



TECHNICAL DESCRIPTION

**Environmental and sustainability solutions provided to
PLATER CHEMICALS GROUP LTD**

WRM-LTD.CO.UK



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1.0 INTRODUCTION

1.1 Site Address

Plater Chemicals Group Ltd
High Street West
Glossop
Derbyshire
SK13 8ES

The site consists of; site offices, a weighbridge, laboratory, loading area, manufacturing areas and warehousing.

1.2 Plans

The Site Layout Plan for the Plater Chemicals Group Ltd (hereon referred to as "Plater Chemicals") site is presented in the following documents:

PCG_Site_Layout_Plan_v1

2.0 PROCESS DESCRIPTION

Plater Chemicals currently hold an Environmental Permit (EPR/AP3737GA), issued under Regulation 10 of the Pollution Prevention and Control (PPC) Regulations 2000. Regulated activities include:

- Schedule 1, Part 1, Section 4.2A(1)(a) (iv) – Producing inorganic chemicals such as salts.
- Schedule 1, Part 1, Section 5.3A(1)(c) (i) – Disposal of non-hazardous waste in a facility with a capacity of more than 50 tonnes per day by biological treatment.

The site produces rare earth metal salts, basic metal salts and alkali metal fluoride through the following processes:

- Reactions
- Spray drying
- Spray cooling
- Fluid bed drying
- Vacuum drying
- Calcining

- Granulation

The chemical metal salts produced on site include:

- Potassium Acetate
- Potassium Formate
- Alkali metal fluoride
- Potassium Phosphite
- Ammonium phosphate
- Potassium phosphate
- Monosodium phosphate

The largest chemicals outputs produced on site by mass are monosodium phosphate and potassium products. The site no longer produces chromium-based chemicals.

2.1 Material Acceptance and Storage

All vehicles delivering input materials to the Site are directed along the south and southeastern boundary of the Site to the weighbridge area which is located adjacent to the spray drying facility and the main Site office. The driver of the vehicle is required to sign in at the weighbridge office. Following this, the delivery vehicle is directed to the appropriate section of the Site to offload materials where they will be met by an appropriately trained Site operative.

The chemical manufacturing process begins with the careful specification and delivery of raw materials. Initially, the required raw materials are defined in terms of type and quality to ensure the correct substances are utilised in production. These materials, which may be in liquid or powder form, are delivered to the manufacturing site, accompanied by certificates of analysis that confirm their quality and specifications. There are over 150 raw materials accepted onto site. A list of these can be seen in the accompanying spreadsheet titled *Raw Materials List*.

Bulk storage vessels are located across the Site and therefore there is not a single reception point for the associated incoming materials. Storage sheds are located to the north, south and west of the Site. Stocking points are used for the receipt of intermediary bulk containers (IBCs) in the main yard area. Here, the materials undergo a decanting process before being mixed according to specific formulations to create either intermediate or final products. Vehicles delivering IBCs will be directed northwards through the centre of the Site, follow the road anticlockwise immediately to the west and then southwest towards the entrance point

to the relevant stocking point. Only bulk liquid tankers will be required to weigh both in and out.

2.2 Production

The production area is located mostly in the centre and north of the Site. The production process is undertaken within 14 enclosed buildings, with the Site footprint covering a cumulative area of approximately 20,500m². The processing technology includes a combination of reactors, spray dryers, spray coolers, vacuum dryers and blenders.

Throughout the production process, the mixed product is subjected to rigorous testing and inspection to ensure it meets predefined quality standards. Continuous monitoring during this phase helps maintain consistent product quality. If any product fails to meet the required specifications, it is reprocessed to correct any deficiencies. Products that cannot be reworked are classified as waste or out of specification and are disposed of according to environmental regulations.

Following initial processing and quality checks, the product is stored in appropriate containers, such as tanks, IBCs, or bottles, until further processing or distribution is required. When necessary, the product is decanted from these storage containers into smaller containers, such as drums or bottles, for final processing or shipping.

The alkali metal hydroxide solution is taken from its bulk or packaged container and added to a stainless steel chemical reactor with agitation, heating and cooling capabilities. To this agitated solution is added a mineral or carboxylic acid solution or crystal to neutralise the alkali and form a salt solution. These reactions normally have a significant exotherm associated with them which is dissipated by the use of vessel cooling water coils or jackets. The resultant solutions are then tested and packed off into either bulk or other packaging for storage and sale. Some of these may require filtration prior to release.

Before the final product is released for distribution, it undergoes additional testing to ensure it meets all quality and specification standards. A final certificate of analysis (CoA) is generated to document the product's compliance with these standards. This CoA accompanies the product, providing assurance of its quality to customers. The finished product is then prepared for shipment and transported to customers, ensuring it reaches them in optimal condition. The location of storage vessels, storage areas, production areas and stocking points are clearly labelled within the plan below.

Chemical production on site can be split into two main categories: bulk chemicals and high purity chemicals. Figure 1 shows that the high purity chemical production takes place in the northeast corner of the site.

Figure 2 below shows the process flow diagram for bulk chemicals.

Figure 2 - Bulk Chemical Process Flow Diagram

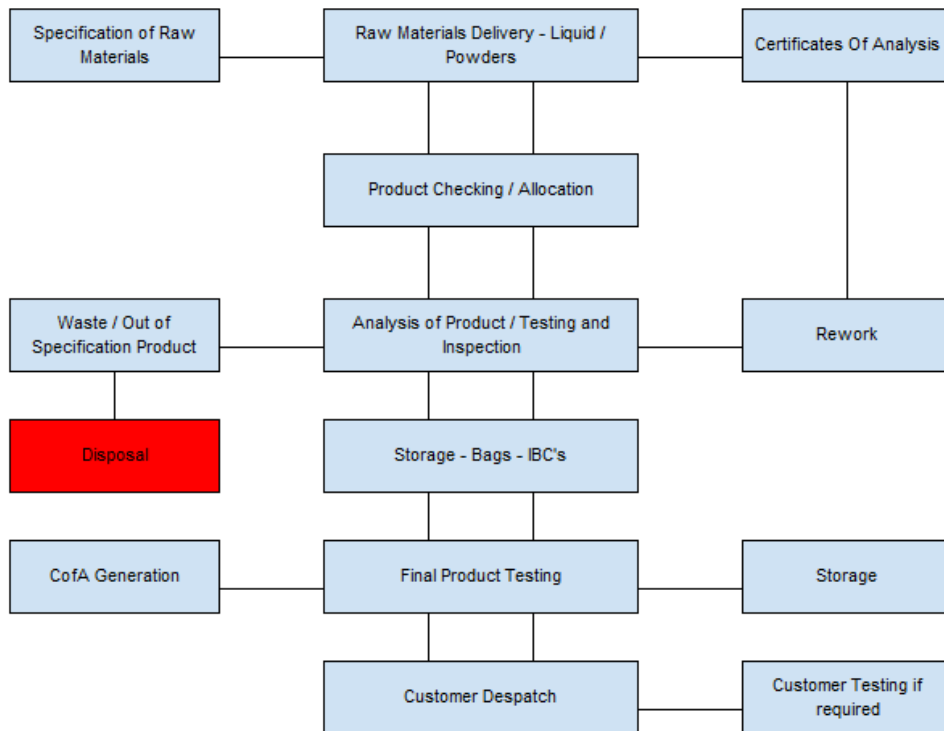
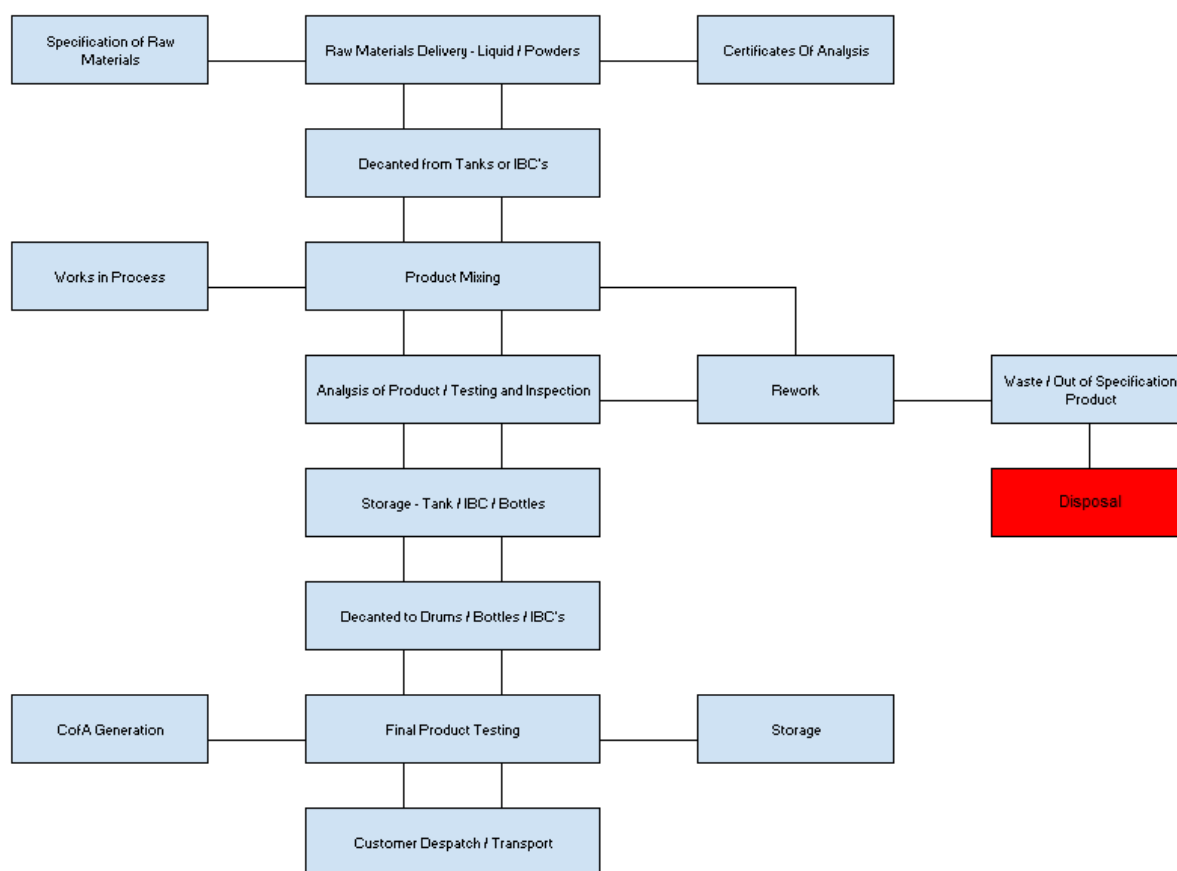


Figure 3 below shows the process flow diagram for high purity chemicals.

Figure 3 - High Purity Chemical Process Flow Diagram

It should be noted that all of the reactions are acid/base neutralisations where an acid and an alkali react together to give a salt solution with no by-products or side reactions. All of the reaction vessels are atmospheric so there are no pressure vessels and no pressure data is required to be taken. Most reactions are kept under 60°C with process cooling.

2.3 Monosodium Phosphate Production

As mentioned above, one of the largest chemical outputs produced on site by mass is monosodium phosphate. The following describes the procedure for the production of a 10,244 litre batch of 32% monosodium phosphate. This is a standard batch size.

The production of monosodium phosphate takes place in Vessel SPV200, which is located between the Shed 4 Warehouse and the Compressor House. The operator first checks the vessel to make sure that it is empty, clean and that the outlet valve is closed. The vessel is then charged with 4,900 litres of demineralised water through the 2" line using the mono pump. 2,134 litres of 50% sodium hydroxide is then charged slowly into the vessel through the 2" line reduced to 1" via an adaptor using a 1" air pump. The temperature is maintained below

60°C. 3,210 litres of 81.5% phosphoric acid is then charged slowly into the vessel using the same system as is used for the charging of sodium hydroxide. Again, the temperature is maintained below 60°C. The chemicals are then held in the vessel for 30 minutes. A record of the temperature of the finished product is then taken on completion of the 30 minute period with the production process formally completed when the temperature is below 40°C.

The 32% monosodium phosphate is then transferred into either storage vessel SPV 201 or 202 (1,000 litre IBCs) located immediately next to the reactor vessel. Before doing so, the operator checks that the IBC is empty, clean and the outlet valve is closed. A record is then taken of the tank from which the IBCs are to be decanted from and the transfer process commences with a sample of the chemical being taken from the first IBC filled. The chemical is analysed to ensure the product meets the required specification. Following completion of the chemical product transfer process, all of the pipes are washed out thoroughly with water to ensure that no residue remains to avoid crystallisation taking place inside the pipes. The specification requirements of the 32% monosodium phosphate product are as follows:

- Specific gravity: 1.275 – 1.295
- pH: 3.0 – 4.0
- Assay: 31% - 33% (as dry product)
- Temperature: <40°C

2.4 Potassium Acetate Production

Potassium products are another of the largest chemical outputs produced on site by mass. The following describes the procedure for the production of a 27,234 litre batch of 50% potassium acetate (de-icer) solution. This is a standard batch size.

The production of potassium acetate takes place in Vessel V401, which is located in a building between the lab and sales building and where pallets are stored. The operator first checks the vessel to make sure that it is empty, clean and that the bottom valve is closed. The flow meter is then set to charge 13,393 litres of 50% potassium hydroxide with the level in the tank being checked manually with a tape measure. Charging is complete when there are 86" of potassium hydroxide in the vessel. Once complete, the agitator and fan are switched on and cooling is applied to the vessel. 11,770 litres of 79% acetic acid solution is then charged into the vessel via the control panel. The control panel controls the addition to ensure that the temperature remains below 60°C at all times during the reaction. A sample of the mixture is then taken to record the specific gravity / temperature and pH level. The vessel is then charged with 1,000 litres of demineralised water via the acetic acid pump, directly into the mixing vessel. The vessel is then left to mix for 20 minutes and the acetic acid line is flushed with water to clean.

71 litres of TTA inhibitor solution is then charged directly into the vessel via the acetic acid pump and the vessel is left for 30 minutes to ensure that the inhibitor solution is fully mixed in. Following this, a further 1,000 litres of demineralised water is charged into the vessel and allowed to mix for a further 20 minutes. Another sample of the mixture is then taken to record the specific gravity / temperature and pH level. The agitator is turned off and 15 minutes later a the level in the tank is manually checked using a tape measure. Following this, the finished 50% potassium acetate (de-icer) solution is pumped directly into either a designated bulk store, IBCs or bulk road tanker.

The specification requirements of the 50% potassium acetate (de-icer) product are as follows:

- Appearance: clear colourless to pale yellow / straw colour free from suspended matter
- Specific gravity: 1.27 – 1.28
- pH: 9.5 – 10.5

3.0 EMISSION CONTROL

The Site has a range of infrastructure to control and mitigate potential emissions from storage vessels, mixing vessels; as described in Sections 3.1 to 3.5 below. The emissions to air release points at the Site derive from the following sources:

- i. Gas boiler;
- ii. Carbon filters serving the acetic acid storage tanks;
- iii. Sodium hydroxide scrubber serving the hydrochloric acid tank;
- iv. Sulphuric acid scrubber serving the ammonia tank;
- v. Bag filter serving the calciner plant;
- vi. Alkali metal fluoride production; and,
- vii. Cooling tower

The site also has a water release to foul sewer from the on-site effluent treatment plant. This is well established and no changes to it are required as part of this permit variation.

3.1 Oxides of Nitrogen Emissions

Boiler technical information is presented within Table 1, below. The emission limit value of NO_x from the boiler is presented in Table 2. The system meets European Instructions No. 98/37/EC, 97/23/EC, 73/23/EC, 89/336/EC, and European Standards EN 292- 1, EN 292-2, EN

12953, EN 60204-1, and EN 50081-1. Emissions monitoring for NO_x shall be carried out on an annual basis by an MCERTS accredited organisation.

Table 1 - Gas Boiler Technical Specification

Gas Boiler Technical Information	
Make	Ruston
Model	Thermax Two
Thermal Capacity	5.3MWth
Efficiency	90%
Control System	Dunphy Radiotronic 6,000 Series
Variable Heat Load	Yes
Stack Height	15 metres above ground level

Table 2 – Gas Boiler Emissions Monitoring Requirements

Substance	Frequency of monitoring	Emission limit Value (mg/Nm ³)	Emissions Monitoring Method
NO _x	Annual	200	BS EN 14792

The Ruston Thermax Two gas boiler is housed within the boiler house located to the southwest of the weighbridge. The gas boiler has a net thermal input rating of 5.3MWth and features a Dunphy Radiotronic 6000 series control system which automatically runs the burning process through setting upper and lower temperature of boiler water, controlling primary and secondary air fans, dosing screw, hydraulics etc. The gas boiler is used to satisfy the heating demands of the Site, including the spray dryers and cooler. The boiler has a control system with an alarm. A trained Site operative starts the boiler at 4am on Monday morning and shuts the boiler down on Friday morning. There shall be no changes to the boiler operation as a result of this permit variation. The predicted impacts of the emissions of Oxides of Nitrogen from the boiler have been modelled, with the results set out in the Air Quality Impact Assessment which accompanies this document (titled *EPR-A05 AQIA Report v1.0*).

3.2 Acetic Acid Emissions

Each acetic acid storage vessel is connected to a carbon filter through which acetic acid vapours are filtered prior to being released to air. Activated carbon is highly porous, which gives it a large surface area for adsorbing acetic acid vapours from the efflux. The carbon filter effectively controls the air quality at the point of release.

Management of the carbon filters includes performance monitoring and the establishment of a maintenance schedule. The carbon filters are regularly inspected for signs of damage, such as cracks, clumping, or degradation of the carbon material. Furthermore, the area directly surrounding the carbon filters is regularly checked to ensure that it is kept clear of dust and debris.

The carbon filter system undergoes regular inspection, monitoring and maintenance to ensure optimal performance and therefore the following frequency of monitoring shall be undertaken:

- The air quality released by the carbon filter shall be monitored frequently through Draeger tubes installed downstream of the carbon filters. Visual checks are undertaken daily to check whether a colour change within the tube has occurred. The colour change is read against a scale on the tube to quantify concentration levels. If the concentrations levels increase, this indicates that the carbon filter requires changing;
- A visual inspection of the carbon filter will form part of a weekly visual inspection and cleaning schedule, checking the carbon filter for signs of damage and removing the build-up of any dust or debris; and,
- The air quality released by the shall be monitored on an annual basis to ensure that the emissions are below the emission threshold of acetic acid vapours as stated within the Site environmental permit.

The following emissions monitoring for Acetic Acid shall be carried out from all carbon filters by an MCERTS accredited organisation on an annual basis. There shall be no changes to the acetic acid emissions as a result of this permit variation

Table 3 - Acetic Acid Emissions Monitoring Requirements

Substance	Frequency of monitoring	Emission limit Value (mg/Nm ³)	Emissions Monitoring Method
Acetic Acid	Annual	80	CEN TS 13649

The results of inspections will be recorded on the Site Check Sheet and any remedial action on the carbon filters shall be undertaken as necessary. Plater Chemicals shall replace the carbon filters when required to ensure that the carbon filters maintain their effectiveness. Through replacing carbon filters, this ensures that they do not reach saturation point and lose their ability to adsorb acetic vapour acid. Carbon filters are replaced where indicated through monitoring of the Draeger Tubes.

The removal and replacement of carbon filters may only be undertaken by a fully trained Site operative(s), in accordance with the manufacturer's instructions and Plater's OHSAS Manual (document reference: PG-OHSAS-001).

Table 4 – Critical Limit Management Approach for the Carbon Filters

Potential Issue	Monitoring	Critical Limits	Process Controls	Records
Concentration of acetic acid vapours being released to air increases beyond critical limits	Monthly - Draeger Tubes	Colour change in Draeger tube	Replacement of carbon filter	Site Check Sheet

3.3 Hydrochloric Acid Emissions

The hydrochloric acid storage vessel is connected to a sodium hydroxide scrubber which treats the air displaced from the storage vessel during filling and emptying serving to effectively reduce the levels of hydrogen chloride being released to the atmosphere. When sodium hydroxide reacts with hydrochloric acid, they undergo a neutralisation reaction.

Management of the sodium hydroxide scrubber includes performance monitoring and the establishment of a maintenance schedule. The sodium hydroxide scrubber components such as the piping, seals, tanks and spray nozzles shall be regularly inspected for signs of damage, such as corrosion, leaks, and clogs within the spray nozzle that may reduce scrubbing efficiency and efficacy. The sodium hydroxide scrubber shall also be regularly checked for the build-up of solids and salts that may precipitate in the scrubber.

The sodium hydroxide scrubber system requires regular inspection, monitoring and maintenance to ensure optimal performance and therefore the following frequency of monitoring will be undertaken:

- Continuous monitoring of the scrubber solution pH level. This monitoring system is alarmed if the PH level reduces below the critical limit for pH;

- A weekly inspection of the condition of the sodium hydroxide scrubber components shall be undertaken and recorded within the Scrubber Weekly Inspection Form, which shall also be used to record and any remedial action as necessary; and,
- The air quality released by the sodium hydroxide scrubber shall be monitored on an annual basis to ensure that the emissions are below the emission threshold of hydrogen chloride as stated within the Site environmental permit.

The following emissions monitoring for Hydrochloric Acid shall be carried out from the sodium hydroxide scrubber by an MCERTS accredited organisation on an annual basis.

Table 5 - Hydrochloric Acid Emissions Monitoring Requirements

Substance	Frequency of monitoring	Emission limit Value (mg/Nm ³)	Emissions Monitoring Method
Hydrochloric Acid	Monthly	10	EN 1911

The results of inspections will be recorded on the Site Check Sheet Form alongside any remedial action taken as necessary. Plater Chemicals shall ensure that the sodium hydroxide scrubber solution is regularly replaced to ensure that the scrubber maintains its effectiveness.

The removal and replacement of the sodium hydroxide scrubber solution may only be undertaken by a fully trained Site operative(s), in accordance with the manufacturer's instructions and Plater's OHSAS Manual (document reference: PG-OHSAS-001).

Table 6 - Critical Limit Management Approach for the Sodium Hydroxide Scrubbers

Potential Issue	Monitoring	Critical Limits	Process Controls	Records
pH level of scrubber solution dropping and becoming more acidic and affecting the level of adsorption of hydrochloric acid	Continuous – alarmed.	PH level < 11	Replacement of sodium hydroxide scrubber solution.	Site Check Sheet

3.4 Ammonia Emissions

The ammonia storage vessel is connected to a sulphuric acid scrubber which treats the air displaced from the storage vessel during filling and emptying serving to effectively reduce the levels of ammonia gas being released to the atmosphere. Acidic solutions are used to remove alkaline components, e.g. ammonia. The dosing of the acid is done by means of pH regulation.¹

Management of the sulphuric acid scrubber includes performance monitoring and the establishment of a maintenance schedule. The sulphuric acid scrubber components such as the piping, seals, tanks and spray nozzles shall be regularly inspected for signs of damage, such as corrosion, leaks, and clogs within the spray nozzle that may reduce scrubbing efficiency and efficacy. The sulphuric acid scrubber shall also be regularly checked for the build-up of solids and salts that may precipitate in the scrubber.

The sulphuric acid scrubber system requires regular inspection, monitoring and maintenance to ensure optimal performance and therefore the following frequency of monitoring will be undertaken:

- Continuous monitoring of the scrubber solution pH level. This monitoring system is alarmed if the pH level increases above critical limit for pH;
- A weekly inspection of the condition of the sulphuric acid scrubber components shall be undertaken and recorded within the Scrubber Weekly Inspection Form, which shall also be used to record and any remedial action as necessary; and,
- The air quality released by the sulphuric acid scrubber shall be monitored on an annual basis to ensure that the emissions are below the emission threshold of ammonia as stated within the Site environmental permit.

The following emissions monitoring for Ammonia shall be carried out from the sulphuric acid scrubber by an MCERTS accredited organisation on an annual basis.

¹ [Best Available Techniques \(BAT\) Reference Document for Production of Speciality Inorganic Chemicals 2007, Industrial Emissions Directive 2010/75/EU \(Integrated Pollution Prevention and Control\)](#)

Table 7 - Ammonia Emissions Monitoring Requirements

Substance	Frequency of monitoring	Emission limit Value (mg/Nm ³)	Emissions Monitoring Method
Ammonia	Monthly	1.2	EN ISO 21877

The results of inspections will be recorded on the Site Check Sheet and any remedial action taken as necessary. Plater chemicals shall ensure that the sulphuric acid scrubber solution is regularly replaced to ensure that the scrubber maintains its effectiveness. The removal and replacement of the sulphuric acid scrubber solution may only be undertaken by a fully trained Site operative(s), in accordance with the manufacturer's instructions, Plater's OHSAS Manual (document reference: PG-OHSAS-001) and the Sulphuric Acid SOP (Appendix C).

Table 8 - Critical Limit Management Approach for the Sulphuric Acid Scrubbers

Potential Issue	Monitoring	Critical Limits	Process Controls	Records
pH levels rising and becoming less acidic and affecting the level of adsorption of ammonia gas	Continuous and alarmed	Alarmed is pH > 4	Replacement of sulphuric acid solution if pH levels above critical limit.	Site Check Sheet

3.5 Dust Emissions

A bag filter is deployed on Site to capture dust produced through the processing of catalytic converter material in the calciner plant. Fabric filters, often referred to as bag filters, are constructed from porous woven or felted fabric through which gases are passed to remove dust (including PM10 and PM2.5). Removal efficiencies for dust typically range from 95 % to more than 99.9 %.²

Management of the bag filter includes the establishment of a cleaning and maintenance schedule. The bag filter components such as the exterior of the baghouse, ductwork, and seals shall be regularly inspected for signs of damage, leaks, or dust buildup, which may

² [Best Available Techniques \(BAT\) Reference Document for Production of Speciality Inorganic Chemicals 2007, Industrial Emissions Directive 2010/75/EU \(Integrated Pollution Prevention and Control\)](#)

indicate worn or damaged filter bags or seals. The condition of the bag shall be regularly checked for wear, tears, abrasion, or holes.

When working at maximum capacity the bag filter will require regular inspection, monitoring and maintenance to ensure optimal performance and therefore the following frequency of monitoring will be undertaken:

- Air flow is monitored continuously to measure the difference in pressure on either side of a dust filter. A high-pressure drop often indicates that a filter is clogged or inefficient and would highlight to the Site manager that the bag filter requires replacing;
- A weekly inspection of the condition of the bag filter components shall be undertaken and recorded within the Bag Filter Inspection Form, which shall also be used to record and any remedial action as necessary; and,
- The air quality released by the bag filter shall be monitored on an annual basis to ensure that the particulate emissions are below the emission threshold as stated within the Site environmental permit.

The following emissions monitoring for dust shall be carried out from the bag filter by an MCERTS accredited organisation on an annual basis.

Table 9 - Dust Emissions Monitoring Requirements

Substance	Frequency of monitoring	Emission limit Value (mg/Nm ³)	Emissions Monitoring Method
Dust	Annual	10	BS EN 13284

Plater Chemicals shall ensure that the bag filters are replaced as required to ensure that the filter maintains its effectiveness. The replacement of bag filters may only be undertaken by a fully trained Site operative(s), in accordance with the manufacturer's instructions and the principles of Plater's OHSAS Manual (document reference: PG-OHSAS-001).

Table 10 - Critical Limit Management Approach for the Bag Filters

Potential Issue	Monitoring	Critical Limits	Process Controls	Records
Wear, tears, abrasions or other form of damage to the bag filter, meaning that particulate matter is not filtered effectively.	Visual inspection; and, monitoring of air flow; and, monitoring of dust concentration.	Notable tears / damage identified through visual inspection; or, Notable change in pressure differential; or, Dust emissions concentrations exceeding critical limit of [30mg / m ³]	Repairs to the bag filter material or replacements of the bag filter if damage is significant.	Site Check Sheet

3.6 Carbon Dioxide Emissions

Some of the chemicals produced on site are alkali metal fluorides. The reactor is charged with materials via a mixer hopper. The suspension is heated, cooled and then discharged to a purification system. This process emits carbon dioxide with trace amounts of hydrogen fluoride. It is considered that no abatement or emission control is required on this emission point as there are no emission limit values for carbon dioxide and the fact that the hydrogen fluoride emission is negligible.

3.7 Cooling Tower

The cooling tower provides cooling water to the processes that are carried out on site. The only emission from the cooling tower is that of water vapour so no abatement or emission control is considered required on this emission point. An alternative to the cooling tower is a closed loop chiller. A decision on which cooling appliance will be installed will be made at a later date.

4.0 BEST AVAILABLE TECHNIQUE ASSESSMENT

The BAT Assessment process is undertaken throughout the following sections of this report. BAT Conclusions which are not considered to be relevant or applicable at Plater Chemicals Manufacturing Facility due to Site-specific permitted activities have been excluded from the table. As stated within the Commission Implementing Decision (EU) 2018/1147, the scope (e.g. level of detail) and nature of how the Site addresses the BAT conclusions will generally be related to the nature, scale and complexity of the installation, and the range of environmental impacts it may have (determined also by the type and volume of wastes processed).

The tables below present each of the relevant areas of the BAT conclusions grouped together and then assess information from the relevant section of the management system or other Site documents against the relevant BAT Conclusions and guidance. The management system as well as other key documents, forming the permit management system, have been consulted with in order to undertake this BAT Assessment.

All non-site-specific information contained within the Commission Implementing Decision (EU) 2016/902, containing the BAT conclusions, has been scrutinised but is not mentioned within this document to eliminate any potential confusion.

Overall Environmental Performance		
BAT No.	BAT Guidance	Permit Documents
01	<p>Raw and auxiliary materials supply, storage, handling and preparation</p> <p><i>BAT is to:</i></p> <ul style="list-style-type: none"> • reduce the amount of packaging materials disposed of by, e.g. recycling 'hard' and 'soft' used packaging materials (see Sections 4.2.1 and 4.2.2), unless safety or hazard considerations prevent it. 	<p>Only a small amount of material delivered to site is encased in packaging as the site largely accepts liquid which is pumped directly from vehicles into sealed storage tanks.</p> <p>Any delivery of drums to site are designated to recycling or reuse.</p> <p>BC01 Status: Compliant – It is the operator's view that they are compliant with this BAT conclusion.</p>
02	<p>Synthesis/reaction/calcination</p> <p><i>BAT is to:</i></p> <p>reduce emissions and the amount of residues generated by implementing one or more of the following measures:</p> <ol style="list-style-type: none"> a) using high purity feedstock (see Section 4.3.1) b) improving reactor efficiencies (see Section 4.3.2) c) improving catalyst systems (see Section 4.3.3). 	<p>High purity feedstock is sourced and utilised to minimise the presence of impurities that could lead to increased emissions and residues.</p> <p>All suppliers are required to provide certificates of analysis (CoAs) for their materials, ensuring that only high-purity feedstock is used in our processes.</p> <p>Reactors are designed for optimal efficiency, featuring precise control of temperature, pressure, and mixing conditions to ensure maximum reaction efficiency and minimal by-product formation. They contain</p> <ul style="list-style-type: none"> • baffles in the reactors • suitable rpm motor for the agitator • different mixing blade designs • impellers • pump recirculation

Overall Environmental Performance		
BAT No.	BAT Guidance	Permit Documents
		<ul style="list-style-type: none"> adding feed streams at a point in time closer to the ideal reactant concentration <p>Process monitoring and control to continuously oversee reactor conditions are employed, allowing for real-time adjustments to maintain optimal efficiency.</p> <p>BC02 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>
03	<p>For discontinuous processes, BAT is to:</p> <ul style="list-style-type: none"> optimise yields, lower emissions and reduce waste by sequencing the addition of reactants and reagents (see Section 4.3.4). 	<p>The site uses systems which monitor the process continuously and respond quickly and accurately. This system of operation can bring the process to a stable condition quickly, minimising the generation of off specification products.</p> <p>BC03 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>
04	<p>For discontinuous processes, BAT is to:</p> <ul style="list-style-type: none"> minimise cleaning operations by optimising the sequences for addition of raw and auxiliary materials (see Section 4.3.4). 	<p>As above.</p> <p>BC04 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>
05	<p>Product handling and storage</p> <p><i>BAT is to:</i></p>	<p>Only a small amount of material delivered to site is encased in packaging as the site largely accepts liquid which is pumped directly from vehicles into sealed storage tanks.</p>

Overall Environmental Performance		
BAT No.	BAT Guidance	Permit Documents
	<ul style="list-style-type: none"> reduce the amount of residues generated e.g. by using returnable product transportation containers/drums (see Section 4.2.1). 	<p>Any drums and bags delivered to site are designated to recycling or reuse.</p> <p>BC05 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>
06	<p>Waste gas emissions abatement</p> <p><i>BAT is to:</i> minimise emissions of total dust in off-gases and achieve emission levels of 1 - 10 mg/Nm³ by using one or more of the following techniques:</p> <ol style="list-style-type: none"> cyclone (see Section 4.4.2.1.2) fabric or ceramic filter (see Section 4.4.2.1.5) wet dust scrubber (see Section 4.4.2.1.3) ESP (see Section 4.4.2.1.4). <p>The lower end of the range may be achieved by using fabric filters in combination with other abatement techniques. However, the range may be higher, depending on the carrier gas and particle characteristics (see Section 4.4.2.1). Using fabric filters is not always possible e.g. when other pollutants have to be abated (e.g. SO_x) or when the off-gases present humid conditions (e.g. presence of liquid acid).</p> <p>The particulate matters recovered/removed are recycled back into production when this is feasible. The scrubbing medium is recycled when this is feasible.</p>	<p>A variety of emission controls are used across site on the processing vessels. This includes carbon filters, bag filters and wet scrubbers.</p> <p>The natural gas boiler that produces steam across site does not contain any abatement system as is normal for a natural gas fired boiler. However, there is a control system which automatically runs the burning process through setting upper and lower temperature of boiler water, controlling primary and secondary air fans, dosing screw, hydraulics etc. Optimum ratios of temperature, air and turbulence in boiler operations are remotely monitored by the boiler. There shall only be an emission limit value for NO_x with this figure standing at 200mg/Nm³. Servicing and periodic monitoring of the emissions from the boiler shall ensure continued compliance with the emission limit value.</p> <p>The cooling tower shall only emit water vapour.</p> <p>BC06 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>

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07	<p><i>BAT is to:</i> Reduce HCN emissions and achieve emission levels of <1 mg/m³ by scrubbing with an alkaline solution. The scrubbing medium is recycled when this is feasible (see Section 4.4.2.2.5).</p>	<p>There are wet scrubbers across site in the High Purity shed, Lime shed and at Spray Dryer 9 and 11. The scrubbing solution within these scrubbers are changed when necessary.</p> <p>BC07 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>
08	<p><i>BAT is to:</i> reduce NH₃ emissions and achieve emission levels of <1.2 mg/m³ by scrubbing with an acidic solution. The scrubbing medium is recycled when this is feasible (see Section 4.4.2.2.5).</p>	<p>There are wet scrubbers across site in the High Purity shed, Lime shed and at Spray Dryer 9 and 11. The scrubbing solution within these scrubbers are changed when necessary.</p> <p>BC08 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>
09	<p><i>BAT is to:</i> reduce HCl emissions, e.g. by wet gas scrubbing under alkaline conditions (see Section 4.4.2.2.4). If HCl is the main pollutant to be treated and alkali scrubbing is used, BAT is to achieve 3 – 10 mg/Nm³ HCl.</p>	<p>There are wet scrubbers across site in the High Purity shed, Lime shed and at Spray Dryer 9 and 11. The scrubbing solution within these scrubbers are changed when necessary.</p> <p>BC09 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>

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10	<p>Waste water management and water emissions abatement</p> <p><i>BAT is to:</i> allocate contaminated wastewater streams according to their pollutant load. Inorganic wastewater without relevant organic components is segregated from organic waste water and ducted to special treatment facilities (see Section 4.4.1 and Figure 4.1).</p>	<p>The site operates an effluent treatment plant solely for the materials produced on site. This treatment plant discharges into the foul sewer operated by United Utilities.</p> <p>BC10 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>
11	<p>For rainwater, BAT is to: minimise pollution to receiving watercourses by applying all of the following measures:</p> <ol style="list-style-type: none"> minimising the contamination of rainwater from activities carried out at the installation in particular by applying measures for reducing fugitive and diffuse emissions (see BAT 5.12 and BAT 5.13 and BAT 5.17) ducting and storing rainwater (see Section 4.7.4) expected to be contaminated from activities carried out at the installation and treating it if necessary. Other rainwater may be directly discharged (see Section 4.7.4) monitoring the discharge of this other rainwater as outlined in Section 4.7.4. Rainwater found to be contaminated is treated as in b. above (see Section 4.7.4). <p>In some cases, the use of rainwater as process water to reduce fresh water consumption may be environmentally beneficial.</p>	<p>The site is fully contained and features local containment with sumps and pumps to handle rainwater. Storage tanks are stored in bunded areas and only sealed IBC’s and drums are stored outside of buildings and solid raw material and products are stored in a designated warehouse, thus minimising the likelihood of rainwater contamination. The site also contains an effluent treatment plant with a capacity of 200,000 litres which treats all liquid effluent prior to discharge off site into the foul sewer.</p> <p>BC11 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>

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12	<p>Infrastructure</p> <p>For diffuse emissions, BAT is to: minimise diffuse dust emissions where dust may arise (in particular from the storage and handling of materials/products) by applying one or more of the following techniques:</p> <ol style="list-style-type: none"> storing materials in closed systems (e.g. silos, see Section 6.3.4.1) using covered areas protected from rain and wind (see Section 6.3.4.1) having production equipment, e.g. conveyors, totally or partially enclosed (see Section 2.2) having equipment designed with hooding and ducting to capture diffuse dust emissions (e.g. during loading into storage) and abating it (e.g. using a fabric filter, see Section 6.3.4.1) carrying out housekeeping regularly, e.g. by vacuuming (see Section 4.7.6). 	<p>Materials are stored in closed systems with solid raw material / product being stored in a designated warehouse. Building roofs are routinely checked for holes / damage. Only sealed IBCs and drums are stored outside of buildings.</p> <p>Chemical production equipment within the buildings use hooding and ducting to capture dust emissions. Fabric filters are used on the required equipment with a lowest pore size of 1 micron. The production equipment also use abatement such as carbon filters on tanks and wet scrubbers.</p> <p>BC12 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>
13	<p><i>BAT is to:</i></p> <p>minimise fugitive gaseous and liquid emissions by applying (according to the substances that may require controlling) one or more of the following techniques:</p> <ol style="list-style-type: none"> having periodic leak detection and repair programmes (see Sections 4.7.1 and 2.6.6) operating equipment at slightly below atmospheric pressure (see Section 6.3.4.16) 	<p>Tank and pipe maintenance is completed a mixture of daily and monthly to ensure there are no faults and therefore no unwanted release of liquid or gas. All external pipework is insulated reducing the impacts of extremely cold or hot weather conditions. In periods of hot weather, daily inspections are carried out on the external storage areas and the associated tanks and vessels. Good housekeeping is maintained in the</p>

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	<ul style="list-style-type: none"> c. replacing flanges by welded connections (see Section 2.6) d. using seal-less pumps and bellow valves (see Section 2.6) e. using high performance sealing systems (e.g. effective gaskets and flanges, valves and pumps with high integrity packing, see Section 2.6) f. carrying out housekeeping regularly (see Section 4.7.6). 	<p>form of daily site inspections. All tanks on site have secondary containment in the form of a concrete bund.</p> <p>BC13 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>
14	<p>For new installations, BAT is to: use a computerised control system to operate the plant (see Section 4.5.2). However, this does not apply where safety issues do not permit automatic operations (e.g. in the production of SIC explosives).</p>	<p>The site uses a well-established computerised control system to operate the plant which has been in operation for a number of years.</p> <p>BC14 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>
15	<p>For installations where solid hazardous compounds can build up in pipelines, machines and vessels, BAT is to: have in place a closed cleaning and rinsing system (see Section 4.5.1).</p>	<p>BC15 Status: Not applicable – It is the operator’s view that this condition is not for this type of installation.</p>

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16	<p>Energy</p> <p><i>BAT is to:</i> reduce the consumption of energy by optimising plant design, construction and operation, e.g. by using pinch methodology, except if safety issues prevent it (see Section 4.6.1).</p>	<p>Plater Chemicals hold ISO 14001, 9001 and 45001 accreditation. Environmental Planning is a continual process, required to ensure that they have all the necessary means that are defined in their objectives. These needs are constantly changing and therefore require continual adjustment to meet our objectives.</p> <p>The Production KPI Dashboard is maintained and issued on a regular basis to illustrate Company performance inclusive of Customer Complaints, Safety (Accident Rate, Lost Time), Spray Dryer Utilisation etc. Internal Environmental Audits and their findings are reviewed at each Quarterly Environmental Meeting, Monthly Management Meeting and at Management Review, actions are implemented and maintained.</p> <p>Actions, corrective and preventative, are placed on the company Action Tracker with responsibilities and time-scales; this is then reviewed at each Quarterly Environmental Meeting, Monthly Management Meeting and Management Review.</p> <p>Continuous improvements are noted and discussed at both the Quarterly Environmental and OH&S Meetings, Monthly Management Meeting and at Management Review; any improvements to be made are discussed and documented from these meetings.</p>

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		<p>The Management of PLATER GROUP Ltd defines key objectives with measurable targets, responsibilities and timescales. These are reviewed for effectiveness and when completed new objectives met.</p> <p>Key objectives include reducing energy consumption.</p> <p>BC16 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>
17	<p><i>BAT is to:</i> minimise soil and groundwater pollution by designing, building, operating and maintaining facilities, where substances (usually liquids) which represent a potential risk of contamination of ground and groundwater are handled, in such a way that material escapes are minimised (see Section 4.7.1). This includes all of the following:</p> <ol style="list-style-type: none"> having facilities sealed, stable and sufficiently resistant against possible mechanical, thermal or chemical stress. This is particularly important for highly toxic substances – e.g. cyanides, phosphorus compounds providing sufficient retention volumes to safely retain spills and leaking substances in order to enable treatment or disposal providing sufficient retention volume to safely retain fire fighting water and contaminated surface water carrying out loading and unloading only in designated areas protected against leakage run-off 	<p>The site is fully contained and features local containment with sumps and pumps to handle rainwater, firewater and any process water spillages. Storage tanks are stored in bunded areas and only sealed IBC’s and drums are stored outside of buildings and solid raw material and products are stored in a designated warehouse, thus minimising the likelihood of rainwater contamination. The site also contains an effluent treatment plant with a capacity of 200,000 litres which treats all liquid effluent prior to discharge off site into the foul sewer.</p> <p>Materials are stored in closed systems with solid raw material / product being stored in a designated warehouse. Building roofs are routinely checked for holes / damage. Only sealed IBCs and drums are stored outside of buildings.</p> <p>Chemical production equipment within the buildings use hooding and ducting to capture dust emissions. Fabric filters are used on the required equipment with a lowest pore size of 1 micron. The production</p>

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	<p>e. storing and collecting materials awaiting disposal in designated areas protected against leakage run-off</p> <p>f. fitting all pump sumps or other treatment plant chambers from which spillage might occur with high liquid level alarms or having pump sumps regularly inspected by personnel</p> <p>g. establishing programmes for testing and inspecting tanks and pipelines including flanges and valves</p> <p>h. providing spill control equipment, such as containment booms and suitable absorbent material</p> <p>i. testing and demonstrating the integrity of bunds</p> <p>j. equipping tanks with overfill prevention</p> <p>storing materials/products in covered areas to keep rainfall out.</p>	<p>equipment also use abatement such as carbon filters on tanks and wet scrubbers.</p> <p>Tank and pipe maintenance is completed a mixture of daily and monthly to ensure there are no faults and therefore no unwanted release of liquid or gas. All external pipework is insulated reducing the impacts of extremely cold or hot weather conditions. In periods of hot weather, daily inspections are carried out on the external storage areas and the associated tanks and vessels. Good housekeeping is maintained in the form of daily site inspections. All tanks on site have secondary containment in the form of a concrete bund</p> <p>BC17 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>
18	<p><i>BAT is to:</i></p> <p>have a high level of education and continuous training of personnel (see Section 4.7.2).</p> <p>This includes all of the following:</p> <p>a. having personnel with sound basic education in chemical engineering and operations</p> <p>b. continuously training plant personnel on the jobs</p> <p>c. regularly evaluating and recording the performance of personnel</p> <p>d. regularly training personnel on how to respond to emergency situations, health and safety at work,</p>	<p>Members of staff and other interested parties receive appropriate training during their employment for or on behalf of the Organisation. This includes the Management System(s) Policy and individual roles and responsibilities within the operation of the Management System(s) and the achievement of relevant Objectives.</p> <p>Appropriate training methods and aides are used that may include:</p> <ul style="list-style-type: none"> ● Induction training – Commencement of Employment ● Internal training by more experienced staff ● External training.

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	and on product and transportation safety regulations.	<p>Evidence of qualifications, training certificates, licences, skills and competencies of prospective employees where specialist skills are required is obtained and recent previous employment references are requested.</p> <p>Training and competency requirements may be identified as a result of:</p> <ul style="list-style-type: none"> ● Performance reviews ● New personnel ● New equipment and/or technology ● Revised legal and/or regulatory requirements (e.g. Health & Safety) ● Revised industry standards ● Management Reviews ● Employee request. <p>Details of all OH&S training are recorded on the individual staff member training record. Records of safety training are kept in accordance with the process described in Section 7.2, in the Organisation's ISO 9001 Quality Manual.</p> <p>OH&S training records include such details as:</p> <ul style="list-style-type: none"> ● Trainee's name ● Trainee's job title ● Course title/content ● Date

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		<ul style="list-style-type: none"> • Expiry. <p>A detailed Training Matrix is in place for site-based staff showing the following information:</p> <ul style="list-style-type: none"> • Course attended • Date attended • Outcome of training • Renewal date <p>BC18 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>
19	<p><i>BAT is to:</i> apply, if available, the principles of an Industry Code (see Section 4.7.3). This includes all of the following:</p> <ol style="list-style-type: none"> applying very high standards for safety, environmental and quality aspects in the production of the SIC substances <p>carrying out activities such as auditing, certification, training of plant personnel (related to BAT number 5.18 and 5.22).</p>	<p>Plater Chemicals hold ISO 14001, 9001 and 45001 accreditation for Environmental Management System, Quality Management System and Occupational Health & Safety respectively.</p> <p>BC19 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>
20	<p><i>BAT is to:</i> carry out a structured safety assessment for normal operation and to take into account effects due to deviations of the chemical process and deviations in the operation of the plant (see Section 4.7.5).</p>	<p>Plater Chemicals have a Crisis Management Manual in place to ensure that Plater Group can respond effectively in a rapid and controlled manner to an actual or potential major incident which could seriously threaten its business.</p>

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		<p>The business recovery/contingency plan will be to move any processing, packing or distribution to a partner business of Plater Group in the event of an emergency.</p> <p>There is also an Accident Management Plan in place.</p> <p>BC20 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>
21	<p>In order to ensure that a process can be controlled adequately, BAT is to: apply one individual or a combination of the following techniques (without ranking, see Section 4.7.5):</p> <ol style="list-style-type: none"> a. organisational measures b. concepts involving control engineering techniques c. reaction stoppers (e.g. neutralisation, quenching) d. emergency cooling e. pressure resistant construction <p>pressure relief.</p>	<p>Plater Chemicals have a Standard Operating Procedure for every chemical product that they produce. These clearly state what steps to follow for the safe and correct production of each product.</p> <p>Plater Chemicals have a Crisis Management Manual in place to ensure that Plater Group can respond effectively in a rapid and controlled manner to an actual or potential major incident which could seriously threaten its business.</p> <p>BC21 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>

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22	<p>A number of environmental management techniques are determined as BAT. The scope (e.g. level of detail) and nature of the EMS (e.g. standardised or non-standardised) will generally be related to the nature, scale and complexity of the installation, and the range of environmental impacts it may have.</p> <p>BAT is to: implement and adhere to an Environmental Management System (EMS) that incorporates, as appropriate to individual circumstances, the following features (see Section 4.7.6):</p> <ol style="list-style-type: none"> a. definition of an environmental policy for the installation by top management (commitment of the top management is regarded as a precondition for the successful application of other features of the EMS) b. planning and establishing the necessary procedures c. implementation of the procedures, paying particular attention to: <ol style="list-style-type: none"> i. structure and responsibility ii. training, awareness and competence iii. communication iv. employee involvement v. documentation vi. efficient process control vii. maintenance programmes 	<p>Plater Chemicals demonstrate a proactive approach towards maintaining high environmental and overall business. Furthermore, Plater Chemicals hold ISO certification to ISO9001, ISO 14001 and ISO 45001 to add a further layer of robustness to their management approach.</p> <p>Senior Management Commitment</p> <p>As part of the continuous improvement of the business and compliance, Senior Management attend annual management reviews. Similarly, an annual EMS management review takes place covering the implementation and overall compliance against the Environmental Permitting Regulations. In addition, all management system documents are produced or at least reviewed and authorised by a Director of Plater Chemicals or his delegate, to ensure there are commitments written into the document can be implemented on site.</p> <p>Continual Improvement</p> <p>Plater Chemicals are committed towards the continual improvement of their environmental performance of the business, this has been documented in their environmental policy. The policy will be reviewed by Company Directors no less than annually during the management review.</p> <p>Improvement Programmes</p> <p>The integrated management system is supported by several procedures to facilitate and structure progress in a number of areas of the business,</p>

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	<ul style="list-style-type: none"> viii. emergency preparedness and response ix. safeguarding compliance with environmental legislation <p>d. checking performance and taking corrective action, paying particular attention to:</p> <ul style="list-style-type: none"> i. monitoring and measurement (see also the Reference Document on General Principles of Monitoring) ii. corrective and preventive action iii. maintenance of records iv. independent (where practicable) internal auditing in order to determine whether or not the environmental management system conforms to planned arrangements and has been properly implemented and maintained <p>e. review by top management.</p> <p>Three further features, which can complement the above stepwise, are considered as supporting measures. However, their absence is generally not inconsistent with BAT. These three additional steps are:</p> <ul style="list-style-type: none"> f. having the management system and audit procedure examined and validated by an accredited certification body or an external EMS verifier g. preparation and publication (and possibly external validation) of a regular environmental statement describing all the significant environmental aspects 	<p>these procedures can be found within the Integrated SOPs document (V13, November 2022). To guide improvements across the business, the Operator has implemented a general complaint procedure, which is detailed in Section 11.3 of the Integrated SOPs. The objective of this system is to ensure that all customer complaints, complaints about the site operations and/or its impact on the environment made by third parties are dealt with in a manner that ensures the operator acts in a responsible way and maximises customer satisfaction (customer complaint only). Also, to ensure that, as far as is practical, corrective and preventive action is taken to eliminate the causes and the potential causes of customer complaints, complaints about the site operations and/or its impact on the environment made by third parties.</p> <p>Corrective Action</p> <p>Plater Chemicals has also developed a procedure to help facilitate corrective and preventative actions. This details how the Company determines actions to eliminate the causes of potential batch failures and non-conformities in order to prevent their occurrence. As a result, Plater Chemicals can implement any required improvements to the business in order to facilitate high quality products and continual improvement of the onsite operations.</p> <p>Organisation Structure, Training & Competency</p>

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	<p>of the installation, allowing for year-by-year comparison against environmental objectives and targets as well as with sector benchmarks as appropriate</p> <p>h. implementation and adherence to an internationally accepted voluntary system such as EMAS and EN ISO 14001:1996. This voluntary step could give higher credibility to the EMS. In particular EMAS, which embodies all the abovementioned features, gives higher credibility. However, non-standardised systems can, in principle, be equally effective provided that they are properly designed and implemented.</p> <p>Specifically for the SIC sector, it is also important to consider the following potential features of the EMS:</p> <p>i. the environmental impact from the eventual decommissioning of the unit at the stage of designing a new plant</p> <p>j. the development of cleaner technologies</p> <p>where practicable, the application of sectoral benchmarking on a regular basis, including energy efficiency and energy conservation activities, choice of input materials, emissions to air, discharges to water, consumption of water and generation of waste.</p>	<p>Plater Chemicals have a clearly defined organisational structure to maintain control over the integrated and permit management system with the integrated SOPs containing a dedicated 'Roles and Responsibilities' section to define key tasks that must be undertaken at different levels of the organisation. The operator has detailed their comprehensive approach towards upholding a good level of staff competency in Section 11.1: Training within the Integrated SOPs document. This procedure details a clear approach Plater Chemicals maintains to ensure that all members are competent within their roles and carrying out their role in a safe and responsible manner. The required training to satisfy the needs of each operator is provided either in house or via a third party and the training is recorded within individual training records and in the Plater Chemicals IMS Training Matrix, which indicates when individual refresher training is due.</p> <p>Action is taken to ensure that personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality, environmental and health & safety objectives through informal conversations with site management. The key mechanisms within the training and competence process will be the company appraisal system, with the effectiveness of training to be reviewed within the annual Management Review.</p>

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		<p>Communication and Employee Involvement</p> <p>Clear and coherent communication is fundamental to the effective process operation on site. Directors and Managers are responsible for ensuring that internal communications take place. Plater Chemicals communicate information using a variety of media, including, but not limited to team meetings, toolbox talks and training records, shared file server and notice boards. The electronic Shared File Server is the key method of communication and is updated on a regular basis.</p> <p>Effective Process Control</p> <p>Plater Chemicals are able to maintain high levels of process control through the combination of various different operational procedures and monitoring of the systems. The regular monitoring and measurement of site processes and any environmental impacts such as odour, noise, litter and pests are recorded and available for inspection, should it be requested. Plater Chemicals also conduct and record daily, weekly and monthly site checks to assess a number of variables including within the environmental permit documents, including, but not limited to site security, odour, litter, pests and drainage systems. The effectiveness of individual site procedures is regularly evaluated through various meetings, such as internal and external audits and management reviews.</p>

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		<p>Maintenance</p> <p>As detailed within the Environmental Permit Management System, Plater Chemicals operates a strict maintenance regime and equipment used is of sufficient capacity to allow down time for routine maintenance, calibration and servicing as recommended by the manufacturer.</p> <p>Daily checks of various parts of the plant are undertaken across the site by the maintenance staff/site manager. The results of these checks are recorded on the daily check sheet and if any faults are identified they too are recorded on the daily issues raised record sheet. Routine maintenance is recorded, and in addition operator pre-use checks will be completed to assess the general condition of the machines and identify any defects.</p> <p>Emergency Preparedness and Response</p> <p>The operator's diligent approach to managing accidents onsite is documented within the site's Accident Management Plan, completed in line with Environment Agency requirements. This document lists key emergency contact details and has comprehensively evaluated a range of hazards and how they are monitored and mitigated on site. The Accident Management Plan is supported by a range of procedures, such as the Fugitive Releases Plan and Environmental Risk Assessment to minimise the potential occurrence of accidents on site. Plater Chemicals have a Crisis Management Manual in place to ensure that Plater Group</p>

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		<p>can respond effectively in a rapid and controlled manner to an actual or potential major incident which could seriously threaten its business.</p> <p>BC22 Status: Compliant – It is the operator’s view that they are compliant with this BAT conclusion.</p>