Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Kemira Chemicals (UK) Limited

Kemira Chemicals (UK) Limited
New Potter Grange Road
M62 Trading Estate
Goole
East Yorkshire
DN14 6BZ

Variation application number

EPR/TP3135PX/V005

Permit number

EPR/TP3135PX

Kemira Chemicals (UK) Limited
Permit number EPR/TP3135PX

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. Only the variations specified in schedule 1 are subject to a right of appeal.

This variation is to facilitate an increase in ferric sulphate production capacity from 250,000 to 300,000 tonnes per year. There is one new 58m^3 dissolving tank, one new condenser, one 30m^3 final product adjustment tank, 5 new emission points to air from the dissolver condensers and adjustment tank, installation of an existing refurbished filter press, one 100m^3 process water tank (blowdown tank) and associated pressure relief system to serve all five reactors and a magnetite storage and transportation/distribution system. The installation boundary has been extended for the magnetite storage warehouse and it is transported to the main plant via a fully sealed conveyor belt.

The main features of the permit are as follows.

The Kemira Chemicals (UK) Limited site is approximately centred on National Grid Reference SE 72948 23555. The installation is permitted to produce inorganic salts such as ferric sulphates, calcium nitrate and ferric nitrate as covered by the description in Section S.4.2 Part A (1) a) (iv) in Schedule 1 of the EP Regulations.

A number of inorganic salts for the use in water treatment are manufactured at the installation primarily by dilution of high concentration salts or reaction with acids in vessels of capacity between 10 and 30 cubic metres, at temperatures between 70 and 130°C, and up to 14 bar pressure.

The principal permitted reactions are:

Dissolution of magnetite in sulphuric acid; Dissolution of Copperas (ferrous sulphate hydrate) in sulphuric acid; Oxidation of ferrous sulphate to ferric sulphate with oxygen at high pressure.

Dissolution of ferric sulphate in water, including oxidation of residual ferrous sulphate to ferric sulphate using small quantities of sodium chlorate; reaction of hydrofer (ferric sulphate hydroxide) with sulphuric acid; slurry formation of polyaluminium chloride; reaction of calcium hydroxide with nitric acid; and the reaction of ferric hydroxide with nitric acid. A small boiler burning low sulphur oil is used for process steam generation to heats solutions. At the time of issue of this variation there is no production of nitrates.

The finished products are filtered either using a filter press or through filter socks before transfer to storage. Oxides of sulphur, oxides of nitrogen and dusts are liberated from the processes. These are treated using wet scrubbing techniques before release to the atmosphere. The scrubber liquors are reused in the process.

The installation is completely on hard standing concrete surface. Drainage from the process areas is reused in the process. Some surface waters from the roadway drain to sewer. Uncontaminated surface water is pumped to the River Don. There are no discharges to groundwater.

The installation is within the screening distance (the nearest being approx. 2km) of four Special Areas of Conservation, four Special Protected Areas, three Ramsar designated sites and a Site of Special Scientific Interest as well as Oak Hill local wildlife site at 640m.

The main solid waste streams generated at the permitted installation are filter cake and sludge wastes, and these are stored in closed enclosed containers prior to disposal to landfill.

The activities carried out at the installation do not have the potential to cause odour since there are no odorous materials used at the installation.

Noise is controlled by enclosing processes within buildings. It is unlikely that there will be significant noise at the installation boundary.

The potential for accidents that could adversely affect the environment is not considered to be significant.

The installation is managed under the internationally recognised Environmental Management System ISO14001, such that environmental issues are incorporated into all relevant aspects of the business activities.

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 received EPR/TP3135PX/A001	Duly made 29/08/2005	
Additional information received	31/01/2006; 03/02/2006; 13/02/2006.	Information on BAT assessments, monitoring, impact assessments, emissions to sewer, fugitives, energy, site report, and site plan
Additional information received	13/02/2006	Information on improvements, emissions to sewer and water, raw material and waste storage, waste streams, abatement, fugitives, and monitoring
Permit determined EPR/TP3135PX	16/03/2006	Original Permit issued to Kemira Chemicals (UK) Limited
Variation application EPR/TP3135PX/V002	Duly made 07/06/2013	Application to vary permit to remove emission points and include the installation of a new reactor, one stock tank and one buffer tank.
Variation determined EPR/TP3135PX/V002	20/08/2013	Varied permit issued to Kemira Chemicals (UK) Limited
Variation application EPR/TP3135PX/V003	Duly made 06/03/2018	Application to vary and update the permit to modern conditions.
Additional information received	06/03/2018	Confirmation of contingency plans and procedures.
Variation determined EPR/TP3135PX/V003	09/04/2018	Varied and consolidated permit issued.
Variation application EPR/TP3135PX/V004	Duly made 09/12/2019	Application to add one dissolver, two reactors and a tank farm to facilitate an increase in production capacity
Additional information request	18/02/2020	Updated site plan received 18/02/20
Variation determined EPR/TP3135PX/V004	20/03/2020	Varied and consolidated permit issued.
Application received EPR/TP3135PX/V005	Duly made 19/02/2025	Application to add new process equipment and increase in installation boundary to facilitate an increase in production capacity.
Additional information received	31/03/2025	Response received against the RFI email sent on 27/03/2025.
Additional information received	06/05/2025	Response to RFI email sent on 01/05/2025

Status log of the permit		
Description	**Date**	**Comments**
Variation determined EPR/TP3135PX/V005	10/06/2025	Varied and consolidated permit issued to Kemira Chemicals (UK) Limited

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/TP3135PX

Issued to

Kemira Chemicals (UK) Limited ("the operator")

whose registered office is

Bowling Park Drive
West Bowling
Bradford
West Yorkshire
BD4 7TT

company registration number 00907866

to operate a regulated facility at

Kemira Chemicals (UK) Limited
New Potter Grange Road
M62 Trading Estate
Goole
East Yorkshire
DN14 6BZ

to the extent set out in the schedules.

The notice shall take effect from 10/06/2025.

Name	Date
Sandra Cavill	**10/06/2025**

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 2.4 has been added to reflect the addition of improvement condition in the permit.
- Table S1.1 as referred to in condition 2.1.1 has been varied to reflect the addition of activity reference column, change in the number of dissolvers and addition of a directly associated activity.
- Table S1.2 as referred to in conditions 2.3.1 and 2.3.2 has been updated to add the operating techniques from this variation.
- Table S1.3 as referred to in condition 2.4.1 has been varied to reflect the addition of IC4.
- Table S3.1 as referred to in conditions 3.1.1, 3.5.1 and 3.5.4 has been varied to remove existing emission point A1, addition of 5 new emission points (A1, A2, A3, A4, A5) and addition of notes.
- Table S4.1 as referred to in condition 4.2.3 has been varied to include reporting for the new emission points to air.
- Schedule 7 site plan has been varied to show updated site boundary and emission points.

Schedule 2

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

- Condition 4.3.2 has been amended to reflect change to the permit template
- Table S3.2 as referred to in conditions 3.1.1, 3.5.1 and 3.5.4 has been updated to reflect the correct surface water emission point as shown in the site plan.
- Table S3.3 as referred to in conditions 3.1.1, 3.5.1 and 3.5.4 has been updated to reflect the correct point source emission to sewer as shown in the site plan.
- Table S4.4 as referred to in conditions 4.2.2 and 4.2.3 have been varied to update the reporting forms.
- Schedule 6 has been varied to reflect relevant interpretation texts.

Schedule 3 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/TP3135PX

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/TP3135PX/V005 authorising,

Kemira Chemicals (UK) Limited ("the operator"),

whose registered office is

Bowling Park Drive
West Bowling
Bradford
West Yorkshire
BD4 7TT

company registration number 00907866

to operate an installation at

Kemira Chemicals (UK) Limited
New Potter Grange Road
M62 Trading Estate
Goole
East Yorkshire
DN14 6BZ

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

Name	Date
Sandra Cavill	**10/06/2025**

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 plan at schedule 7 to this permit.

2.3 Operating techniques

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

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

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

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

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

(b) the composition of the waste;

(c) the handling requirements of the waste;

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

(e) the waste code of the waste.

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

2.4 Improvement programme

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

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

3 Emissions and monitoring

3.1 Emissions to water, air or land

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

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

4.3 Notifications

4.3.1 In the event:

(a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—

(i) inform the Environment Agency,

(ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and

(iii) take the measures necessary to prevent further possible incidents or accidents;

(b) of a breach of any permit condition the operator must immediately—

(i) inform the Environment Agency, and

(ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;

(c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

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

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

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

Where the operator is a registered company:

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

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

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

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

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

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 reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
AR1	S4.2 Part A(1)(a)(iv) Producing inorganic chemicals such as salts	Production of ferrous/ferric sulphate from Copperas or Magnetite (four dissolvers)	From receipt of raw materials to transfer or dispatch of product solution. Handling, storage, recycling and despatch of waste materials arising from the listed activity. Treatment of flue gases and monitoring systems including recycling of waste materials arising.
AR2	S4.2 Part A(1)(a)(iv) Producing inorganic chemicals such as salts	Oxidation of ferrous to ferric sulphate (five reactors)	From receipt of ferrous/ferric sulphate solution to dispatch of finished product. Handling, storage, recycling and despatch of waste materials arising from the listed activity. Treatment of flue gases and monitoring systems including recycling of waste materials arising.
AR3	S4.2 Part A(1)(a)(iv) Producing inorganic chemicals such as salts	Production of ferric nitrate	From receipt of raw materials to dispatch of finished product. Handling, storage, recycling and despatch of waste materials arising from the listed activity. Treatment of flue gases and monitoring systems including recycling of waste materials arising.
AR4	S4.2 Part A(1)(a)(iv) Producing inorganic chemicals such as salts	Production of calcium nitrate	From receipt of raw materials to dispatch of finished product. Handling, storage, recycling and despatch of waste materials arising from the listed activity. Treatment of flue gases and monitoring systems including recycling of waste materials arising.
	Directly Associated Activity		
AR7	Slurries preparation	Preparation of poly aluminium chlorides slurries	From receipt of raw materials to dispatch of finished product. Handling, storage, recycling and despatch of waste materials arising from the listed activity. Treatment of flue gases and monitoring systems including recycling of waste materials arising.
AR8	Steam generation	Operation of oil fired boiler for generation of process steam	From receipt of raw material. Conditions of low sulphur oil in a boiler of capacity 1.51 MW net thermal input to generate process steam. Handling,

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
			storage, recycling and despatch of waste materials arising from the activity.
AR9	Air abatement	The use of air abatement systems via wet scrubbers and dust extractor	From the generation of emissions resulting from salts manufacture to discharge to atmosphere.
AR10	Conveyor belt system	For the transportation of Magnetite from the storage warehouse to the main plant.	The conveyor belt is fully sealed.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application EPR/TP3135PX/A001	The responses to question 2.1 and 2.2 and 2.10 of the application.	29/08/2005
Responses dated 31/01/06, 03/02/06 and 13/02/06 to request for information dated 12/01/06	Response to Item 1 detailing plant operations; item 2 and item 3 detailing abatement plant; item 8 detailing fugitive emissions; item 9 detailing bunding; and item 13 and 14 detailing monitoring techniques.	31/01/2006 03/02/2006 13/02/2006
Response dated 13/02/06 to request for information dated 06/02/06	Responses to item 3 detailing IBC storage; and item 8 detailing safety relief of pressure vessels.	13/02/2006
Application EPR/TP3135PX/V002	Responses to Part C3 section 3 of the application form and other referenced supporting documentation, including a revised site layout plan.	Duly Made 07/06/2013
Application EPR/TP3135PX/V003	Response to question 3d Management systems of the Application form C2. Responses and the documents provided to question 3a Technical standards, question 3c Types and amounts of raw materials of the Application form C3.	06/03/2018
Additional information request e-mail dated 01/03/18	Response to question regarding the contingency plans and procedures that will apply to the new proposed stage in the process.	06/03/2018
Application EPR/TP3135PX/V004	Application Submission Letter process and equipment changes description including the in maximum oxidation reactor pressure from 6.3 to 14 barg.	Duly Made 09/12/2019
Application EPR/TP3135PX/V005	• Technical summary document titled ‘Kemira Installation Changes for Goole Capacity Expansion Permit TP3135PX Reference – 002’ • Site specific Risk Assessment • BAT Assessment against The Inorganic Chemicals Sector (EPR 4.03) technical guidance • Email dated 19/02/2024 from Mr. G. Pickard and the associated attachment titled ‘Emission Points_VTUrevised_20250219 (003).xlsx’	Duly Made 21/02/2025

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC1	With reference to Section B2.2.39 of the Application the operator shall complete the installation of the new raw materials off-loading bay to the timescale indicated in the response to item 2 for further information needed 06/02/06 and received on 13/02/06.	Completed
IC2(a)	The Operator shall submit a written Energy Efficiency Plan (the Plan) to the agency, having due regard to Sector Guidance Note S4.03 draft 1, 12 May 2004, Section 2.7. The Plan shall include proposal for the installation of energy efficient measures identified and a timetable for their implementation. The Plan shall include an Energy Balance Diagram, the energy efficiency measures detailed in Section B2.7.6 of the Application, and a review of the energy efficient building service measures detailed in section B2.7.4 of the Application.	Completed
IC2(b)	On receipt of written agreement by the Agency to the proposal and the timetable required by improvement condition 2(a), the Operator shall carry out the improvements and submit a report in writing to the Agency.	Completed
IC3	The Operator shall submit a formal written Site Closure Plan to the Agency, having due regard to section 2.11 of Sector Guidance Note S4.03 Draft 1, 12 Man 2004.	Completed
IC4	Emissions monitoring data The operator shall submit a written report to the Environment Agency for assessment and written approval. The report must contain, in related to emission points A1 to A5: • Emissions monitoring data from first round of monitoring immediately after commissioning of the dissolver stacks and buffer stack. • A comparison of actual emissions of Sulphur dioxide (SO_2) and Particular Matter with the modelled emissions identified in the Air Dispersion Modelling report provided with the application on 28/01/2025. • An assessment of actual emissions against the emission limit values set in the permit. • Where emissions are higher than the emission limit values set in the permit, proposals for measures to be taken to reduce or abate emissions. The operator must implement any proposals identified within the report in accordance with the Environment Agency's written approval and within the approval timescales.	Within 3 months from the date of permit issue.

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 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A1 [Point A1 on site plan in Schedule 7]	Dissolver 1 via condenser	Sulphur dioxide SO_2	0.15mg/m^3	Average over the sampling period Note 1 Note 2	Once every 6 months Note 3	BS EN 14791
		Particulate Matter	2mg/m^3	Average over the sampling period Note 1 Note 2	Annual Note 4	BS EN 13284-1
A2 [Point A2 on site plan in schedule 7]	Dissolver 2 via condenser	Sulphur dioxide SO_2	0.15mg/m^3	Average over the sampling period Note 1 Note 2	Once every 6 months Note 3	BS EN 14791
		Particulate Matter	2mg/m^3	Average over the sampling period Note 1 Note 2	Annual Note 4	BS EN 13284-1
A3 [Point A3 on site plan in schedule 7]	Dissolver 3 via condenser	Sulphur dioxide SO_2	0.15mg/m^3	Average over the sampling period Note 1 Note 2	Once every 6 months Note 3	BS EN 14791
		Particulate Matter	2mg/m^3	Average over the sampling period Note 1 Note 2	Annual Note 4	BS EN 13284-1
A4 [Point A4 on site plan in schedule 7]	Dissolver 4 via condenser	Sulphur dioxide SO_2	0.15mg/m^3	Average over the sampling period Note 1 Note 2	Once every 6 months Note 3	BS EN 14791
		Particulate Matter	2mg/m^3	Average over the sampling period Note 1 note 2	Annual Note 4	BS EN 13284-1
A5 [Point A5 on site plan in schedule 7]	Buffer tank fan	Sulphur dioxide SO_2	6.5mg/m^3	Average over the sampling period Note 1 Note 2	Once every 6 months Note 3	BS EN 14791
		Particulate Matter	5mg/m^3	Average over the sampling period Note 1 Note 2	Annual Note 4	BS EN 13284-1
Pressure relief valve RV-02	Reactor R-0101	No parameters set	No limit set	-	-	-
Pressure relief valve RV-03	Reactor R-0102	No parameters set	No limit set	-	-	-

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
Pressure relief valve RV-04	Reactor R-0103	No parameters set	No limit set	-	-	-
Pressure relief valve RV-007	Reactor R-0104	No parameters set	No limit set	-	-	-
Pressure relief valve RV-008	Reactor R-0105	No parameters set	No limit set	-	-	-
Pressure relief valve RV-012	T-022 compressed air inlet line	No parameters set	No limit set	-	-	-
Pressure relief valve RV-013	T-021 compressed air inlet line	No parameters set	No limit set	-	-	-
Pressure relief valve RV-022	T-032 Compressed air vessel	No parameters set	No limit set	-	-	-
Note 1: Average over sample period is defined as three samples of at least 30 minutes Note 2: To the extent possible, the measurements are carried out at the highest expected emission rate under normal operating conditions. Note 3: The minimum monitoring frequency may be reduced to once every year or once every 3 years if the emission levels are proven to be sufficiently stable. Note 4: The minimum monitoring frequency may be reduced to every 3 years if the emission levels are proven to be sufficiently stable.						

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (incl. unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
SW4 on site plan in schedule 7 emission to River Don	Surface water	No parameters set	No limit set	-	-	-

Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (incl. Unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
MH04 on site plan in schedule 7 emission to Yorkshire Water Goole Sewage Treatment Works	Potentially contaminated road drainage	No parameter	No limit set	-	-	-

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**
Point source emissions to air Parameters as required by condition 3.5.1	A1, A2, A3, A4, A5	First reporting within 3 months from the date of permit issue. Thereafter, SO_2 – Every 6 months PM - Every 12 months	1 January

Table S4.2: Annual production/treatment	
Parameter	**Units**
Production of sulphate solutions	tonnes
Production of nitrate solutions	tonnes
Production of aluminium solutions	tonnes

Table S4.3 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Water usage	Annually	tonnes
Energy usage	Annually	MWh
Waste return	Annually	tonnes
Annual releases of sulphur dioxide	Annually	g/tonne
Annual releases of particulates	Annually	g/tonne all solutions
Potable water use	Quarterly	m^3/t all solutions

Table S4.4 Reporting forms		
Parameter	**Reporting form**	**Form version number and date**
Point source emissions to air	Emissions to Air Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1, 08/03/2021
Water usage	Water Usage Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1, 08/03/2021
Energy usage	Energy Usage Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1, 08/03/2021
Waste return	Form/FP3138SB/R1	16/03/06
Other performance parameters	Other Performance Parameters Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1, 08/03/2021

Schedule 5 – Notification

These pages outline the information that the operator must provide.

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

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

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

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

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

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	**Notification period**

(c) Notification requirements for the breach of permit conditions not related to limits	
To be notified within 24 hours of detection	
Condition breached	
Date, time and duration of breach	
Details of the permit breach i.e. what happened including impacts observed.	
Measures taken, or intended to be taken, to restore permit compliance.	

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

Part B – to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	

Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

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

“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.

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

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

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

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.

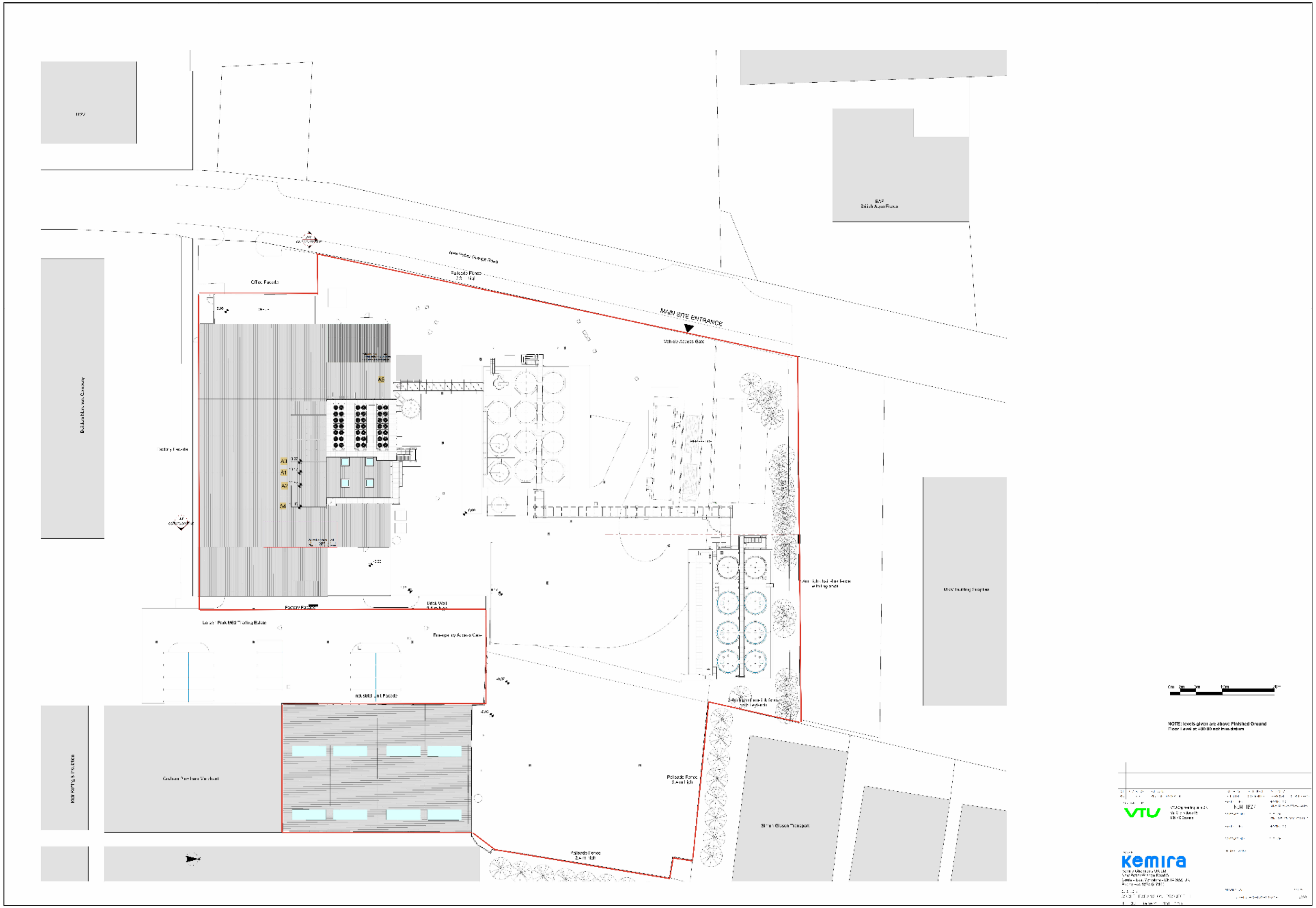
Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- 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 emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content

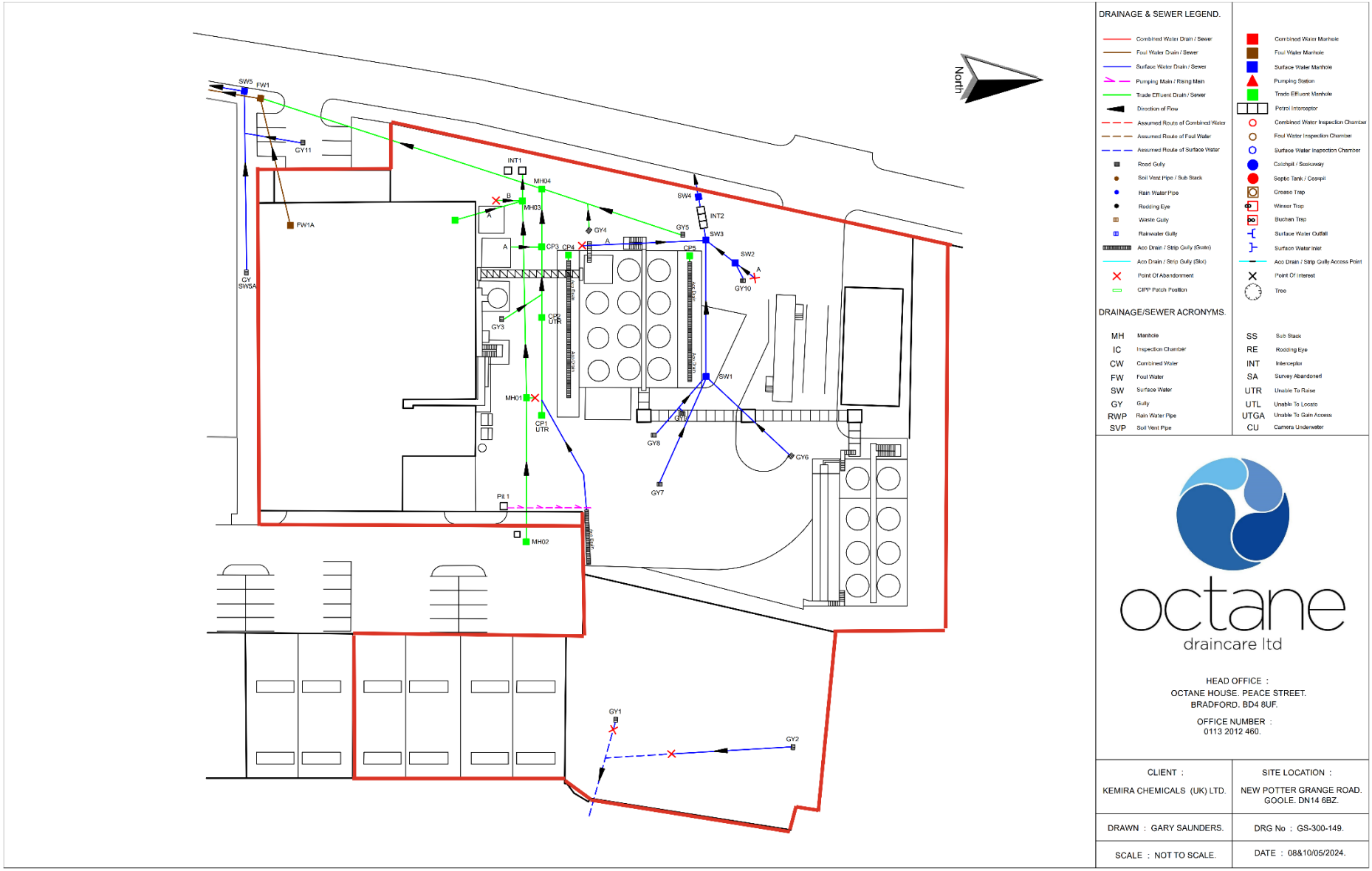
“year” means calendar year ending 31 December.

Schedule 7 – Site plan

Emissions to Air



Emissions to water



END OF PERMIT

Emissions to Air Reporting Form

Permit number: EPR/TP3135PX

Operator: Kemira Chemicals (UK) Limited

Facility name: Kemira Chemicals (UK) Limited

Emissions to Air Reporting Form: version 1, 08/03/2021

Reporting of emissions to air for the period from *[DD/MM/YY]* to *[DD/MM/YY]*

Emission point	Substance / parameter	Emission Limit Value	Reference period	Test method [1]	Result [2]	Sample dates and times [3]	Uncertainty [4]
[e.g. A1]	*[e.g. Oxides of nitrogen (NO and NO_2 expressed as NO_2)]*	*[e.g. 200 mg/m^3]*	*[e.g. daily average]*	*[e.g. BS EN 14181]*	*[State result]*	*[State relevant dates and time periods]*	*[State uncertainty if not 95% confidence interval]*

Signed: *[Name]*

Date: *[DD/MM/YY]*

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your monitoring results.
Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Complete columns 1 to 5 using the information from schedule 3 of your permit. Complete columns 6 to 8 with your monitoring data. Add additional rows as necessary.

[1] Where an internationally recognised standard test method is used, give the reference number. Where another method that has been formally agreed with the Environment Agency, give the appropriate identifier. In other cases state the principal technique, for example gas chromatography.
[2] Give the result as 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, give the result as the 'minimum to maximum' of the measured values.
[3] For non-continuous measurements give the date and time of the sample that produced the result. For continuous measurements give the percentage of the process operating time covered by the result.
[4] Complete if the uncertainty associated with the result is not a 95% confidence interval. Leave blank for 95% confidence intervals.

Water Usage Reporting Form

Permit number: EPR/TP3135PX

Operator: Kemira Chemicals (UK) Limited

Facility name: Kemira Chemicals (UK) Limited

Water Usage Reporting Form: version 1, 08/03/2021

Reporting of water usage for the year *[YYYY]*

Water source	Water usage (m^3)	Specific water usage (m^3/unit) [2]
Mains water	*[insert annual usage in m^3 where mains water is used]*	*[insert annual usage in m^3/unit where mains water is used]*
Site borehole	*[insert annual usage in m^3 where water is used from a site borehole]*	*[insert annual usage in m^3/unit where water is used from a site borehole]*
River abstraction	*[insert annual usage in m^3 where abstracted river water is used]*	*[insert annual usage in m^3/unit where abstracted river water is used]*
Other – *[specify other water source where applicablel. Add extra rows where needed]*	*[insert annual usage in m^3 where applicable]*	*[insert annual usage in m^3/unit where applicable]*
Total water usage	*[insert total annual water usage in m^3]*	*[insert total annual water usage in m^3/unit]*

Operator's comments

Signed: *[Name]* **Date:** *[DD/MM/YY]*

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your annual water usage.
Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Add additional rows as necessary.

Energy Usage Reporting Form

Permit number: EPR/TP3135PX

Operator: Kemira Chemicals (UK) Limited

Facility name: Kemira Chemicals (UK) Limited

Energy Usage Reporting Form: version 1, 08/03/2021

Reporting of energy usage for the year *[YYYY]*

Energy source	Energy consumption / production (MWh)	Specific energy consumption (MWh/unit) [2]
Electricity imported as delivered - source [specify source, e.g. supplied from the national grid]	*[insert annual consumption in MWh where electricity is imported]*	*[insert annual consumption in MWh/unit where electricity is imported]*
Electricity imported as primary energy 1 – conversion factor of [specify conversion factor used to convert electricity delivered to primary energy]	*[insert annual consumption in MWh where electricity is imported]*	*[insert annual consumption in MWh/unit where electricity is imported]*
Natural gas	*[insert annual consumption in MWh where natural gas is used]*	*[insert annual consumption in MWh/unit where natural gas is used]*
Gas oil – conversion factor of [specify conversion factor used to convert tonnes to MWh]	*[insert annual consumption in MWh where gas oil is used]*	*[insert annual consumption in MWh/unit where gas oil is used]*
Imported heat	*[insert annual consumption in MWh where heat is imported]*	*[insert annual consumption in MWh/unit where heat is imported]*
Other – *[specify other energy source and conversion factors where applicable, e.g. renewable fuel. Add extra rows where needed]*	*[insert annual consumption in MWh where applicable]*	*[insert annual consumption in MWh/unit where applicable]*
Electricity exported	*[insert annual production in MWh where electricity is exported]*	Not applicable
Heat exported	*[insert annual production in MWh where heat is exported]*	Not applicable

Operator's comments

Signed: *[Name]* **Date:** *[DD/MM/YY]*

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your annual energy usage.
Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Add additional rows as necessary.

[1] Multiply delivered electricity by 2.4 to convert to primary energy where the electricity is supplied from the national grid. If the electricity is supplied from another source, specify the conversion factor used. Add additional rows as needed if electricity is imported from multiple sources.
[2] Divide energy consumption by an appropriate unit of raw material processed or product output.

Other Performance Parameters Reporting Form

Permit number: EPR/TP3135PX **Operator:** Kemira Chemicals (UK) Limited

Facility name: Kemira Chemicals (UK) Limited **Other Performance Parameters Reporting Form: version 1, 08/03/2021**

Reporting of other performance parameters for the period from *[DD/MM/YY]* to *[DD/MM/YY]*

Parameter	Units
[e.g. Total raw material usage]	*[e.g. tonnes per production unit]*

Operator's comments

Signed: *[Name]* **Date:** *[DD/MM/YY]*

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report the performance parameters (other than water and energy) required by your permit.
Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. The parameters to report and units to be used can be found in the 'Performance parameters' table in schedule 4 of your permit. Add additional rows as necessary.