operational and the number of plant involved.
PO2	Phase 2 of the ES2 Gel Plant	The operator shall provide notification to the Environment Agency at least two weeks before the start of the Phase 2 operations. The notification should include details of which processes will become operational, the number of plant involved and an update to the document on containment (15/09/17).
PO3	Phase 3 of the ES2 Gel Plant	The operator shall provide notification to the Environment Agency at least two weeks before the start of the Phase 3 operations. The notification should include details of which processes will become operational, the number of plant involved and a further update to the document on containment.

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
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Schedule 3 – Emissions and monitoring

Table S3.1 Emission limits to air and monitoring						
Emission point ref. & location	Source	Parameter	Limit (including unit) (Note 1)	Reference period	Monitoring frequency	Monitoring standard or method
A1 as shown on drawing 40959-2	Silicate Furnace Stack	Particulates	250 mg/m ³	Note 2	Continuous	BS ISO 10155
		Oxides of Nitrogen as nitrogen dioxide	2700 mg/m ³	Note 2	Continuous	ISO 10849
A2 as shown on drawing 40959-2	A24 Plant Ring Drier via bag filter	Particulates	20 mg/m ³	Hourly average	Annual	BS EN 13284-1
A3 as shown on drawing 40959-2	A24 Plant Product Silos via bag filter	No parameters set	No limit set	--	--	--
A4 as shown on drawing 40959-2	Precips Plant Stack via bag filter and wet scrubber	Particulates	20 mg/m ³	Hourly average	Annual	BS EN 13284-1
A5 as shown on drawing 40959-2	Precips Air Microniser Product Collector via cassette filter	No parameters set	No limit set	--	--	--
A6 as shown on drawing 40959-2	Gels Plant Ring Drier via bag filter	Particulates	20 mg/m ³	Hourly average	Annual	BS EN 13284-1
A7 as shown on drawing 40959-2	Steam Microniser Product Collector via filter bag	No parameters set	No limit set	--	--	--
A8 as shown on drawing 40959-2	Steam Microniser Hot Collector 1 via filter bag	No parameters set	No limit set	--	--	--
A9 as shown on drawing 40959-2	Steam Microniser Hot Collector 2 via filter bag	No parameters set	No limit set	--	--	--
A10 as shown on drawing 40959-2	Steam Microniser Hot Collector 3 via filter bag	No parameters set	No limit set	--	--	--

Table S3.1 Emission limits to air and monitoring						
Emission point ref. & location	Source	Parameter	Limit (including unit) (Note 1)	Reference period	Monitoring frequency	Monitoring standard or method
A11 as shown on drawing 40959-2	Gels Plant Rotary Drier via filter bag	No parameters set	No limit set	--	--	--
A12 as shown on drawing 40959-2	No 3 Air Microniser Product Collector via filter bag	No parameters set	No limit set	--	--	--
A13 as shown on drawing 40959-2	No 1 Air Microniser Product Collector via filter bag	No parameters set	No limit set	--	--	--
A14 as shown on drawing 40959-2	Gels Plant Spray Drier via filter bag	Particulates	20 mg/m ³	Hourly average	Annual	BS EN 13284-1
A15 as shown on drawing 40959-2	Gels Plant Flash Drier via filter bag and absolute filter	No parameters set	No limit set	--	--	--
A16 as shown on drawing 40959-2	Vacumax via filter bag	No parameters set	No limit set	--	--	--
A18 as shown on drawing 40959-2	Lucilite Mill No 1 via filter bag	No parameters set	No limit set	--	--	--
A19 as shown on drawing 40959-2	Lucilite Mill No 2 via filter bag	No parameters set	No limit set	--	--	--
A29 as shown on drawing 40959-2	WDM26 via condenser	No parameters set	No limit set	--	--	--
A30 as shown on drawing 40959-2	WDM27 via condenser	No parameters set	No limit set	--	--	--
A31 as shown on drawing 40959-2	WDM15 Vent via condenser	No parameters set	No limit set	--	--	--

Table S3.1 Emission limits to air and monitoring						
Emission point ref. & location	Source	Parameter	Limit (including unit) (Note 1)	Reference period	Monitoring frequency	Monitoring standard or method
A32 as shown on drawing 40959-2	WDM14 Vent via condenser	No parameters set	No limit set	--	--	--
A33 as shown on drawing 40959-2	WDM14 Solvent recovery tank	No parameters set	No limit set	--	--	--
A34 as shown on drawing 40959-2	Complex Pot Vent via condenser	No parameters set	No limit set	--	--	--
A35 as shown on drawing 40959-2	Pilot Plant Ring Drier via bag filter	No parameters set	No limit set	--	--	--
A37 as shown on drawing 40959-2	ES2 Spray Dryer via cyclone and bag filters	Particulates	20 mg/m ³	Hourly average	Annual	BS EN 13284-1
A38 as shown on drawing 40959-2	Boiler Plant Stack	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	100 mg/m ³	Hourly average	At least every 6 months	BS EN 14792
A38 as shown on drawing 40959-2	Boiler Plant Stack	Carbon Monoxide	110 mg/m ³	Hourly average	At least every 6 months	BS EN 15058
A38 as shown on drawing 40959-2	Boiler Plant Stack	Sulphur Dioxide mg/m ³	35 mg/m ³	-	At least every 6 months	Concentration by calculation as agreed in writing by the Environment Agency
A38 as shown on drawing 40959-2	Boiler Plant Stack	Dust mg/m ³	5 mg/m ³	-	Every 6 months	Concentration by calculation as agreed in writing by the Environment Agency
A38 as shown on drawing 40959-2	Boiler Plant Stack	Oxygen	-	-	Periodic As appropriate to reference	BS EN 14789
A38 as shown on drawing 40959-2	Boiler Plant Stack	Water Vapour	-	-	Periodic As appropriate to reference	BS EN 14790

Emission point ref. & location	Source	Parameter	Limit (including unit) (Note 1)	Reference period	Monitoring frequency	Monitoring standard or method
A38 as shown on drawing 40959-2	Boiler Plant Stack	Stack gas volume flow	-	-	-	BS EN 16911 & TGN M2
A38 as shown on drawing 40959-2	Boiler Plant Stack	As required by the Method Implementation Document for BS EN 15259	-	-	Pre-operation and when there is a significant operational change	BS EN 15259

Note 1: See Schedule 6 for reference conditions
Note 2: Determined on 15 minute averages, compliance shall be achieved if 95% of the 15 minute averages are below the specified limit.

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
W1 as shown on drawing 40959-2, to River Mersey	Precipitation Effluent Treatment Plant	Suspended Solids	150 mg/l	Weekly arithmetic mean average of daily sample results	Daily results mean averaged for weekly composite figure	BS EN 872
		pH	5-9	Weekly composite sample	Weekly	BS 6068-2.50:1995 ISO 10523:1994
		Temperature	60°C	Note 1	Continuous	Calibrated temperature instrument
		Flow	Total 4000 m ³ /day	24-hour total Note 2	Continuous	SCA Blue Book 143 Estimation of Flow and Load ISBN 01775 2364X
W2 as shown on drawing 40959-2, to River Mersey	Gels Effluent Treatment Plant	Chemical oxygen demand	125 mg/l	Weekly composite sample	Weekly	BS 6068:2002

Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
		Ammonia	10 mg/l	Weekly composite sample	Weekly	To standards in M18: Monitoring of discharges to water and sewer, or as otherwise agreed in writing.
		Suspended Solids	No limit set	Weekly composite sample	Weekly	BS EN 872
		pH	5.5– 10	Weekly composite sample	Weekly	BS 6068-2.50:1995
		Temperature	60°C	Note 1	Continuous	Calibrated temperature instrument
		Flow	5300 m ³ /day	24-hour total	Continuous	SCA Estimation of Flow & Load, ISBN 011752364X
W3 as shown on drawing 40959-2, to River Mersey	Process & Cooling Water from Silicate Plant and A24 Plants	pH	6 – 9	Weekly composite sample	Weekly	BS 6068-2.50:1995
		Temperature	40°C	Note 3	Continuous	Calibrated temperature instrument
		Flow	17,500m ³ /day	24-hour total	Continuous	Calculation from river pump run hours
W4 as shown on drawing 40959-2, to River Mersey	Uncontaminated rainwater from Outfall 8	No parameters set	No limit set	--	--	--
W5 as shown on drawing 40959-2, to River Mersey	Uncontaminated rainwater from Outfall 12	No parameters set	No limit set	--	--	--
W6 as shown on drawing 40959-2, to River Mersey	Uncontaminated rainwater from Outfall 31	No parameters set	No limit set	--	--	--
W7 as shown on drawing 40959-2, to River Mersey	Uncontaminated rainwater from Outfall 40	No parameters set	No limit set	--	--	--

Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
Note 1: Determined on 15 minute averages, compliance shall be achieved if 95% of the total volume flow is below the limit of 60°C. Compliance shall not be achieved if any reading is greater than 65°C.						
Note 2: A limit of 5500m ³ /day shall apply during the months of January, February, June, July, November and December.						
Note 3: Compliance shall be achieved if 95% of the total daily volume flow is below the limit of 40°C.						

Table S3.3 Point source emissions to sewer – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
S1 as shown on drawing 40959-2, to United Utilities Warrington North Wastewater Treatment Works	Silicate Plant tanker washing	Total daily volume of discharge	No limit set	24-hour total	Monthly	Flow meter ¹
S2 as shown on drawing 40959-2, to United Utilities Warrington North Wastewater Treatment Works	A24 plant process effluent	Total daily volume of discharge	No limit set	24-hour total	Monthly	Flow meter ¹
S3 as shown on drawing 40959-2, to United Utilities Warrington North Wastewater Treatment Works	Steam raising process effluent from boiler plant	Total daily volume of discharge	No limit set	24-hour total	Continuous	MCERTS self-monitoring of effluent flow scheme
S5 as shown on drawing 40959-2, to United Utilities Warrington North Wastewater Treatment Works	FPA cooling coils and process effluent	Total daily volume of discharge	No limit set	24-hour total	Monthly	Flow meter ¹
S7 as shown on drawing 40959-2, to United Utilities Warrington North Wastewater Treatment Works	ES2 Gels Plant cooling water and washings	Total daily volume of discharge	No limit set	24-hour total	Monthly	Flow meter ¹
Note 1: To be upgraded to 'MCERTS self-monitoring of effluent flow scheme' upon replacement.						

Schedule 4 – Reporting

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

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Particulates mg/m ³	A1, A2, A4, A6, A14, A37	Annual	01/01/06
Oxides of Nitrogen mg/m ³	A1	Annual	01/01/06
Oxides of nitrogen mg/m ³	A38	Every 6 months	1 January, 1 July
Carbon Monoxide mg/m ³	A38	Every 6 months	1 January, 1 July
Sulphur Dioxide mg/m ³	A38	Every 6 months	1 January, 1 July
Dust mg/m ³	A38	Every 6 months	1 January, 1 July
Emissions to water Parameters as required by condition 3.5.1	W1, W2, W3	Quarterly	01/01/06
Emissions to sewer Parameters as required by condition 3.5.1	S1, S2, S3, S5, S7	Annual	1 January

Parameter	Units
Production of sodium silicate and other silicates	tonnes
Production of non-crystalline (hydrated amorphous) silicon dioxides	tonnes
Production of crystalline aluminosilicates (zeolites)	tonnes

Parameter	Frequency of assessment	Units
Energy consumption	Annually	MWh/t
Water consumption	Annually	m ³ /t
Waste production	Annually	t/t
Simultaneous production of steam by both gas fired boilers	Quarterly (Note 1)	Total hours in the quarter

Note 1: For the first 12 months after the start of commissioning of the two boilers associated with emission point A38 the total number of hours of simultaneous operation per month must be reported to the Environment Agency quarterly in writing.

Table S4.4 Reporting forms		
Media/ parameter	Reporting format	Date of form
Air	Form A1 or other form as agreed in writing by the Environment Agency	01/12/17
Water	Form W1 or other form as agreed in writing by the Environment Agency	01/12/17
Sewer	Form Sewer 1 or other form as agreed in writing by the Environment Agency	01/12/17
Water usage	Form WU1 or other form as agreed in writing by the Environment Agency	01/12/17
Energy	Form E1 or other form as agreed in writing by the Environment Agency	01/12/17
Waste production	Form R1 or other form as agreed in writing by the Environment Agency	01/12/17
Other performance indicators	Form PI1 or other form as agreed in writing by the Environment Agency	01/12/17

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	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
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.

“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.

“emissions to land” includes emissions to groundwater.

“Energy efficiency” the annual net plant energy efficiency means the value calculated from the operational data collected over the year.

“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.

“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

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

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

“SI” means site inspector.

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; and/or
- in relation to gases from emission point A1, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 8% dry for liquid and gaseous fuels; and /or
- 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.

“Quarterly” for reporting/sampling means after/during each 3 month period, January to March; April to June; July to September and October to December and, when sampling, with at least 4 weeks between each sampling date.

“6 monthly” for reporting/sampling means after/during each 6 month period, January to June; July to December and, when sampling, with at least 8 weeks between each sampling date.

“Annual” for reporting/sampling means after/during each year and, when sampling, with at least 4 months between each sampling date.

“Daily” means, for sampling purposes, a 24 hour period.

“Week” means, for sampling purposes, a period of 7 days.

“Daily composite sample” means a representative sample obtained by periodically taking a sample from the effluent over a day.

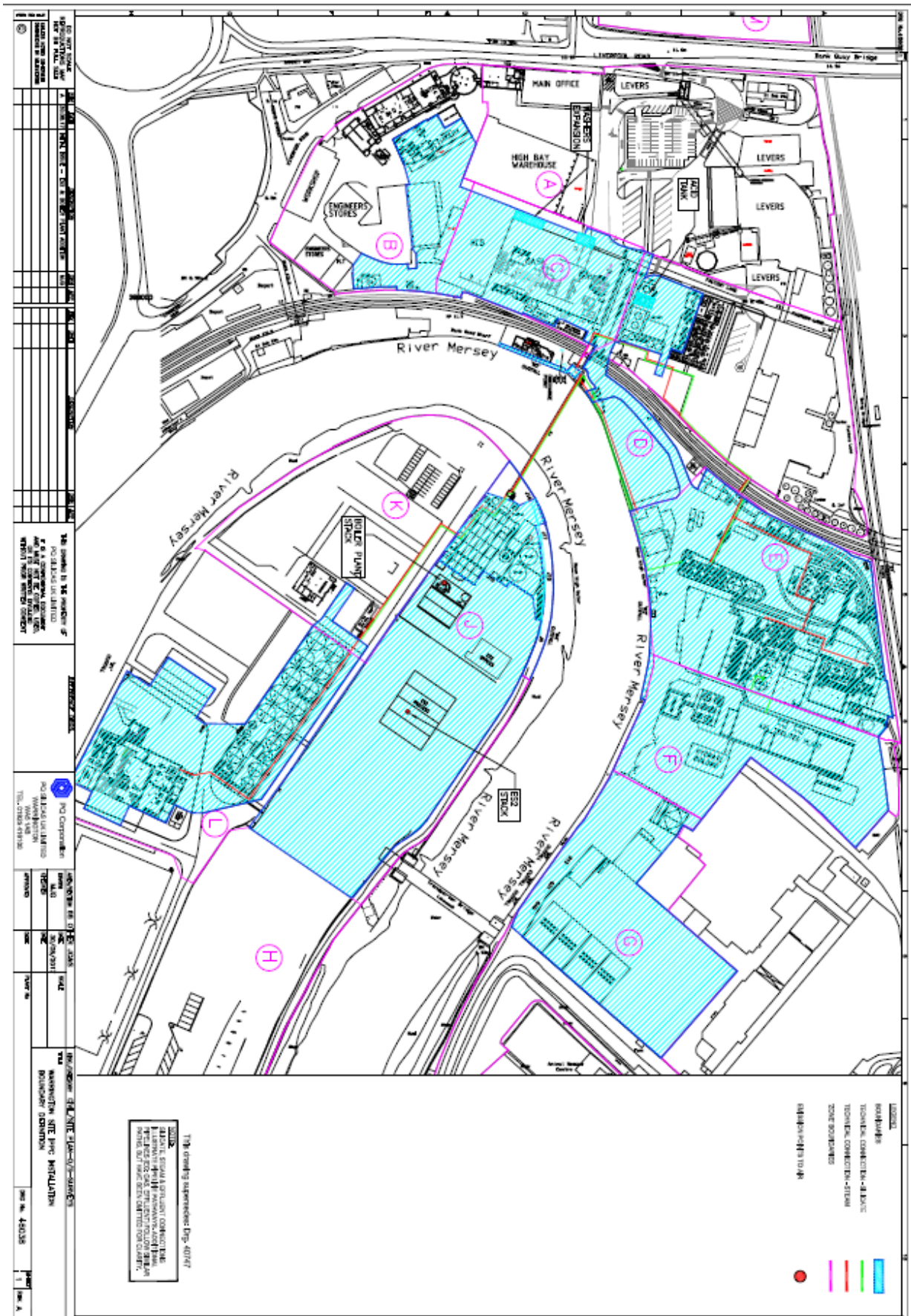
“Weekly composite sample” means a representative sample obtained by periodically taking a sample from the effluent over a week.

“Hourly average” means the average value from continuous monitoring over each 60 minute period.

“Monthly average” means the average of all weekly results obtained during a calendar month.

“Class A or Class B” in relation to volatile organic compounds is as defined in Environment Agency Guidance for Speciality Organic Chemicals S4.02, Appendix 3.

Schedule 7 – Site plan



END OF PERMIT