



Augean Treatment Limited
**Port Clarence Waste Recovery Park –
Environmental Permit Variation
Application**

Supporting Report

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Project Number: UK0042762.3116





Document distribution

Augean Treatment Limited

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Supporting Report

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Executive summary

Augean Treatment Limited (Augean) is responsible for the operation of the Port Clarence Waste Recovery Park, in Stockton on Tees. The Waste Recovery Park (WRP) is currently operational and receives and processes a variety of hazardous and non-hazardous wastes.

The original environmental permit (ref. EPR/YP3234XR) was issued in 2009 by the Environment Agency. Several subsequent variations have been issued since to reflect changes made during the operational lifetime of the WRP.

Augean is seeking to vary its permit to reflect operational updates and improvements that are proposed to be introduced to the treatment of waste on site. Such changes include the addition of an Air Pollution Control residues (APCr) washing plant that will result in the production of an End of Waste (EoW) product that can be used as an alternative to Pulverised Fuel Ash (PFA) for use as a construction additive. The new treatment process will have water reuse measures embedded into it, allowing wastewater and rainwater to be treated and used throughout the treatment process. As part of current operations, APCr is already accepted on site and undergoes neutralisation / stabilisation treatment. Instead, once the processes outlined in this permit variation have been implemented, APCr will be reallocated to this washing process to produce a more beneficial EoW product.

As part of this permit variation application, the following requirements have been considered:

- **Management Systems:** Augean operates the site in accordance with an Environmental Management System (EMS), which is certified to ISO 14001. There will be no overarching changes to the structure and implementation of the EMS as a result of this permit variation and associated changes. However, where relevant, procedures and management plans will be reviewed and updated to include for the new APCr washing plant.
- **Energy Efficiency:** Energy use on site will be altered as a result of the changes to be implemented. It is not expected that the APCr washing plant will be a great consumer of energy, however, measures will be in place to monitor energy consumption in relation to the process specifically. Energy efficiency protocols that are already in place on site will be extended to include the APCr washing plant.
- **Raw Materials and Water:** Changes to be introduced on site will require the addition of some raw materials for the wastewater treatment plant part of the process. Water is a key factor in the APCr washing process, with dirty water being able to be reused via the Reverse Osmosis treatment within the wastewater treatment plant. Rainwater harvesting will provide support for the remaining water requirements in addition to mains supply. Efficient water usage throughout the treatment process has been carefully considered and incorporated into the proposed changes on site, with future plans to enhance this process even further.
- **Waste Management:** Waste streams that will be generated from the new APCr washing process include Reverse Osmosis (RO) concentrate, which will be tankered off-site to a suitable alternative treatment facility. Metal filter cake will be produced from the wastewater treatment process – this is



hazardous material that will be disposed of via the neighbouring hazardous landfill site also under Augean operation.

- **Process Emissions:** There will be four new emission points to air from the APCr washing plant. These will only release under abnormal conditions as they will be associated with pressure relief vents that will be fitted to APCr storage silos. There will also be suitable abatement of such emission points, in the form of a reverse jet bag filter. There will be no new discharges to ground and surface water or sewer as a result of the proposed activities.
- **Site Condition Report:** An assessment of hazardous substances was undertaken to inform the update and maintenance of the installation's site condition report. This assessment found that for the relevant hazardous substances identified there would be no risk to soil and/or groundwater from the proposed activities.
- **Environmental Risk Assessment:** An environmental risk assessment was undertaken for the proposed activities. This assessed considered emissions to air, ground and surface water, fugitive emissions, accidents, noise and vibration and odour from various hazards and scenarios. The findings confirm that with suitable risk management techniques to be utilised at the installation the overall risk rating is considered low for all hazards identified. As the installation is operational and APCr is already handled on site, the addition of the new APCr washing plant is not anticipated to pose any further significant to nearby sensitive receptors of the WRP.

1. Introduction

1.1 About the installation

This report supports the application for a variation to the environmental permit for the Port Clarence Waste Recovery Park (WRP) operated by Augean Treatment Limited (Augean).

The installation's address is:

Port Clarence Waste Recovery Park
Port Clarence Landfill Site
Off Huntsman Drive
Stockton on Tees
TS2 1UE

The WRP is currently regulated by an environmental permit reference EPR/YP3234XR/V007 (variation and consolidation), issued on 18/02/2021. The original permit was issued on 15/05/2009. Current processes at the site involve various regulated waste activities relating to waste wood energy recovery, plasma treatment, thermal desorption, tank farm, effluent treatment, anaerobic digestion, waste recovery, waste transfer, soil washing, waste solidification / stabilisation, bioremediation of solid and sludge wastes, storage activities, and blending and batching of cement.

The installation is located adjacent to the Port Clarence Landfill, with the WRP found in an industrial area, neighbouring various other sites with industrial applications. To the south and southeast of the site lies the River Tees, separated from the WRP by an expanse of land as well as a large screening bund. Figure 1-1 outlines the installations location.

Figure 1-1: Site Location (approximate boundary highlighted in red)



1.1.1 Environmental receptors and site designations

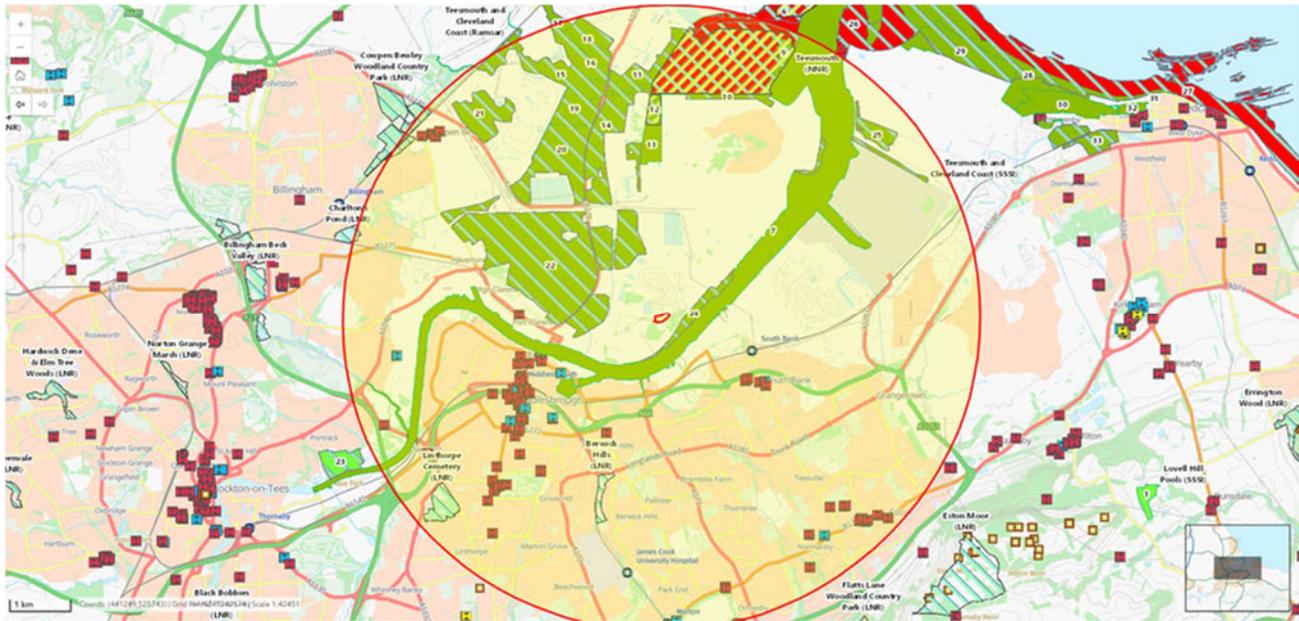
An online search has been undertaken to clarify whether the site is within or near to any protected areas. The search, performed on MAGIC.GOV¹, identified statutory environmental designated features within a 5 km buffer of the installation area, which included Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs), and Local Nature Reserves (LNRs). Figure 1-2 below provides a map of the site location in relation to the features found. The following features were identified:

- Teesmouth and Cleveland Coast SSSI.
- Teesmouth and Cleveland Coast Ramsar Site.
- Teesmouth NNR.
- Berwick Hills LNR.
- Linthorpe Cemetery LNR.

¹ [Magic Map Application](#)
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There are no Ramsar Sites, Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Areas of Outstanding Natural Beauty (AONB), Environmentally Sensitive Areas or Ancient Woodland identified within the 5 km buffer, according to the MAGIC.GOV check performed.

Figure 1-2: Screenshot from MAGIC highlighting environmental statutory designations



1.1.2 Flood risk

According to the GOV.UK Flood map for planning², as highlighted in Figure 1-3 below, the installation is located in Flood Zone 1. This means that the land on which this installation is situated has a low probability of flooding from rivers and the sea. However, as shown, the installation is at risk of flooding from surface water. As the proposed development is to be within the existing site boundary, there is no additional risk of flooding compared to the current state of the site.

² [Get flood risk information for planning in England - Flood map for planning - GOV.UK](#)
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Figure 1-3: Screenshot from Flood maps for planning, showing flood risk zones



1.2 Proposed changes / why the variation application is being made

Augean intend to expand their operations at the installation to include a new activity comprising of washing of air pollution control residues (APCr). The capacity of the new infrastructure for APCr treatment will be 60,000 tonnes per annum – this is simply a reallocation and treatment of the APCr material that is already accepted at the installation and there will not be an increase in the throughput or overall capacity of the WRP. APCr is currently accepted at the installation and is subject to stabilisation and neutralisation processes for recovery. However, the proposed new process (APCr washing) will enable an End of Waste (EoW) product to be produced, which replaces virgin aggregate in the building supply chain, therefore reducing the need for certain raw materials on sites. The proposed development will therefore create a number of environmental and circular economy benefits for the waste management and construction sectors, resulting in less material being destined for landfill. The APCr treatment process will produce an EoW product that can be used as an alternative to Pulverised Fuel Ash (PFA) for use as a construction additive in two applications: as a grout / lightweight filling material (where the material is hydraulically pumped or injected into the ground to fill void space) and as a binder ingredient in bound construction materials (for example, as an additive to pre-cast concrete).

This new process will require the installation of additional infrastructure required for the various stages of the APCr activity, which will be situated in the southern area of the current WRP site, within the existing permit boundary. Therefore, the proposed activities would require a variation to the installations current environmental permit.

1.2.1 Process description

Inbound loads of APCr (determined to be suitable based on pre-acceptance checks) will be unloaded and stored in raw APCr intake silos. In order to prevent fugitive emissions, a sealed atmosphere will be in place during discharge into storage silos: tankers will be connected to the silo and the APCr will enter into the tank via pipework. Following this, APCr is to be processed through a conditioning plant, during which water will be added at a pre-determined ratio, initiating physico-chemical reactions. Such reactions are required for the EoW process. APCr will then be transferred to conditioning bays for storage for the duration of five weeks, during which consistent monitoring of water content and temperature will be conducted. Following the conditioning period, compliance with the EoW process is checked via testing of the material. If the material fails, it will be re-processed. If the material passes, the material will be transferred to the washing plant, where water is added and mixed with the damp APCr. This will be in an approximate ratio of up to 5:1 water to APCr, allowing leaching chemicals to be liberated from the material. A slurry will be produced from this continuous process, and this will then be stored in holding tanks that continuously agitate the material. In order to separate APCr from the wash water, slurry is to be pumped to a plate press. Dewatered APCr is dropped from the base of the filter-press at the end of each cycle and stored in a bay, pending dispatch as an EoW material.

Wash water pressed out of the slurry is directed to a storage tank, before being pre-treated, in preparation for treatment in a Reverse Osmosis (RO) plant. Pre-treatment will involve pH adjustment to precipitate heavy metals (such as lead and zinc) and addition of coagulants / flocculants and settling via a lamella clarifier. Settled sludge arising from this process will undergo treatment from a secondary filter-press for dewatering, in preparation for transfer to the nearby hazardous landfill.

The RO system is then to be used for the treatment of the clarified water and water from the filter-press, removing and concentrating contaminants (which are expected to be predominantly calcium chloride) into a retentate, which is to be stored in a bunded tank. Clean wash water can then be recycled into the process, reducing the demand for fresh water. Retentate can either be re-used for other on-site processes or transported off-site for further processing at a third-party wastewater treatment facility.

Potential future enhancements to the process include the drying and milling of EoW filtercake via a drying technology (that is yet to be defined) and a subsequent pendulum mill, to produce a dry, flowable powder. This product could be sold and dispatched from site. Retentate could also be evaporated to produce a recovered water stream, to be re-used within the process and a concentrated brine or salt cake for potential re-sale as a product. These future developments will be subject to a further permit variation application at the relevant time should they become further developed. Provisions will be in place across the facility for rainwater collection, to reduce pressure and reliance on mains water supply for use within the process. Enclosed sump infrastructure will be implemented to support yard areas, and re-use of water will be promoted within the process, where appropriate. If water is unsuitable for re-use, it is anticipated that this will be re-processed through the water treatment stage of operations, to result in a composition that is either suitable for re-use or discharge with other process liquors.

A Process Flow Diagram is provided in Appendix B – . .

1.2.2 Process emissions

There will be four new emission points introduced in the new APCr washing plant. These will be associated with the pressure release valves (PRVs) fitted to each of the raw APCr intake silos. Under

normal operation, there will be no release from these emission points. Release via these emission points will be under abnormal operation only, in the unlikely scenario that high pressure be detected within a silo. Emission points will be suitably abated, with reverse jet bag filtration systems. The location of the emission points will be on the top of each silo, as indicated in drawings included in Appendix F – . The PRVs will be connected to a high-pressure alarm system, which will aid in alerting Augean staff in the event of high pressure.

Wastewater will be treated in a new wastewater treatment plant comprising pre-treatment for heavy metals followed by RO (as explained in the above process description), with the cleaned water being re-used in the process and the retentate re-used in other on-site processes or tankered off site. Surface water run-off from the site area will be contained: there will be a new concrete area created for the purpose of the installation of the infrastructure required for the new process, as well as the implementation of lagoons, with suitable capacity to accommodate a 1-in-100 year rainfall event with an additional 45% capacity for climate change provisions. The surface water run-off from this area will not be combined with drainage from other areas of the wider site. There will be separate containment for ‘clean’ and ‘dirty’ surface water run-off. It is Augean’s intention to collect and recirculate water as far as possible in relation to this process.

Fugitive emissions (to air, land and water) will be controlled by appropriate mitigation measures detailed in the following sections, comprising suitable sheltering of parts of the APCr washing process and dampening of APCr material during conditioning.

1.3 Regulatory context

1.3.1 Existing environmental permit

Augean’s Port Clarence WRP is currently regulated by environmental permit EPR/YP3234XR, which permits several regulated activities under Schedule 1 to the Environmental Permitting (England and Wales) Regulations 2016, as amended (‘EPR’). These are summarised in Table 1-1 by the main activity reference referred to in the current permit. Port Clarence WRP is part of a wider site, which includes two landfill areas, regulated by two further environmental permits: one hazardous and one non-hazardous. However, the proposed changes outlined within this permit variation application do not affect the operation of these sites and therefore are not mentioned further in this document.

Table 1-1: Current permitted activities

Activity Reference
AR1: Waste Wood Energy Recovery
AR2: Plasma Treatment
AR3: Thermal Desorption
AR4: Tank Farm

Activity Reference
AR5: Effluent Treatment
AR6: Anaerobic digestion.
AR7: Waste recovery facility.
AR8: Waste transfer station.
AR9: Soil washing.
AR10: Waste solidification / stabilisation.
AR11: Bioremediation of solid and sludge wastes.
AR12 Storage activity (for AR9, AR10 and AR11).
AR13: Blending and batching of cement.

The WRP's original permit was issued in May 2009 and has been varied on several occasions since then, with the most recent variation (V007) issued on 18/02/2021, which was a variation and consolidation. Variations and updates to the environmental permit have included updates to the waste codes that can be accepted at the facility and addition of stabilisation and neutralisation processes for recovery processes.

The last operator-initiated permit variation (V007, February 2021) accounted for the below changes:

- Addition of neutralisation of hazardous and non-hazardous waste for recovery.
- Addition of solidification / stabilisation of hazardous waste for recovery.
- Reference to revised operating techniques.
- Addition of various waste codes for the new activities.

A variation to the existing environmental permit is required to incorporate the changes that are proposed at the facility for the new APCr washing process.

1.3.2 Proposed activities

The proposed activities to be undertaken for the APCr washing activity are expected to fall within the following sections of Schedule 1 of the EPR:

- S5.3 A(1)(a)(ii): Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment.
- S5.6 A(1)(a)(i): Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes.

A wastewater treatment plant is required to serve these activities. The capacity of the proposed wastewater treatment plant will have a capacity of 60 m³ / hour, which will therefore be regulated as:

- S5.4 A(1)(a)(ii): Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving physico-chemical treatment.

There will also be related directly associated activities (DAAs), consisting of:

- Receipt, handling and storage of incoming wastes.
- Receipt, handling and storage of raw materials (e.g. coagulants and flocculants).
- Management of processed sludges and wastewater.
- Management of processed product (which meets EoW).

Due to the nature of the changes on site, the proposed variation will be a substantial variation. The proposed changes do not significantly increase the risk from the operations carried out at the installation. The activity is an addition to those already being conducted to extract greater value from an otherwise wasted resource. The variation will not see any additional waste types accepted at the installation as APCr is already a permitted waste type and material that is already being handled on site. Therefore, the proposed activities do not pose any greater risk than those already permitted with appropriate management.

1.3.3 Pre-application discussion and advice

The formal Environment Agency pre-application advice process was not used during pre-application preparations because this permit application needed to be submitted within a specific timeframe to allow for determination before the scheduled start date of the new activities. Instead of an advice request submission to National Permitting, discussions were held with the site's local Permitting Officer to obtain advice, ahead of application submission.

A virtual meeting was held on 08/10/2025 with the local site officer, Kevin Nicholson. This meeting consisted of giving an overview of the proposed activities to be undertaken and a description of the APCr washing process. The contents of the variation application documents were also presented and discussed for any initial feedback. There were no concerns raised by the local site officer, in relation to the proposed activities and the documents being prepared for submission. A discussion in relation to the approach to the permit variation concluded that the approach is suitable and the local site officer was confident that all relevant aspects will be covered, supported by appropriate technical guidance for the activities that are to be introduced. To summarise, there were no concerns raised in relation to the proposed activities and associated permit variation application.

1.4 Variation application structure

The application to vary an environmental permit consists of Forms A, C2, C3 and F1 as required under the EPR. The completed application forms, provided in Appendix A – , are supported by this report which comprises the main application document detailing the proposed changes at the installation. This report outlines their environmental impact, including consideration of management techniques to avoid and control emissions and design of the process to meet Best Available Techniques (BAT).

This report has been structured and developed in accordance with and with reference to the relevant technical guidance for the installation activities, namely:

- Environmental permit guidance obtained from GOV.UK webpages (replacing previous EPR 1.00 'How to Comply' guidance).
- Waste Treatment BREF and BAT Conclusions (2018)³.
- Chemical Waste: appropriate measures for permitted facilities⁴.

It should be noted that the information provided in this report is that in relation to the proposed changes at the installation for the APCr washing process only, and subject to the permit variation application only. Where there will be no changes to processes, procedures, emissions or monitoring as a result of the permit variation being applied for, the relevant information in the original permit application or previous variation applications should be referred to and such information or environmental assessments are not repeated in this document.

Due to the nature of the proposed changes, it has been determined that no quantitative risk assessments or detailed modelling will be required to support this permit variation application. There are no new point source emissions to air (other than pressure release valves that will be fitted to storage silos) or water. Therefore, an H1 risk assessment will not be required. The new process activity is not expected to be inherently odorous and does not introduce additional materials that are not already accepted at the installation. In relation to noise nuisance, as justified in later sections in this report, it is not anticipated that noise will be an issue, particularly due to the nature of the enclosure of the process equipment, as well as the location of nearest receptors. However, further details and justification are provided in the qualitative environmental risk assessment within this report, as well as within later sections of this supporting document.

In addition to the application forms in Appendix A – , the following supporting information is provided in the appendices to this report:

- Appendix B – Process Flow Diagram
- Appendix C – BAT Assessment
- Appendix D – Appropriate Measures Assessment
- Appendix E – EoW Decision Notice
- Appendix F – Drawings
- Appendix G – Technical Competence

³ [Waste Treatment | EU-BRITE](#)

⁴ [Chemical waste: appropriate measures for permitted facilities - Guidance - GOV.UK](#)

2. Managing your activities

2.1 General management

The effective management of environmental performance is a key requirement for ensuring that all pollution prevention and control techniques are delivered reliably, monitored and measured appropriately, and on an integrated basis. The Environmental Management System (EMS) helps to maintain compliance with regulatory requirements and to understand and manage all other significant environmental impacts.

An EMS is already in place across Augean's portfolio of UK sites, including at the Port Clarence WRP. The EMS is certified to ISO 14001 (certificate reference EMS 77070, effective date 07/10/2024) and independently audited every year. The original environmental permit application produced in 2008 contained an overview of Augean's management system at that time. The installations EMS provides a framework for Augean to control the environmental impacts of its activities, products and services, and continually improve its environmental performance and complies with BAT.

There will be no overarching changes to the EMS as a result of this permit variation, and the existing EMS will continue to be implemented at the site. However, it will be reviewed and updated as necessary in order to implement and reflect the new APCr washing process. This will include the development of relevant operational procedures and processes in relation to the proposed process, including start up and shutdown procedures and key measures for inspection and maintenance to prevent any accidental releases. A review of EMS arrangements against technical guidance (BAT Conclusions and Appropriate Measures) is included in Appendix C – and Appendix D – .

The original permit application included an environmental risk assessment which identified the risks relevant to the installation, and, for each risk, it identified:

- The actual or possible hazards, e.g. emissions to air.
- The process that causes the hazard, e.g. tank failure.
- The receptors.
- The pathways.
- What measures Augean will take to reduce the risks.
- What the overall risk is (based on a consideration of the probability of exposure and the potential consequences).

This risk assessment is reviewed and updated (as necessary) each time the permit is varied in order to consider any new risks introduced by the proposed changes. A risk assessment that considers the new APCr washing process, which is the subject of this environmental permit variation application, is provided in Section 6.

The new plant and equipment required to be installed and operated as part of this project will be incorporated into the Planned Preventative Maintenance Programme (PPMP) which is implemented at

the installation. This covers all plant and equipment whose failure could have an impact on the environment and will include inspection and maintenance of the infrastructure required for the proposed APCr activities. The PPMP details inspection and maintenance timescales, which are in accordance with the manufacturers' / suppliers' recommendations for the equipment. The PPMP is managed, using Augean's integrated software systems which is built into the EMS. All installation and servicing will be carried out by suitably competent personnel, which, for the infrastructure and APCr activity technology, includes the use of qualified external contractors.

In relation to the EMS, the existing legal register will also be reviewed and updated if any new legal compliance obligations are identified as a result of the new activities.

2.1.1 Technically Competent Manager

As the WRP is operational, pre-existing and suitable Technically Competent Management (TCM) is in place. The changes proposed do not require any additional TCM staff and existing TCM personnel will be on site to support the new APCr washing process. Certificates of Technical Competence are appended to this report in Appendix G – .

2.2 Energy efficiency

The proposed changes being introduced as a result of the new APCr washing process will alter the energy use at the installation. The process will use electricity supplied from the national grid; Table 2-1 below shows the change in energy use anticipated at the installation.

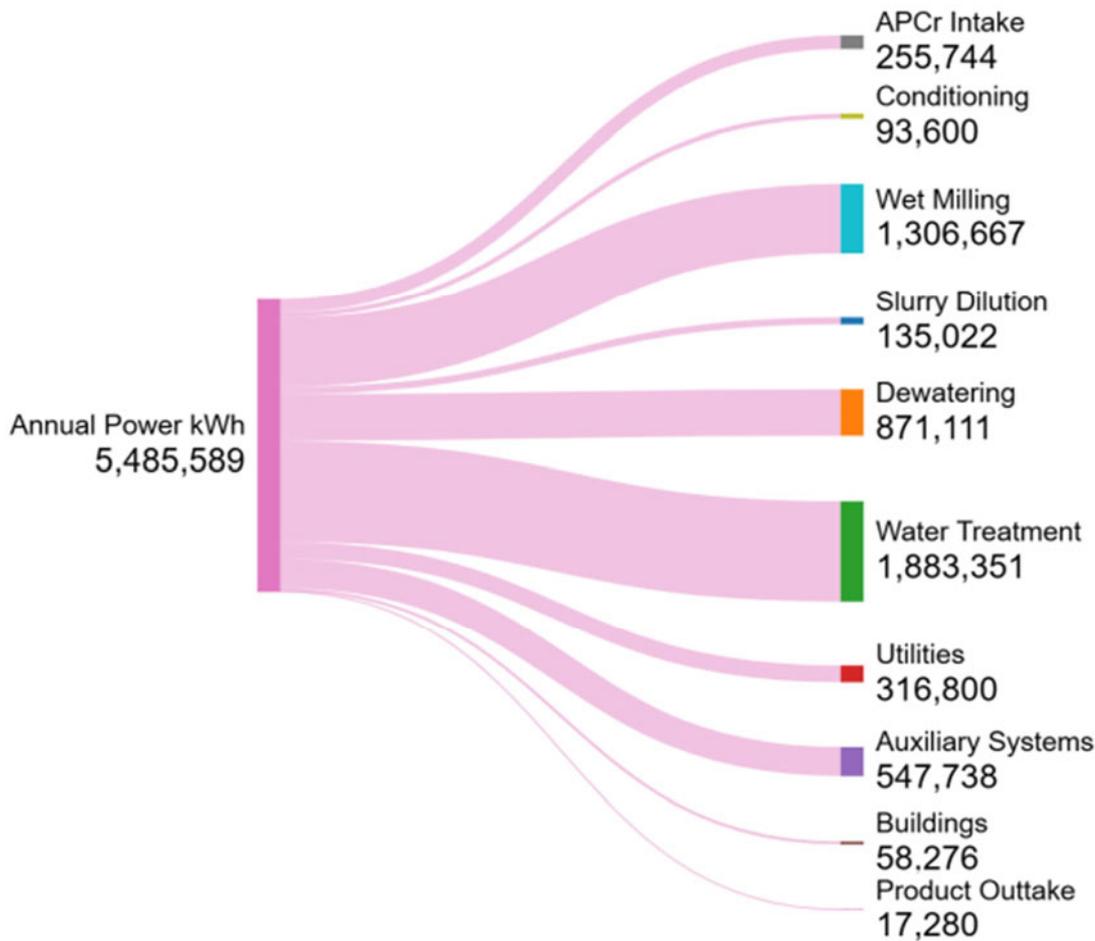
Table 2-1: Current and future estimated annual energy consumption

Energy Source	Current (2024) Energy Consumption ¹		Estimated Future Energy Consumption ²	
	Delivered (MWh)	Primary (MWh)	Delivered (MWh)	Primary (MWh)
Electricity from public supply	121.09	290.62 ³	5,486	12,582 ³
Oil (kerosene)	281	n/a	355	n/a
Solar	0	0	294	n/a

Notes: 1. Current energy consumption based on 2024 data for the WRP installation which is used as a baseline.
 2. Future energy consumption is a best estimate at this stage based on the expected project design for the new APCr washing process.
 3. Electricity imported from the grid is multiplied by a factor of 2.4 to account for heat losses from thermal generation.

The new APCr washing process will use energy predominantly for the wet milling stage and water treatment. Figure 2-1 provides a breakdown of the expected energy usage for the APCr recovery process and the various stages involved. The overall energy consumption for this additional process is anticipated to be 5,486 MWh.

Figure 2-1: Sankey diagram for overall energy consumption



Overall, Augean have incorporated energy efficiency within the development plans, with system-based optimisation considerations of the following systems that will all be managed through PLC, SCADA and HMI systems:

- Continuous flow is being built into the design of the system, where possible.
- Lighting across the area will be on a timer or will be Passive Infrared (PIR) lighting.
- Motors will be variable speed drive (VSD) motors.
- The plant will be run at optimum design levels, which involves operating at 90% capacity for 90% of the time.
- Motor driven systems will be used, particularly compressed air and pumps at the filter press stage.

Augean are currently exploring the possibility of introducing solar panels to supply energy at the facility. This will likely be implemented as part of future developments at the site.

Appendix C – details the arrangements for energy efficiency in relation to the Waste Treatment BREF and Appendix D – outlines arrangements in relation to the Chemical Waste Appropriate Measures Guidance.

2.3 Efficient use of raw materials and water

The installation maintains a raw materials inventory which is regularly reviewed. Water use is monitored with targets set each year and a monthly review against the targets is undertaken. This will be continued at the facility, to incorporate the new infrastructure and activities.

There are to be a limited number of additional raw materials (See Table 2-3) required as a result of the proposed new APCr washing process that is the subject of this application. These are expected to be minor as the main raw material, APCr, is already accepted at the facility and the addition of this activity is simply a reallocation of this material under a different process. The additional raw materials required are in the form of flocculants / coagulants, as well as acids, to be used in the wastewater treatment process that will support the main activity. There are likely to be small changes in the use of fuel for mobile plant as there will be an additional treatment area to be covered within the overall WRP area.

Annual water consumption from the mains supply is expected to increase, as a result of the new APCr washing process. Total water required per year is expected to increase to approximately 150,000 m³ per year, which will be supplied via both mains supply and water harvesting. Water is a key aspect of the processes to be introduced, and so efficiency measures are to be implemented where possible. The reverse osmosis plant will treat and recover approximately 60% of water to be reused in the process.

To support efficient water consumption, water balancing is managed through PLC, SCADA and HMI systems, with plant HMI recording water usage during process stages. Optimisation extends to the use of wash waters: presses will have automated cleaning cycles to minimise water usage, whilst general plant cleaning will be undertaken via trigger-controlled washing equipment. All wash waters generated will be collected and re-used within the process.

Water capture mechanisms will be in place for capturing washing and yard run-off, which will then be re-used in the APCr washing process. Clean water and dirty water will be kept separate as indicated in Figure 2-2.

Figure 2-2: Plan of clean (blue) and dirty (yellow) areas for water run-off capture





Final wash water will be treated to remove heavy metals and other contaminants. It will then be sent to the RO system to recover as much water as possible for re-use in the process. Concentrated brine then requires disposal. At this stage, investigations are underway (by Augean) to explore further chemical treatment options to reduce the volume. Evaporation methods for recovery have been considered; however, these are currently not energetically or economically viable.

Table 2-2 below shows the expected raw material use for the new APCr washing process.

Specific flocculants and coagulants will be confirmed once the processes are operational, however generic flocculant and coagulant SDS information has been used to support this section.



Table 2-2: Current an estimated future raw material and water use

Material and Composition	Use of Material	Risks	Approximate Annual Usage		Environmental Impact (where known) e.g. degradability, toxicity	Suitable Alternative for those with Significant Impact Potential / Justification
			Current ¹	Future ²		
Water	Conditioning	None	0	150,000 m ³	None	No better alternative – most appropriate material for activity.
Flocculants / coagulants	Wastewater treatment activity	None	0	50 – 100 tonnes	Low environmental hazard. However, care should be taken to not contaminate surface water.	No better alternative – most appropriate material for activity.
Sulphuric acid	Wastewater treatment activity for pH adjustment for neutralisation of aqueous liquids	H290: May be corrosive to metals. H314: Causes severe skin burns and eye damage.	0	1,000 – 2,000 tonnes	Discharge to the environment must be avoided. Should not enter drains.	No better alternative – most appropriate material for activity.
Hydrochloric acid		H290: May be corrosive to metals. H314: Causes sever skin burns and eye damage.	0	1,000 – 2,000 tonnes	Should not enter drains.	No better alternative – most appropriate material for activity.



Material and Composition	Use of Material	Risks	Approximate Annual Usage		Environmental Impact (where known) e.g. degradability, toxicity	Suitable Alternative for those with Significant Impact Potential / Justification
			Current ¹	Future ²		
		H318: Causes serious eye damage. H335: May cause serious respiratory irritation.				
Fuel (diesel)	To fuel mobile plant		25 tonnes	100 tonnes		No better alternative – most appropriate material for activity.

Notes: 1. Current raw material quantities based on 2024 data for the WRP installation which is used as a baseline.
2. Future raw material quantities comprise a best estimate based on the expected APCr washing process.



The estimated data in the table above will be reviewed and updated once the new APCr washing process has been fully implemented and a full year's worth of operational data is available.

Appendix C – details how the efficient use of raw materials and water complies with the Waste Treatment BREF and Appendix D – outlines arrangements in relation to the Chemical Waste Appropriate Measures Guidance.

2.4 Avoidance, recovery and disposal of wastes

The proposed activities at the installation will have an impact on the generation and management of waste at the installation. This relates to the production of hazardous metal filter cake, high-salinity brine and various maintenance wastes. However, the introduction of this APCr treatment will help to minimise waste generation as a whole across the WRP, as it will process a waste that is already accepted at the facility into an EoW product that can be sold and used as an aggregate material. As APCr material is already accepted at the facility, there will not be any anticipated changes in the generation of contaminated packaging arising from the delivery of such materials. A summary of the waste streams generated from the proposed new activities is provided in Table 2-3.



Table 2-3: Waste streams generated from the proposed activities

Waste	Origin	Storage Arrangements	Storage Capacity	Method of Transfer and Recycling and Disposal	Annual Quantity	Justification for Disposal / Improvement Proposed
Hazardous Metal Filter cake	Water treatment process.	RO-RO skip under filter press	20 tonnes	Hazardous landfill disposal	< 600 tonnes per year	Generated from extraction of heavy metals from APCr to allow use as EoW material. Treatment of water required to discharge liquid without harm to the environment. No recovery option / need for lead so Best Overall Environmental Option (BOEO) is secure landfill disposal.
High-Salinity Brine	APCr washing and water treatment processes	Bunded tank	650 m ³	Tanker to third-party discharge facility or re-use in other site processes.	120,000 m ³ per year	Chloride brine has no other uses on site other than in conditioning other waste prior to landfill. No requirement for full volume on site, therefore some volume will require discharge. Potential future improvement process to evaporate water for re-use and recover salts – however dependent on available spare heat from future local projects, otherwise not BOEO.



Waste	Origin	Storage Arrangements	Storage Capacity	Method of Transfer and Recycling and Disposal	Annual Quantity	Justification for Disposal / Improvement Proposed
Maintenance wastes	Repair and maintenance of equipment	IBC / wheelie bins / covered skips	Will be managed by adjacent transfer station	Various, to be managed as per Augean waste management processes.	Expected to be low	Waste generated during standard operations to keep process operational.



There is to be 120,000 m³ of RO concentrate (wastewater) generated per year, as part of the new activities to be introduced on site. This will be tankered off-site for further treatment / disposal. This wastewater (reverse osmosis concentrate) is deemed non-hazardous, based on a 5:1 wash cycle. The expected composition is detailed below in Table 2-4.

Table 2-4: Expected wastewater composition

Parameter	Unit	Minimum	Average	Maximum
Volume	m ³ /day	300	330	360
TDS	mg/l	10,299	48,606	86,281
F	mg/l	10	15	60
Cl	mg/l	8,800	21,500	28,079
Br	mg/l	84	413	731
SO ₄	mg/l	20	50	72
Al	mg/l	0	13	39
As	mg/l	0	0	0
B	mg/l	0	0	0
Ba	mg/l	1	2	3
Ca	mg/l	6,739	11,233	15,628
Cd	mg/l	0	0	0
Co	mg/l	0	0	0
Cr	mg/l	0	0	0.3
Cu	mg/l	0	0	0
Fe	mg/l	0	0	0
Hg	mg/l	0	0	0
K	mg/l	385	4,438	6,619
Li	mg/l	0	1	2
Mg	mg/l	0	2	7

Parameter	Unit	Minimum	Average	Maximum
Mn	mg/l	0	0	0
Mo	mg/l	0	0	1
Na	mg/l	262	6,008	13,422
Ni	mg/l	0	0	0
P	mg/l	0	0	0
Pb	mg/l	0	0	0.3
S	mg/l	604	853	1,271
Sb	mg/l	0	0	0
Se	mg/l	0	0	0
Si	mg/l	0	2	10
Sn	mg/l	0	0	0
Sr	mg/l	6	34	64
Ti	mg/l	0	0	0
V	mg/l	0	0	0
Zn	mg/l	0	0	2

Appendix C – details how the avoidance, recovery and disposal of wastes comply with the Waste Treatment BREF and Appendix D – outlines arrangements in relation to the Chemical Waste Appropriate Measures Guidance.

3. Operations

3.1 Overview

Under the current environmental permit, Port Clarence WRP accepts, handles, treats and recovers various waste types, encompassing both hazardous and non-hazardous waste. APCr is already an accepted waste at the installation. Current operations at the site involve APCr being subject to stabilisation and neutralisation processes for recovery. The proposed APCr wash process will allow for a EoW compliant material to be produced, enabling the material to be used within the construction sector.

3.2 End of waste process

The process (described in Section 3.5) produces a product that can be used as a construction additive, both as a grout / lightweight filling material and as a binder in bound construction materials. In Scotland, the Scottish Environmental Protection Agency (SEPA) has approved the EoW status for the material in Scotland. The Environment Agency have also since approved the EoW status, with constraints attached, detailed in DOW221228/01A which can be found in Appendix E – .

The final material produced is titled 'IAS PFA Alternative'. The required methodology for the production of this material is described in the EoW decision (DOW221228/01A) and this will be aligned with in terms of the Factory Production Control at the facility.

3.3 Waste pre-acceptance, acceptance and tracking procedures

Port Clarence WRP already accepts APCr, via established pre-acceptance and acceptance procedures. As a result of this permit variation, there are to be no changes to these procedures required, as there are no additional wastes that are not accepted at the facility that will be processed through the APCr washing treatment.

3.4 Waste Storage

Storage of Waste arrangements are already established on site at the WRP. These arrangements will be reviewed and updated to include the storage of APCr to be treated within this new APCr washing process, as well as waste arising from the process itself. Incoming APCr will be unloaded directly into receiving storage silos, awaiting conveyance into the conditioning part of the treatment process. RO concentrate that is to be tankered off-site, arising from the wastewater treatment process is to be held in a suitable tank, from which it will be pumped to tankers that will handle dispatch from site. This tank will be fitted with suitable containment measures and bunding.

EoW will be stored in a covered bay, ready for dispatch by road tipper vehicles (loaded uses a loading shovel or a 360 excavator).

3.5 Process description

A process flow diagram is included in Appendix B – , which will support the process description included in this section.

Pre-acceptance checks of the incoming APCr material will be conducted, prior to receipt of material, to determine suitability for the process. As APCr is already accepted at the facility, such pre-acceptance processes are already existing, well-established and in line with BAT. Acceptance procedures will be conducted once APCr material is received on site – again, APCr is already accepted under current activities, so these procedures will be reviewed and updated to account for the new storage silo location and process to be undertaken. The same applies to waste storage procedures already established at the installation. Overall, measures for the pre-acceptance, acceptance and storage of APCr will be in line with established procedures already in place on site, however, incoming material will be assessed against different limits / requirements for this specific route (APCr washing).

Once determined to be suitable, APCr will be delivered to the installation within enclosed powder tankers, directed into the site via the main weighbridge serving current operations at the WRP. Supported by Augean's computerised Waste Management System, inbound loads will be weighed and details checked, before proceeding to unloading bays, which will be located adjacent to APCr storage silos that will be receiving the material. Tanks will discharge raw APCr loads to the storage silo under a completely sealed atmosphere, served by other precautionary measures, to prevent any likelihood of environmental pollution:

- Storage silos will be fitted with a high-level alarm to alert operators during filling processes when the silo reaches capacity.
- High-pressure alarm system and pressure release valve will be installed on the silo to allow for pressure relief as required.
- An abatement system will be installed on the pressure relief valve system, in the form of a jet bag filter (such abatement will replicate and reflect that used at similar release points across the facility).

Such measures prevent spillages or similar incidents from the silo.

APCr is to then be processed through the conditioning plant. The conditioning plant to be installed at the site will be similar to the existing above ground mixers that are already present on the soil treatment pad at the facility. Processes undertaken at the conditioning plant involve the addition of water at a pre-determined ratio, which will initiate physico-chemical reactions that are required for the EoW process. There is an added benefit of the addition of water to the APCr as it provides a means of fugitive dust emission mitigation, via dampening of the material – this is useful when progressing into the subsequent stages.

Using loading shovels the APCr-water mix is transferred to conditioning bays, where it will be stored under weatherproof covering for a five-week period. During this time, material will be moved to adjacent bays, whilst being monitored for water content and temperature. Additional water can be added by spraying the surface of the material, as and when required, as it is moved between bays.

At the end of the five-week conditioning period, material will be tested for compliance with the EoW process and associated limits and will be reprocessed through the conditioning plant in the event of a failure. If the material is deemed suitable, it will be transferred (via loading shovel) to a feed hopper,

which meters and conveys the material to the washing plant. The washing plant is to be located within the building. Water is mixed into the damp APCr material in an approximate ratio of 3:1 water to APCr mix within the wet mill – the purpose of this step is to liberate leaching chemicals within the materials. Via a continuous process in the wash plant, a slurry will be produced, to then be pumped to holding tanks that will provide continuous agitation – the resulting slurry will be stored here. There will be an opportunity for additional water to be introduced to increase the extraction of leachable materials, as required – this will be up to a total mix ratio of 5:1 water to APCr.

From the storage tanks, slurry will be pumped to a plate press to separate the APCr from the wash water. Dewatered APCr is to be dropped from the base of the filter press at the end of each cycle, to then be stored in a covered bay, pending dispatch from the site as an EoW material. Road tipper vehicles will be used for the dispatch process and will be loaded by plant such as a loading shovel or a 360-excavator.

Wash water will be pressed out of the slurry and will flow into a storage tank, where it will be held prior to treatment in the Reverse Osmosis (RO) system. Pre-processing will consist of pH adjustment, for the precipitation of heavy metals (such as lead and zinc), as well as addition of coagulants / flocculants and settling via a lamella clarifier. Resultant settled sludge will be fed into a secondary filter press and will be dewatered, for transfer to the adjacent hazardous landfill (also under Augean operation via a separate permit). Clarified water and water obtained from the filter press will then undergo processing via the RO system. This will remove and concentrate contaminants in the wash water into a retentate, which will be stored in a bunded tank. Contaminants are expected to predominantly be calcium chloride. Clean wash water will be recycled back into the process, reducing the overall requirement for fresh water for APCr washing activities on site. Retentate can be re-used for other on-site processes, such as soil treatment (which would replace freshwater usage), or it may be transported off site (via tanker) for further treatment and processing at an alternative wastewater treatment facility.

The composition of APCr at the various process stages outlined above must comply with various upper limits to aid in achieving EoW status which are subject to agreement with the EA EoW agreement (Appendix E –).

3.6 Potential Future Development

There are possible developments of this process that Augean are currently considering for future advancements. This includes the drying and milling of the EoW filter cake via an undefined drying technology, followed by a pendulum mill. This would produce a dry flowable powder that would be transferred to a dispatch solo and sold as a product. Road-going powder tanks would be utilised for the dispatch. These future developments will be subject to a further permit variation application at the relevant time.

4. Emissions and monitoring

4.1 Point source emissions to air

There will be four new emission points introduced in the new APCr washing plant. These will be associated with the PRVs fitted to each of the raw APCr intake silos, and so under normal operation, there will be no release from these emission points. Release via these emission points will be under abnormal operation only, in the unlikely scenario should high pressure be detected within a silo. Emission points will be suitably abated, with reverse jet bag filtration systems. The location of the emission points will be on the top of each silo, as indicated in drawings included in Appendix F – . The PRVs will be connected to a high-pressure alarm system, which will aid in alerting Auegan staff in the event of high pressure.

4.2 Point source emissions to water

There will be no new point source emission to water from the proposed activities.

Any wastewater (RO concentrate) generated from the APCr washing process that is not reused will be tankered off-site for further treatment / disposal at an appropriate facility. There will be no direct releases to surface water as a result of the proposed activities.

4.3 Emissions of Substances Not Controlled by Emission Limits

4.3.1 Fugitive Emissions to Water

Fugitive emissions to water are reviewed under four headings as follows:

- Sub-surface structures and sumps.
- Surfacing and drainage.
- Bunds / secondary containment.
- Storage areas for IBCs, drums etc.

4.3.1.1 Sub-surface structures and sumps

As part of the sealed drainage infrastructure that will serve the APCr washing plant, enclosed sumps will capture all run-off from yard areas. From 'clean' areas and roof water, water captured in this sump will be pumped to the wastewater holding tank, ready to supply the conditioning process. Run-off from 'dirty' areas will undergo a screening process and oil removal, via an oil / water separator. Solids will be removed via a solids settlement tank, and this water will then be combined with other wastewater in the holding tank, for use in the conditioning plant. This will then be added to the process at the point of water

treatment, to then be reused once treated. The enclosed sump will be included in established maintenance and inspection procedures, to ensure integrity is maintained.

4.3.1.2 Surfacing and drainage

All process areas involved in the APCr washing process will be on impermeable areas, with a sealed drainage system. These areas will be further bunded so that liquids will be contained to provide further protection in the unlikely event of any failure or release of liquid substances. All site surfacing and drainage will be subject to regular site inspections to ensure the integrity of the infrastructure with any defects reported quickly and the appropriate action taken. Through these measures and the specific infrastructure design of the site, there will be no emissions from any surfacing and/or drainage from the proposed new activities at the installation.

As described in earlier sections of this report, run-off from 'clean' and 'dirty' areas of the site will be collected separately, to prevent unnecessary treatment. Drainage from 'dirty' areas will involve run-off being screened and then will be passed through an oil / water separator to remove any oil. A solids settlement tank will also be employed, from which a solids tanker will remove the solids collected. Roof water and the run-off from those 'clean' areas of the site will be collected in a sump to and then combined with the treated run-off from 'dirty' areas, in a wastewater holding tank, ready for use in the conditioning process.

4.3.1.3 Bunds / secondary containment

All process areas will be bunded, preventing any accidental emissions, as well as run-off, from entering the surrounding environment and posing a pollution risk. Due to the nature of operations, comprising maximisation of water re-use, this arrangement will also support the maximisation of this aspect of the process. Therefore, there will be no emissions from bunds / secondary containment from the proposed new activities at the installation.

4.3.1.4 Storage areas for IBCs, drums, etc.

All process areas required for the APCr washing process, including storage areas, will be supported by suitable containment measures, as discussed above, which include impermeable surfaces and appropriate bunding of areas. Any IBCs and drums used on site will be within designated storage areas where they will be located away from plant to reduce the likelihood of accidental damage. Spill kits will also be available on site with personnel receiving suitable training to ensure that any spills are managed suitably and quickly to further reduce the potential for any emissions to the environment. Therefore, there will be no emissions from storage areas from the proposed new activities at the installation.

4.3.2 Dust, mud, litter and pests

Fugitive emissions arising from the APCr washing process in the form of dust are managed via a variety of measures. During unloading of APCr from enclosed powder tankers into the storage silos on site, a completely sealed atmosphere will be applied, so as to prevent emissions. Overfilling will be prevented via the use of a high-level alarm which alerts the tanker driver to stop the filling process when the silo becomes full. The silo will also be fitted with a high-pressure alarm system and pressure vent, which will be filtered by a reverse jet bag filter, so as to avoid any spillage from the silo. Due to the nature of the

APCr, as a solid it can be easily swept up and cleared and will not be mobilised in water. A fugitive emissions management plan is in place for the WRP – this will be reviewed and updated to account for the changes introduced in this permit variation.

4.4 Odour

The processes undertaken on site are not inherently odorous due to the nature of the APCr material to be treated and, therefore, the potential for odour generation is deemed to be low. The proposed changes as part of this permit variation application are not anticipated to have any increased impacts in terms of emissions of odour, due to the nature of the activities and materials that will be required (which will not be decomposition or reaction products).

Further to this, APCr is already accepted at the facility and so introducing the APCr washing process at the WRP is not introducing further materials that could result in odour nuisance. The installation has no record of any odour complaints at the time of this application.

4.5 Noise

4.5.1 Noise Advisory Tool

The requirement for a Noise Impact Assessment (NIA) or Noise Management Plan (NMP) to be developed in support of this environmental permit variation application has been screened out using the Environment Agency's Noise Advisory Tool (NAT), as shown in Figure 4-1.

Through inputting details to the NAT such as the activity type, operational details and distance to nearby sensitive receptors, the NAT concluded that no NIA or NMP would be required.

Where practicable, equipment required for the process will be enclosed or under cover to further reduce any noise generation – this includes the ball mill and filter press equipment. The site is industrial in nature, within a wider industrial area, and so the surrounding environment is subject to various sources of noise – it is not anticipated that the equipment that is to be introduced as part of these changes will generate noise levels greater than those that are already existing, therefore not causing noise-related nuisance. These measures will be incorporated into the installations EMS and operating procedures for the proposed activities.

The WRP also has received no noise complaints in the last two years, which highlights that noise is not currently an issue for nearby receptors, and this is not expected to change as a result of this permit variation. The APCr plant is planned to be within the existing environmental permit boundary, meaning no changes to nearby sensitive receptors. The embankment to the south of the site is also likely to act as an acoustic bund.

Figure 4-1 - Justification provided by the EA's NAT

Version: 1.4

Step 1: To be completed for all applications

Noise Advisory Tool		
Site Name:	Port Clarence Waste Recovery Park	Application Reference:
input details of the site AFTER the variation is complete		
	Select from the drop-down lists	Evidence your decision here
1. Activity Type	Waste recycling transfer/treatment/processing	Ash washing of Air Pollution Control residues (APCr)
2. Activity Containment	External operations with processing and storage	Storage of APCr within silos and under cover at various stages in the process. WRP layout diagrams show the areas that are to be sheltered, which includes most of the processing areas. There is also a very large bund around the site area that will act as an acoustic barrier too.
3. Operation at night	No	Planning permission authorises 24 hour operation of the new activities, however operation will only occur during daytime hours.
4. Operation Size	medium	Annual throughput of up to 60,000 tonnes per annum for the ash washing of APCr
5. Input distance from site to the nearest (or proposed) noise sensitive receptor (m)	> 1000	Closest residential receptor is 1500 m from site boundary (southeast), which is a property on Salisbury Terrace (corner of a residential estate).
6. Residential receptor Location	urban	There are lots of industrial sites and sources of background noise in close proximity to the site's nearest noise receptor.
7. Residential receptor proximity to other major noise source (m) e.g. busy road, other industrial activities, etc.	101-200	Houses are near to other factories and warehouses, and other sources of noise nuisance. This includes a busy main road (A66) and industrial sites located on Nelson Street Industrial Estate, which will be regularly visited by inbound / outbound deliveries and there will be regular vehicular movement on site
The result will automatically update when the values are selected from the drop down menus		
Evaluation	NIA and NMP are not required*	
*The Environment Agency reserves the right to request the submission of an NIA or NMP independent of the outcome of noise advisory tool		

Step 2: Variation applications only

Answer these questions in relation to a variation application only

	Select from the drop-down lists	Evidence your decision here
8. Has a NIA or NMP been previously requested by the EA?	Yes	A Noise Management Plan has previously been developed for the site.
9. Will new noise generating sources/activities be introduced?	Yes	Ash cleaning of APCr will generate noise. There will also be noise associated with delivery of APCr and movement within the facility, including relevant alarm systems.
10. Will annual throughput increase?	0-25%	APCr is already accepted at the facility.
11. Will the time operations occur change?	No	APCr washing plant will be operated within existing operating hours.
12. Will the variation change how activities are enclosed?	Yes, new external operations	New process infrastructure will be enclosed where practicable.
The result will automatically update when the values are selected from the drop down menus		
Evaluation	NIA and NMP are not required*	
*The Environment Agency reserves the right to request the submission of an NIA or NMP independent of the outcome of noise advisory tool		

4.6 Summary

As outlined above, there will be no new emissions from the normal operation of the proposed activities. Appendix C – details how emissions and monitoring comply with the Waste Treatment BREF and Appendix D – outlines arrangements in relation to the Chemical Waste Appropriate Measures Guidance. A full environmental risk assessment (ERA) has been undertaken to support the application for the proposed additional activities in Section 6.

5. Site condition report

5.1 Overview

A Site Condition Report (SCR) was produced at the time of the original permit application for the Port Clarence WRP. This covered the proposed activities at the time of the application and the current condition of the land within the permit boundary of the site.

The original SCR was prepared in accordance with the guidance and templates on how to complete a SCR under EPR (H5)⁵. This guidance outlines the requirements to prepare and maintain a SCR across the lifetime of the permit/site and contains three core sections:

- Sections 1 to 3 – to be completed and submitted with the application (for new applicants).
- Sections 4 to 7 – to be completed during the life of the permit.
- Sections 8 to 10 – to be completed at permit surrender and to be submitted with the permit surrender application.

5.2 Proposed changes

The proposed changes to be made as part of this variation application will require an update to the original SCR. This is due to the proposed additional activities resulting in a new hazardous substance (and associated measures) being produced. This substance is metal filter cake which is generated from the extraction of heavy metals from the APCr recovery process. Other associated hazardous materials will also be used within the wastewater treatment works, notably hydrochloric acid and sulphuric acid. There will also be additional oils and fuels at the site with the new plant required for the process which will be stored in the installations existing storage areas.

To confirm, the proposed variation will see no change to the current site boundary.

5.3 Assessment for hazardous substances

As the proposed variation will involve the production of a new hazardous substance an updated stage 1 to 3 assessment needs to be undertaken.

5.3.1 Stage 1 – Identifying hazardous substances that are currently used, produced or released

A list has been produced below for all hazardous substances dealt within the installation boundary from the new proposed activities. This includes all hazardous substances associated with both IED Annex I activities and directly associated activities which have a technical connection to the activities proposed to be undertaken and which could have effect on soil and/or groundwater pollution.

⁵ <https://www.gov.uk/government/publications/environmental-permitting-h5-site-condition-report>
Permit Variation Supporting Report
Project No.: UK0042762.3116
Augean Treatment Limited

The listed substances for the proposed variation are:

- Metal filter cake – generated from the extraction of heavy metals from the APCr recovery process to allow use as EoW material.
- Hydrochloric acid – used in the new wastewater treatment activity for pH adjustment and neutralisation of aqueous liquids.
- Sulphuric acid – used in the new wastewater treatment activity for pH adjustment and neutralisation of aqueous liquids.
- Oils and fuels – for use in new plant equipment.
- Flocculants / coagulants – to be used in the new wastewater treatment activity to aid solid settlement, these substances may be irritants, due to their nature.
- High salinity brine – as a non-hazardous substance, this will be tankered off site for further treatment / disposal at an appropriate facility.

5.3.2 Stage 2 – Identifying the relevant hazardous substances

The potential pollution risk of the substances identified in Stage 1 has been determined through considering their chemical and physical properties. This information, outlined in Table 5-1 has been used to determine if the substance has the potential to cause pollution of soil and/or groundwater.

Table 5-1: Summary of Pollution Risk

Substance	Physical State	Solubility	Toxicity	Mobility	Persistence	Soil and Groundwater Pollution Potential	Relevant Substance ¹
Metal filter cake	Solid	Insoluble	Toxic to aquatic and soil organisms	Readily absorbed into soil	Resistant to degradation	Potential to pollute soil and groundwater	Yes
Hydrochloric acid	Liquid	Soluble	Toxic to aquatic and soil organisms	Readily absorbed into soil	Degrades when exposed to air	Potential to pollute soil and groundwater	Yes
Sulphuric acid	Liquid	Soluble	Toxic to aquatic organisms	Readily absorbed into soil	Not persistent in the environment	Potential to pollute soil and groundwater	Yes
Flocculants / coagulants	Liquid	Soluble	Irritants, toxic to aquatic organisms	Readily absorbed into soil	Not persistent in the environment	Potential to pollute soil and groundwater	Yes
Oils and fuels	Liquid	Not soluble	Toxic to aquatic organisms	Readily absorbed into soil	Biodegradable	Potential to pollute soil and groundwater	Yes

¹Relevant hazardous substance with pollution potential to soil and/or groundwater

Sources: European Union Chemicals Agency and UK Health Security Agency

5.3.3 Stage 3 – Assessment of site-specific pollution possibility

Each relevant substance identified in Stage 2 has been considered in the context of the site to determine whether circumstances exist which might result in the release of the substance, in sufficient quantities, to represent a pollution risk. This considers the risk of a single emission and the accumulation from multiple emissions.

Table 5-2: Assessment of pollution possibility

Relevant Substance	Amount used/produced annually	Storage Quantities	Pollution Prevention Measures	Pollution Risk Assessment
Metal filter cake	600 tonnes	20 tonnes	<p>A Ro-Ro skip will be located under the filter press to collect the material from the extraction point. This skip/container will be leakproof to ensure all of the material is collected prior to its onward disposal at an appropriate permitted facility. This activity will be undertaken on a further impermeable surface with sealed drainage system minimising any further risk for release to the environment.</p> <p>The process will be controlled in accordance with the sites management system procedures. Site inspections will also be undertaken to check the integrity of the storage container/skip and</p>	Low risk – no additional baseline data required

Relevant Substance	Amount used/produced annually	Storage Quantities	Pollution Prevention Measures	Pollution Risk Assessment
			<p>associated infrastructure. System procedures will record the volumes of materials being collected and this will allow for adequate changeover of containers/skips so that material will not overflow.</p>	
Hydrochloric acid	1,000 to 2,000 litres	1,000 litres	<p>The use of chemicals will be undertaken in accordance with the sites management system procedures. Hydrochloric acid will be stored in IBCs suitable for the storage, handling and carriage of dangerous goods. All chemicals will be appropriately stored and banded with 110% of their capacity and be compliant with CIRIA 'Containment systems for the prevention of pollution: Secondary, Tertiary and other measures for industrial and commercial premises' (C736, 2014). The site and storage area will be on an impermeable surface with sealed drainage system. Spill kits will be available around site in the</p>	Low risk – no additional baseline data required

Relevant Substance	Amount used/produced annually	Storage Quantities	Pollution Prevention Measures	Pollution Risk Assessment
			<p>unlikely event of a spillage and trained site staff will ensure spillages are cleaned up quickly and safely.</p> <p>Regular inspections will be carried out that check for integrity of site surfacing, integrity of mobile plant and processing equipment (including site control measures on preventative maintenance programme).</p>	
Sulphuric acid	1,000 to 2,000 litres	1,000 litres	<p>The use of chemicals will be undertaken in accordance with the sites management system procedures. Sulphuric acid will be stored in IBCs suitable for the storage, handling and carriage of dangerous goods.</p> <p>All chemicals will be appropriately stored and banded with 110% of their capacity and be compliant with CIRIA 'Containment systems for the prevention of pollution: Secondary, Tertiary and other measures for industrial and commercial premises' (C736, 2014).</p>	Low risk – no additional baseline data required

Relevant Substance	Amount used/produced annually	Storage Quantities	Pollution Prevention Measures	Pollution Risk Assessment
			<p>The site and storage area will be on an impermeable surface with sealed drainage system. Spill kits will be available around site in the unlikely event of a spillage and trained site staff will ensure spillages are cleaned up quickly and safely.</p> <p>Regular inspections will be carried out that check for integrity of site surfacing, integrity of mobile plant and processing equipment (including site control measures on preventative maintenance programme).</p>	
Flocculants / coagulants	100 tonnes	10 tonnes	<p>The use of chemicals will be undertaken in accordance with the sites management system procedures.</p> <p>Flocculants and coagulants will be stored in IBCs suitable for the storage, handling and carriage of dangerous goods.</p> <p>All chemicals will be appropriately stored and banded with 110% of their capacity and be compliant with CIRIA 'Containment systems for the prevention of</p>	Low risk – no additional baseline data required

Relevant Substance	Amount used/produced annually	Storage Quantities	Pollution Prevention Measures	Pollution Risk Assessment
			<p>pollution: Secondary, Tertiary and other measures for industrial and commercial premises' (C736, 2014).</p> <p>The site and storage area will be on an impermeable surface with sealed drainage system. Spill kits will be available around site in the unlikely event of a spillage and trained site staff will ensure spillages are cleaned up quickly and safely.</p> <p>Regular inspections will be carried out that check for integrity of site surfacing, integrity of mobile plant and processing equipment (including site control measures on preventative maintenance programme).</p>	
Oils and fuels	1,000 tonnes	20 tonnes	<p>The use of diesel will be undertaken in accordance with the sites management system procedures.</p> <p>All fuels and tanks will be appropriately stored and bunded with 110% of their capacity and be compliant with CIRIA 'Containment systems for the prevention of</p>	Low risk – no additional baseline data required

Relevant Substance	Amount used/produced annually	Storage Quantities	Pollution Prevention Measures	Pollution Risk Assessment
			<p>pollution: Secondary, Tertiary and other measures for industrial and commercial premises' (C736, 2014).</p> <p>The site and storage area will be on an impermeable surface with sealed drainage system. Spill kits will be available around site in the unlikely event of a spillage and trained site staff will ensure spillages are cleaned up quickly and safely.</p> <p>Regular inspections will be carried out that check for integrity of site surfacing, integrity of mobile plant (including site control measures on preventative maintenance programme) and correct storage of fuel.</p>	

The relevant substances identified are not deemed to pose any significant risk to soil and/or groundwater from the proposed activities.

5.4 Updated site condition report

These findings will therefore be updated/added to the SCR upon receipt of the varied permit. A summary of the proposed changes to Section 1 to 3 and part of Section 4 to 7 are outlined below.

5.4.1 Site details

The site details will remain unchanged and the document reference for the SCR will be updated to record the changes undertaken for the proposed variation. This will include an update to the site plans which will be attached to the document and referenced.

5.4.2 Condition of the land at permit issue

The condition of the land at permit issue has not changed and there have been no recorded pollution incidents at the site.

5.4.3 Permitted activities

The permitted activities will be updated to reflect those being applied for as part of this permit application. Directly associated activities / non permitted activities will also be recorded to reflect the proposed activities as part of the permit variation application.

These changes are outlined in Section 1.3.2.

5.4.4 Changes to the activity

Section 4.0 of the SCR will be updated to reflect the new activities proposed as part of this variation discussed within the wider context of this report.

The list of 'dangerous substances' will be updated to reflect the analysis undertaken above for relevant substances. These will be listed within the SCR to ensure that the documentation is up to date.

5.4.5 Measures taken to protect land

As discussed above in previous sections there are various measures in place to protect land. Over the course of the site and permits life, inspection records will be maintained with all findings documented in relation to pollution control measures. Documents will also be retained for maintenance, repair and replacement of pollution prevention measures. This will be so that when the time comes for the permit to be surrendered there will be adequate information available to understand the condition of the land compared to that at the time of the original permit application.

6. Environmental risk assessment

6.1 Overview

This environmental risk assessment (ERA) has been undertaken in accordance with the methodology set out in the Environment Agency guidance 'Risk assessment for your environmental permit' in the GOV.UK website (<https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit>).

The Port Clarence WRP will continue to be operated with an EMS which is to be certified to ISO 14001. This will be reviewed in relation to the changes proposed and updated as necessary, to support the activities that will be occurring at the facility.

The relevant sensitive receptors have been identified in Section 1.1.1.

6.2 Risk matrix

The risk matrix and associated criteria that have been employed throughout this ERA are outlined below in Table 6-1 and Table 6-2.

Table 6-1: Assessment criteria applied

		Criteria		
		Likelihood	Impact	Risk
Rating	Low	Probability of an event occurring is low or the event duration is short term.	Low financial costs (£1,000s). Short term nuisance of duration impact (hours).	Risk may not be noticeable or is reduced by using low amounts of financial or time resources.
	Medium	Probability of an event is likely to happen in a single year, or the event duration may last many months or a few years.	Medium financial costs (£10,000s). Mid-time nuisance of duration impact over a whole day or days.	Risk may be noticeable and financial, or time resources needed might be disruptive to normal operations.
	High	An event is very likely to happen at a regular interval, or the event duration may last for 3 years or greater.	High financial costs (£100,000s). Long term impact of the nuisance or event lasting for whole weeks at a time.	A risk is present that necessitates significant company financial or time resources to manage.



Table 6-2: Risk matrix

	Likelihood		
Impact	Low	Medium	High
Low	<i>Low</i>	<i>Low</i>	<i>Medium</i>
Medium	<i>Low</i>	<i>Medium</i>	<i>High</i>
High	<i>Medium</i>	<i>High</i>	<i>High</i>



6.3 Environmental risk assessment

6.3.1 Emissions to air

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
There will be no emissions to air from the proposed activities.							

6.3.2 Emissions to ground and surface water

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
There will be no emissions to ground and/or surface water from the proposed activities.							

6.3.3 Fugitive emissions

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
Dust from storage silo filling	Planned and Intermittent	Localised air	Air	<u>Procedural Control:</u> APCr will be discharged from enclosed powder tankers into receiving storage silos under a completely sealed atmosphere, with	Low	Medium	Low

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				<p>tankers connected to silos and APCr blown into the silo via pipework. Silos will be fitted with a pressure vent, which is to be filtered by a reverse jet bag filter, to ensure that spillage from the silo is avoided.</p> <p>Silos are also to be fitted with a high-pressure alarm system, to notify of high-pressure.</p> <p><u>Supervisory Control:</u></p> <p>During the filling of the silos, the process will be monitored by Augean employees.</p> <p>Pressure vents and high-pressure alarm systems will be incorporated into Augean's inspection and maintenance procedures and regimes, so as to ensure that integrity of systems</p> <p><u>Corrective Control:</u></p> <p>Maintenance and repairs will be undertaken in the event that a defect</p>			



Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				<p>or deterioration in the new infrastructure is identified.</p> <p>Any spillage from the storage silos will be captured and cleared, as appropriate.</p>			
Dust from movement of material between conditioning bays	Planned and intermittent	Localised air	Air	<p><u>Procedural Control:</u></p> <p>Addition of water to the APCr material in initial stages will prevent fugitive dust emissions from being released. The level of water added works to damp the APCr and thereby prevents dust creation in the following steps.</p> <p>During movement between conditioning bays, throughout the 5-week conditioning period, additional water will be added to the material's surface via a spray, preventing release of fugitive dust emissions.</p> <p>Conditioning bays are sheltered by weatherproof covering, which will prevent the effects of wind and release of fugitive emissions.</p> <p><u>Supervisory Control:</u></p>	Low	Medium	Low

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				<p>Prior to movement between bays, APCr being transferred by loading shovel will be inspected to determine whether additional water is required to be sprayed on top to dampen the material and prevent fugitive emissions.</p> <p><u>Corrective Control:</u></p> <p>Additional water can be added to prevent further fugitive emissions.</p> <p>If any fugitive emissions are identified, clean-up processes will be initiated to clear dust / APCr material.</p>			
Dust and mud arising from vehicular and plant movements within the APCr washing plant	Planned and intermittent	Localised air	Air	<p><u>Procedural Control:</u></p> <p>Fugitive emission control management is in place at the site.</p> <p>Due to the nature of the processes carried out on site, it is not necessary for wheel washing facilities to be provided.</p> <p><u>Supervisory Control:</u></p>	Low	Low	Low

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				<p>Regular housekeeping is undertaken across the site to ensure high standards are maintained.</p> <p><u>Corrective Control:</u></p> <p>Spillages on site surface are cleaned up as soon as practicable, to prevent further spreading via plant / vehicles on site.</p> <p>A road sweeper shall be employed on a periodic basis when deemed necessary.</p>			
Dust and mud arising from vehicular movements entering and exiting the site	Planned and intermittent	Local driveways and site entrances / exits	Falling from vehicle wheels	<p><u>Procedural Control:</u></p> <p>Fugitive emission control management is in place at the site.</p> <p>Due to the nature of the processes carried out on site, it is not necessary for wheel washing facilities to be provided.</p> <p><u>Supervisory Control:</u></p>	Low	Low	Low

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				<p>Regular housekeeping is undertaken across the site to ensure high standards are maintained.</p> <p><u>Corrective Control:</u></p> <p>Spillages on site surface are cleaned up as soon as practicable, to prevent further spreading via plant / vehicles on site.</p> <p>A road sweeper shall be employed on a periodic basis when deemed necessary.</p>			

6.3.4 Accidents

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
Leaks from the new holding equipment, including:	Unplanned and intermittent	Site drainage infrastructure	Across impermeable hardstanding surface	<p><u>Procedural Control:</u></p> <p>All process areas required for the APCr washing process will be supported by impermeable</p>	Low	Low	Low

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
<ul style="list-style-type: none"> ■ Conditioning plant ■ Conditioning bays 				<p>surfaces, with appropriate bunding.</p> <p>Spill kits will be available across the site to treat spillages.</p> <p><u>Supervisory Control:</u></p> <p>Regular site inspections and maintenance regimes that are already well-established at the WRP will be reviewed and extended to incorporate the new infrastructure required for the new process to be introduced. This will ensure that any defects or required repairs are identified in site infrastructure at an early stage, and reparatory measures taken.</p> <p><u>Corrective Control:</u></p> <p>Maintenance and repairs will be undertaken in the event that a defect or deterioration in the new infrastructure is identified.</p> <p>In the event of a leak or spillage, the site's leakage procedure</p>			

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				<p>(outlined in Augean's Emergency Plan) will be initiated in response.</p> <p>Any leak or spillage from the conditioning plant or conditioning bays will be captured and cleared, as appropriate.</p>			
Overfilling of APCr storage silos	Unplanned and intermittent	Site drainage infrastructure	Across impermeable hardstanding surface	<p><u>Procedural Control:</u></p> <p>Enclosed powder tankers delivering APCr to the WRP will unload into the storage silos under a completely sealed atmosphere.</p> <p>The storage silo will be fitted with a high-level alarm, which will be triggered when the silo becomes full, during the filling process. This will alert the tanker driver to stop the filling process, preventing overfilling and subsequent spillages.</p> <p>A high-pressure alarm system and pressure vent will also be installed on the storage silos at</p>	Low	Low	Low



Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				<p>the facility, along with a reverse jet bag filter, helping to ensure that spillage from the silo is avoided.</p> <p><u>Supervisory Control:</u></p> <p>The silo filling process will be carried out under supervision by an Augean member of staff with suitable training and experience.</p> <p>Staff with adequate training in spill response will be on site and will be available to respond in the event of a spill-related incident.</p> <p><u>Corrective Control:</u></p> <p>Augean’s Emergency Plan, specifically the Spillage section, will be initiated in the event of an overfilling incident.</p> <p>Due to the nature of the material being transferred to the silo, the APCr material will be easily swept up and cleared from the</p>			

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				surrounding area, via housekeeping measures.			
Leak from the Reverse Osmosis (RO) System and storage tank	Unplanned and intermittent	Site drainage infrastructure	Across impermeable hardstanding surface	<p><u>Procedural Control:</u></p> <p>All washdown water and yard run-off will be captured and treated via the RO system, for reuse in the APCr washing process. Therefore, any leaks from this system will be captured and reused in the process.</p> <p>All process areas for the new treatment infrastructure will be supported by impermeable surfacing and areas will be bunded.</p> <p><u>Supervisory Control:</u></p> <p>Regular site inspections and maintenance regimes that are already well-established at the WRP will be reviewed and extended to incorporate the new infrastructure required for the new process to be introduced. This will ensure that any defects</p>	Low	Low	Low



Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				<p>or required repairs are identified in site infrastructure at an early stage, and reparatory measures taken.</p> <p><u>Corrective Control:</u></p> <p>Maintenance and repairs will be undertaken in the event that a defect or deterioration in the new infrastructure is identified.</p> <p>In the event of a leak or spillage, the site's leakage procedure (outlined in Augean's Emergency Plan) will be initiated in response.</p> <p>Any leak from the RO system and supporting storage tanks will be captured and reused in the treatment process.</p>			
Flooding	Unplanned and intermittent	Site drainage and nearby receptors	Flood waters	<p><u>Procedural Control:</u></p> <p>The new process will be conducted within the existing environmental permit boundary,</p>	Low	Medium	Low

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				<p>meaning there are no changes to the flood risks posed.</p> <p>Suitable containers will be used to support the new APCr washing process.</p> <p>Staff are already trained and experienced in implementation of the management system, which includes flood risk management.</p> <p>A maximum amount of waste associated with the new process will be stored on site, to restrict the risk of contamination.</p> <p><u>Supervisory Control:</u></p> <p>Regular inspection and maintenance of infrastructure and drainage systems will be conducted to ensure the structural integrity.</p> <p>The site has been assessed to be within a Flood Zone 1, but there is a small risk from surface water. Signing up to the EA's</p>			

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				<p>flood warning system will be considered.</p> <p><u>Corrective Control:</u></p> <p>An Emergency Plan is already established at the facility that details response to flood-related incidents.</p> <p>Restorative action will be taken following a flooding event to ensure structural integrity is maintained.</p> <p>Relevant authorities will be informed.</p>			
Fire	Unplanned and intermittent	Nearby sensitive receptors	Air transport of smoke / fumes	<p><u>Procedural Control:</u></p> <p>The site has an established management system that includes procedures for the management of fires.</p> <p>Staff are already trained and experienced in implementation</p>	Low	Medium	Low

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				<p>of the management system, which includes fire management.</p> <p>APCr material is not combustible and therefore does not pose an additional fire risk considerations do not need to be made in relation to the new APCr washing process at the WRP.</p> <p>APCr is also already accepted at the site, meaning risks are already accounted for.</p> <p>Due to the nature of the site, the WRP already have an existing fire prevention plan implemented. However, due to the nature of the waste being processed (APCr) and that it is not combustible, this is not relevant to the handling and storage of APCr.</p> <p>The new process will be conducted within the existing environmental permit boundary, meaning there are no changes to the risks posed to surrounding</p>			



Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				<p>nearby receptors in terms of distance.</p> <p><u>Supervisory Control:</u></p> <p>Various fire detection systems are implemented across the WRP as part of current operations. These measures will be extended to cover the new APCr washing plant.</p> <p>Site security infrastructure is included in routine inspection and maintenance procedures to maintain integrity.</p> <p><u>Corrective Control:</u></p> <p>In response to a fire-related incident, the arrangements outlined in site's Emergency Plan will be adhered to as this details how to deal with a fire.</p> <p>Monitoring systems linked to suppression systems will encompass the new APCr washing process area.</p>			

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				Fires will be reported to the EA in accordance with the requirements in the environmental permit.			
Arson and Vandalism	Unplanned and intermittent	Nearby sensitive receptors	Air transport of smoke / fumes or damage to key infrastructure	<p><u>Procedural Control:</u></p> <p>The site has an established management system that includes site security measures.</p> <p>Staff are already trained and experienced in implementation of the management system, which includes fire management.</p> <p>APCr is already accepted at the site, meaning risks are already accounted for.</p> <p>Various measures are already implemented at the facility to prevent arson and vandalism, which will remain unchanged by the new process being introduced.</p> <p>The new process will be conducted within the existing environmental permit boundary,</p>	Low	Medium	Low

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				<p>meaning there are no changes to the risks posed to surrounding nearby receptors in terms of distance. The new process will be within a bunded area, supported by an impermeable hardstanding surface and sealed drainage.</p> <p><u>Supervisory Control:</u></p> <p>Security measures are established at the facility to prevent trespassers – these arrangements are not expected to change as a result of the changes to be introduced at the site.</p> <p><u>Corrective Control:</u></p> <p>A coordinated response will be carried out in line with arrangements detailed in the Emergency Plan that is already established at the site.</p> <p>Monitoring systems linked to suppression systems will</p>			

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				<p>encompass the new APCr washing process area.</p> <p>Fires will be reported to the EA in accordance with the requirements in the environmental permit.</p>			

6.3.5 Noise and vibration

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
Vehicular movement during delivery of APCr and removal of EoW product	Planned and intermittent	Sensitive receptors (distance of > 1000 m to nearest residential receptor)	Soundwaves	<p><u>Procedural Control:</u></p> <p>There is a WRP-wide speed limit of 5 mph imposed, to prevent unnecessary noise generated from vehicular movements on site.</p> <p>There is already vehicular movement across the site, and it is not expected that the new APCr washing process will result in a significant increase in the noise generated from vehicular movement as a result.</p>	Medium	Low	Low

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				<p>The distance to the nearest receptors is significant (> 1000 m), with the nearest receptor located in an area near to other noise-generating sources.</p> <p>The surrounding area is used for industrial purposes that are also noise-generating.</p> <p>Earthen bund acts as an acoustic barrier to the receptors to the south of the site.</p> <p><u>Supervisory Control:</u></p> <p>Existing noise monitoring arrangements will encompass the new APCr washing plant.</p> <p><u>Corrective Control:</u></p> <p>In the event that a noise complaint is received, the site's complaints procedure will be adhered to. Records of complaints will be maintained, as well as any investigation and corrective action taken.</p>			

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
Vehicular movement for transferring of materials across the plant	Planned and intermittent	Sensitive receptors (distance of > 1000 m to nearest residential receptor)	Soundwaves	<p><u>Procedural Control:</u></p> <p>There is a WRP-wide speed limit of 5 mph imposed, to prevent unnecessary noise generated from vehicular movements on site.</p> <p>There is already vehicular movement across the site, and it is not expected that the new APCr washing process will result in a significant increase in the noise generated from vehicular movement as a result.</p> <p>The distance to the nearest receptor is significant (> 1000 m), with the nearest receptor located in an area near to other noise-generating sources.</p> <p>The surrounding area is used for industrial purposes that are also noise-generating.</p> <p>Earthen bund acts as an acoustic barrier to the receptors to the south of the site.</p>	Medium	Low	Low

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				<p><u>Supervisory Control:</u></p> <p>Regular inspection and maintenance of vehicles used on site will be carried out, to prevent any defects causing unnecessary noise levels.</p> <p>Existing noise monitoring arrangements will encompass the new APCr washing plant.</p> <p><u>Corrective Control:</u></p> <p>In the event that a noise complaint is received, the site's complaints procedure will be adhered to. Records of complaints will be maintained, as well as any investigation and corrective action taken.</p>			
Processing equipment noise from operations: Pumps, air compressors and blowers,	Planned and continuous	Sensitive receptors (distance of > 1000 m to nearest	Soundwaves	<p><u>Procedural Control:</u></p> <p>Much of the equipment will be enclosed, offering a level of acoustic barrier.</p> <p>Estimated noise levels that will be generated by the equipment used</p>	Low	Low	Low



Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
hydraulic filter press system, ball mill, and various other systems are expected to be the major noise-generating equipment involved in the new APCr washing process		residential receptor)		<p>for the new APCr washing plant are not expected to significantly exceed existing noise levels generated at the WRP.</p> <p>The distance to the nearest receptor is significant (> 1000 m), with the nearest receptor located in an area near to other noise-generating sources.</p> <p>The surrounding area is used for industrial purposes that are also noise-generating.</p> <p>Earthen bund acts as an acoustic barrier to the receptors to the south of the site.</p> <p><u>Supervisory Control:</u></p> <p>Regular inspection and maintenance of equipment used on site will be carried out, to prevent any defects causing unnecessary noise levels.</p>			

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
				<p>Existing noise monitoring arrangements will encompass the new APCr washing plant.</p> <p><u>Corrective Control:</u></p> <p>In the event that a noise complaint is received, the site's complaints procedure will be adhered to. Records of complaints will be maintained, as well as any investigation and corrective action taken.</p>			

6.3.6 Odour

Hazard	Scenario	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Risk Rating
There will be no odorous emissions from the proposed activities.							



6.4 Summary

Due to the nature of the changes being introduced at the Port Clarence WRP, it is not anticipated that the proposed activities will pose any significant environmental risk with the appropriate management techniques in place.

Particularly as the installation is operational and APCr is already handled on site, the addition of the new APCr washing plant is not anticipated to pose any further significant to nearby sensitive receptors of the WRP, as detailed in the ERA above. Suitable mitigation measures are embedded into plans for the new process to prevent any impacts relating to the various stages of the process.



Appendices



Appendix A – EPR Application Forms

Application for an environmental permit

Part A – About you



You will need to complete this part of the application form if you are applying:

- for a new permit
- to vary (change) an existing permit
- to surrender your permit
- to transfer an existing permit to yourself

Visit our website to check this is the latest version of the form: <https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-a-about-you>.

Please read through the form before completing it. We expect it will take less than 1 hour to complete if you have all the necessary information available.

The form can be:

1. Saved onto a computer and then filled in.

We recommend you use an Adobe Acrobat product to complete the form. You may not be able to complete the form using different software, such as a PDF reader built into your internet browser.

2. Printed off and filled in by hand. Please write clearly in the answer spaces.

Contents

Section 1: About you

Section 2: Applications from an individual

Section 3: Applications from groups of individuals

Section 4: Applications from public bodies or public corporations

Section 5: Applications from government departments

Section 6: Applications from registered companies, limited liability partnerships and other corporate bodies

Section 7: Contact details

Section 8: How to contact us

Section 9: Where to send your application

Section 10: Feedback

Appendix 1: Date of birth information for installation and waste activities (applications for a new permit or transferring a permit and variations to a waste activity) only

Section 1: About you

About you

Tick the box that describes you as the applicant.

- An individual. Now go to **section 2**.
- A group of individuals. Now go to **section 3**.
- A public body or public corporation. Now go to **section 4**.
- A government department. Now go to **section 5**.
- A registered company, limited liability partnerships or other incorporated body. Now go to **section 6**.

To apply, you must be the legal operator of the activity or facility. See: <https://www.gov.uk/guidance/legal-operator-and-competence-requirements-environmental-permits#what-a-legal-operator-is>

Section 2: Applications from an individual

2.1 Name of applicant

Title (optional)

First name

Last name

2.2 Address of applicant

Address

Postcode

Use a business address where possible. Otherwise use a personal address. Individuals based overseas must provide an address for service in the UK.

Now go to **section 7: Contact details**

Section 3: Applications from groups of individuals

Examples of groups of individuals include:

- individuals acting jointly
- individuals that are partners in a general or limited partnership (but not a limited liability partnership)
- unincorporated charities, trusts and associations, (unless recognised as a legal person)

3.1 Trading or organisation name (if any)

Note: we can only issue and transfer permits to named individuals and not to trading or organisation names

3.2 Organisation type

For example, individuals acting jointly (e.g. a club), general partnership, unincorporated charity

3.3 Charity Commission registration number (if any)

Some individuals or groups of individuals with recognised charitable status are entitled to reduced permit fees for certain water discharge activities. We need the Charity Commission registration number to check if this applies to this application.

3.3 Companies House or Limited Liability Partnership number

3.4 Names and addresses of individuals

Provide the names and addresses of all individuals acting jointly, or in a general or limited partnership. Enter the name and address of the first individual. Provide a continuation sheet for all remaining individuals.

For corporate partners in a general or limited partnership, provide the company name and registration number on the continuation sheet.

For unincorporated trusts, charities and associations, provide the name and address of the nominated representative who will hold the permit in the organisation's name and all individuals that form the governing body, for example trustees. Use a continuation sheet as necessary.

Section 3: Applications from groups of individuals, continued

3.4a Name of first individual

Title (optional)

First name

Last name

3.4b Address of first individual

Address

Postcode

Use a business address where possible. Otherwise use a personal address. Individuals based overseas must provide an address for service in the UK.

3.4c Continuation sheet

Document reference of continuation sheet (if any):

Now go to **section 7: Contact details**

Section 4: Applications from public bodies or public corporations

4.1 Name of public body or corporation

4.2 Type of public body or corporation

For example, local government body, executive agency, non-departmental public body

4.3 Charity Commission number (if any)

Section 4: Applications from public bodies or public corporations, continued

4.4 Address of public body or corporation

Address

Postcode

Now go to [section 7: Contact details](#)

Section 5: Applications from government departments

5.1 Title of Secretary of State for relevant department

Title

For example, Secretary of State for Environment, Food and Rural Affairs

5.2 Address of the government department

Address

Postcode

Now go to [section 7: Contact details](#)

Section 6: Applications from registered companies, limited liability partnerships and other corporate bodies

6.1 Name of company, limited liability partnership or other incorporated body

Augean Treatment Limited

6.2 Type of incorporated body

Private limited company

For example, private limited company, public limited company, limited liability partnership, incorporated society, charitable incorporated organisation or community interest company

6.3 Companies House registration number (if any)

04062656

6.4 Charity Commission number (if any)

6.5 Additional information if not registered with Companies House or The Charity Commission

If you are not registered with Companies House or The Charity Commission, supply:

- evidence that your company or corporate body is a legal entity
- a description of how you will be the legal operator if you are an overseas company without a UK presence.

This does not apply to variations or surrender applications.

Document reference for evidence/description:

Evidence of legal entity could, for example, include:

- a copy of your Certificate of Incorporation for companies.
- a copy of your Memorandum and Articles of Association for incorporated charities and trusts

Section 6: Applications from registered companies, limited liability partnerships and other corporate bodies, continued

6.6 Principal address or Registered Office of registered company, limited liability partnership or other incorporated body

Address

4 Rudgate Court
Walton
Wetherby
West Yorkshire

Postcode

LS23 7BF

For registered companies and limited liability partnerships this is the office address registered with Companies House. For other incorporated bodies use your principal business address or the address registered with The Charity Commission.

6.7 Main business address of registered company, limited liability partnerships or other incorporated body

Address

4 Rudgate Court
Walton
Wetherby
West Yorkshire

Postcode

LS23 7BF

Your main UK business address is required only if your principal or registered office address is overseas.

Now go to **[section 7: Contact details](#)**

Section 7: Contact details

7.1 Application contact

Provide the details of someone we can contact about your application. The person must have the authority to act on your behalf.

Title (optional)

Mr

First name

Peter

Last name

Oldfield

Position

Head of Planning and Permitting

Address

4 Rudgate Court
Walton
Wetherby
West Yorkshire

Postcode

LS23 7BF

Phone number

07920231703

Email

peteroldfield@augean.co.uk

- Tick if you would like all general communication about this application sent to the above email address.

7.2 Contact for receipt of official documents

This question does not apply to applications from individuals acting jointly

Provide the details of someone we can send official documents to, such as notices and copies of permits.

For companies this must be a company secretary, clerk or a director.

For partnerships, this must be a person with control or management of the partnership.

- Tick if the contact is the same as in question 7.1 (application contact). Otherwise complete the details below.

Section 7: Contact details, continued

Title (optional)

First name

Last name

Position

Email

Telephone number

7.3 Operational contact

This is optional for variations and surrenders. We use this information to help us know who to contact about operations at the site, returns and reporting.

Contact details are the same as question 7.1 (application contact)

Contact details are the same as question 7.2 (contact for receipt of official documents)

Otherwise complete the details below.

Title (optional)

Mr _____

First name

Steve _____

Last name

Craggs _____

Address

Augean Waste Recovery Park
Off Hunstaman Drive
Stockton on Tees

Postcode

TS2 1UE _____

Phone number

07825603478 _____

Section 7: Contact details, continued

Email

steve.craggs@augean.co.uk

7.4 Billing contact

Provide a billing contact where we can send invoices, such as the annual subsistence charge

- Contact details are the same as question 7.1 (application contact)
- Contact details are the same as question 7.2 (contact for receipt of official documents)
- Contact details are the same as question 7.3 (operational contact)

Otherwise complete the details below.

Title (optional)

First name

Last name

Position

Address

4 Rudgate Court
Walton
Wetherby
West Yorkshire

Postcode

LS23 7BF

Phone number

Email

supplierinvoices@augean.co.uk

Now fill in [Appendix 1](#) if you are applying for a new permit or transferring a permit for an installation or waste activity.

This does not apply to applications from public bodies, statutory corporations or government departments.

Section 8: How to contact us

If you have difficulty filling in this form, please contact the person who sent it to you or contact us as shown below.

General enquiries: 03708 506 506 (Monday to Friday, 8am to 6pm)

Textphone: 03702 422 549 (Monday to Friday, 8am to 6pm)

Email: enquiries@environment-agency.gov.uk

Website: www.gov.uk/government/organisations/environment-agency

If you are happy with our service, please tell us. It helps us to identify good practice and encourages our staff. If you're not happy with our service, please tell us how we can improve it. More information on how to do this is available at: www.gov.uk/government/organisations/environment-agency/about/complaints-procedure

Please tell us if you need information in a different language or format (for example, in large print) so we can keep in touch with you more easily.

Section 9: Where to send your application

Send one electronic copy of your completed application via email to:

- PSC-WaterQuality@environment-agency.gov.uk for water discharge activities
- PSC@environment-agency.gov.uk for waste or installation activities
- flood.permitting@environment-agency.gov.uk for flood risk activities

Alternatively send one paper copy of your application to:

Integrated Permitting Services
Environment Agency
Quadrant 2
99 Parkway Avenue
Parkway Business Park
Sheffield
S9 4WF

Section 10: Feedback

We want to make our forms easy to fill in and easy to understand. Please use the space below to give us any comments that you may have about this form. (You don't have to answer this part of the form, but it will help us improve our forms if you do.)

How long did it take you to fill in this form?

We will use your feedback to improve our form. Would you like a reply to your feedback?

- Yes please
- No thank you

Appendix 1: Date of birth information for installation and waste activities (applications for a new permit or transferring a permit and variations to a waste activity) only

This appendix applies to installation and waste operation activities. Only complete if you are applying for a new permit or to transfer an existing one. This does not apply to applications from public bodies, public corporations and government departments

Dates of birth information in this appendix will not be put onto our Public Register

1 Are you applying as an individual; group of individuals; or a registered company, Limited liability partnership or other incorporated body?

- An individual. Now go to 2.
- A group of individuals. Now go to 3.
- A registered company, limited liability partnership or other incorporated body. Now go to 4.

2 Applications from an individual

Title (optional)

First name

Last name

Date of birth (DD/MM/YY)

3 Applications from a group of individuals

Provide the names and dates of birth of all individuals acting jointly, or in a general or limited partnership.

For unincorporated trusts, charities and associations provide the name and date of birth of all individuals that are part of the group's controlling or guiding mind. For example:

- trustees
- chairperson
- treasurer
- secretary
- or a person with a similar position

Provide a continuation sheet where necessary.

First individual

Title (optional)

First name

Last name

Date of birth (DD/MM/YY)

Second individual

Title (optional)

First name

Last name

Date of birth (DD/MM/YY)

Third individual

Title (optional)

First name

Last name

Date of birth (DD/MM/YY)

Fourth individual

Title (optional)

First name

Last name

Date of birth (DD/MM/YY)

Continuation sheet for additional individuals or corporation

Document reference of continuation sheet (if any):

4 Applications from registered companies, limited liability partnership or other incorporated bodies

For registered companies provide the names and dates of birth of all directors and any company secretary.

For limited liability partnerships provide the names and dates of birth of all partners.

For other incorporated bodies provide the name and date of birth of all individuals that are part of the body's controlling or guiding mind. For example:

- trustees
- chairperson
- treasurer
- secretary
- or a person with a similar position

Use a continuation sheet where necessary.

Provide the company name and registration number on a continuation sheet for any corporate:

- directors
- company secretaries
- partners

First person

Title (optional)

First name

Last name

Position

Date of birth (DD/MM/YY)

Second person

Title (optional)

First name

Last name

Position

Date of birth (DD/MM/YY)

Third person

Title (optional)

First name

Last name

Position

Date of birth (DD/MM/YY)

Fourth person

Title (optional)

First name

Last name

Position

Date of birth (DD/MM/YY)

Continuation sheet for additional people

Document reference of continuation sheet (if any):

Application & Guidance for an environmental permit

Part C2 – General – varying a bespoke permit



Environment
Agency

Use this form if you are applying to make a non-administrative variation (change) to the conditions or any other part of your permit.

In addition to this form, you will also need to complete:

- **Part A: about you** <https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-a-about-you>
- **Part F1: charges and declarations** <https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-f1-opra-charges-declarations>

You will also need to complete one or more additional part C forms, depending on your proposed change:

- **Part C3: vary a bespoke installation permit** <https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-c3-varying-a-bespoke-installation-permit>
- **Part C4: varying a bespoke waste operation permit** <https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-c4-varying-a-bespoke-waste-operation-permit>
- **Part C5: vary a permit to a mining waste permit, or vary a bespoke mining waste permit** https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/582774/LIT_6785.pdf
- **Part C6: vary a water discharge activity, groundwater activity, or point source emission to water from an installation** https://assets.publishing.service.gov.uk/media/66743838d427ab249955cef2/Part_C6_vary_a_bespoke_water_discharge_activity_and_groundwater_point_source_environmental_permit.pdf
- **Part C7: vary a bespoke groundwater permit to discharge used sheep dip, waste pesticide washing or other waste substances** <https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-c7-varying-a-bespoke-groundwater-permit>

If you are not changing to or adding a different facility type, the additional Part C form will depend on your permitted facility type. For example, if you are proposing to change the conditions of an installation permit, the additional form you need to complete is Part C3.

If you are changing to or adding a different facility type, the additional form you complete will depend on the facility you are changing to or adding.

Some examples are given below:

- Waste operation changing to an installation – if your changes mean that your existing waste operation becomes an installation you will need to fill in **Part C3: vary a bespoke installation permit** <https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-c3-varying-a-bespoke-installation-permit>
- Installation changing to a waste operation – if your changes mean that your existing installation becomes a waste operation you will need to fill in **Part C4: varying a bespoke waste operation permit** https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/928388/Application-for-environmental-permit-Part-C4-varying-a-bespoke-waste-operation-permit.pdf

- Change to add a waste operation to an installation – if you are applying to add a waste operation to your existing installation you will need to complete application form **Part C4: varying a bespoke waste operation permit** https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/928388/Application-for-environmental-permit-Part-C4-varying-a-bespoke-waste-operation-permit.pdf
- Change to add an installation to a waste operation – if you are applying to add an installation to your existing waste operation you will need to complete application for **Part C3: vary a bespoke installation permit** <https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-c3-varying-a-bespoke-installation-permit>
- Change to add an inert mining waste operation – if you have an existing permit for a water discharge activity that is integral to the mining waste operation and you wish to vary this permit by adding the requirements for an inert mining waste operation, complete forms Part A, C1 and F1. Please note that we will issue a bespoke permit, but it will resemble the standard rules for mining waste as closely as possible but will not technically be standard rules permit.
- Changing from a standard rule to a bespoke permit – the additional Part C form will depend on the bespoke facility type you are changing to. For example, if you are changing to a bespoke waste operation permit, you will need to complete the **Part C4 form** https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/928388/Application-for-environmental-permit-Part-C4-varying-a-bespoke-waste-operation-permit.pdf
- Change to convert to or add a standard facility – to convert your existing permit to a standard permit or add a standard facility, do not complete this part of the form, but see: **Part C1: vary a standard facilities permit** https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/928394/Application-Part-C1-varying-a-permit-to-change-to-or-add-a-standard-facility.pdf

To make an administrative change to your permit, do not complete this form. Instead see: **Part C0.5 administrative change to a standard or bespoke permit** <https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-c05-administrative-variation-of-a-standard-or-bespoke-permit>

To vary (change) your intensive farming permit, do not complete this form. Instead use: <https://www.gov.uk/government/publications/application-to-vary-an-environmental-permit-part-c3.5>

To vary (change) your medium combustion plant/specified generator permit, do not complete this form. Instead see: <https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-c2.5-vary-to-add-a-new-mcpsg-or-change-an-existing-mcp-or-sg-permit>

You only need to give us details in this application for the parts of the permit that will be affected (for example, if you are adding a new facility or changing an existing one).

You do not need to resend any information from your original permit application if it is not affected by your proposed changes.

Please check that this is the latest version of **Part C2 form**: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/928047/Application-for-a-permit-Part-C2-general-varying-a-bespoke-permit.pdf

This form can be:

- Saved onto a computer then filled in. We recommend you use an Adobe Acrobat product to complete the form. You may not be able to complete the form using different software, such as a PDF reader built into your internet browser.
- Printed off and filled in by hand. Please write clearly in the answer spaces.

Contents

- 1 About the permit**
- 2 About your proposed changes**
- 3 Your ability as an operator**
- 4 Environmental risk assessment**
- 5 Site condition report**
- 6 Other supporting information**
- 7 Consultation**
- 8 How to contact us**

Appendix 1 – Low impact installation checklist

Appendix 2 – Date of birth information for Relevant offences and/or Technical competence questions only

Appendix 3 – Example site plan

1 About the permit

1a Have you spoken to the Environment Agency already about this application?

No

Yes Provide your pre-application reference number. For further information on pre-application advice see **Get advice before you apply for an environmental permit** <https://www.gov.uk/guidance/get-advice-before-you-apply-for-an-environmental-permit>

Pre-application reference number

Reference for the extra documents

Supporting Report Section 1.3.3

1b If we have agreed you can send application information in stages

Provide your proposed timetable giving the dates of when you will submit each piece of information. For further information please see the guidance on **Send environmental permit application information in stages** <https://www.gov.uk/guidance/send-environmental-permit-application-information-in-stages>

Timetable document reference

1c Permit number

What is the permit number that this application relates to?

EPR/YP3234XR

This is the permit number starting with 'EPR' and can be found on your subsistence invoice, for example 'EPR/AB1234CD'

1d Site details (excludes mobile plant)

What is the site name, address and postcode?

Site name

Port Clarence Waste Recovery Park

Address

Port Clarence Landfill Site
Off Huntsman Drive
Stockton on Tees

Postcode

TS2 1UE

1 About the permit, continued

National grid reference for the centre of the site

NZ5180021900

Provide the 12-digit Ordnance Survey national grid reference for the centre of the site: for example, ST12345 67890.

There are several online resources available that can help find the grid reference. For example go to the Ordnance Survey website at <https://explore.osmaps.com/?lat=51.776100&lon=-1.894300&zoom=7.0000&style=Standard&type=2d>, locate and right click on the centre of the site.

2 About your proposed changes

2a Type of variation

What type of variation are you applying for? For examples of the different variation types, see our ‘Charging Scheme Guidance’ <https://www.gov.uk/government/publications/environmental-permitting-charges-guidance/environmental-permitting-charges-guidance#varying-a-permit-charge>.

- Minor variation
- Normal variation
- Substantial variation

2b Changes or additions to existing activities

2b.1 Provide a summary of the changes or additions you want to make to each activity, include details of any changes to discharge points or site boundaries.

2b.2 Provide further details of your proposed changes or additions in a separate document

It is the intention that operations at the Waste Recovery Park (WRP) are to be expanded to include a new activity comprising ash washing of air pollution control residues (APCr), at a capacity of 60,000 tonnes per annum. APCr is currently already accepted at the facility as a permitted waste type. However, the proposed new process (ash washing) will enable an End of Waste (EoW) product (aggregate substitute in construction materials) to be produced, therefore reducing the need for raw materials. This new process will encompass installation of additional infrastructure required for the various stages of the APCr treatment activity, to be situated in the southern area of the current WRP site, within the existing permit boundary.

Document reference of the detailed changes or additions

Supporting Report Section 1.2

2 About your proposed changes, continued

2b3 Do you want to remove an activity from your permit?

No

Yes Enter the activity that you are applying to remove in the text box below.

2c Consolidate (combine) two or more permits into one

If you have more than one permit on the same site you can apply to combine them into a single permit.

We will combine the existing permits into a single replacement permit. Where we agree to combine the permits, old style permit conditions will be replaced with modern ones that deliver an equivalent standard. An existing condition may be used if it does not have a modern equivalent.

We may require additional information from you, for example, about your management system.

It is advisable to obtain pre-application advice before you apply to combine your permits. See <https://www.gov.uk/guidance/get-advice-before-you-apply-for-an-environmental-permit>

Note: You will need to pay a variation charge for each permit being consolidated. See the ‘Consolidate permits through variations’ section of our Charging Scheme Guidance <https://www.gov.uk/government/publications/environmental-permitting-charges-guidance/environmental-permitting-charges-guidance#consolidate-2-or-more-permits-into-1>.

Do you want to combine two or more permits into one?

Yes – list all the permit numbers you want to combine in Table 1 below.

Table 1 – Permit numbers

No – **go to question 2d**

2 About your proposed changes, continued

2d Consolidate (update) a single permit

We will usually issue a new, updated permit whenever variations are made. If your permit has old style conditions we will usually replace them with modern ones that deliver an equivalent standard. An existing condition may be used if it does not have a modern equivalent.

We do this updating as a regulator initiated variation, so it is not something you need to apply for. If you do not want us to do this, tick the box in 2d.1 below and tell us why.

2d.1

I do not want my permit updated with modern conditions.

Explain your reasons below:

Sometimes we will be unable to update old style conditions as a regulator initiated variation. For example, where the work is disproportionate to the type of variation applied for.

You can still apply to consolidate and update your old-style conditions, but this may incur an additional charge. See the 'Consolidate permits through variations' section of our Charging Scheme Guidance <https://www.gov.uk/government/publications/environmental-permitting-charges-guidance/environmental-permitting-charges-guidance#consolidate-a-single-permit>. You will need to include this as part of your overall application charge.

It is advisable to obtain pre-application advice before you apply to update and modernise your permit. See <https://www.gov.uk/guidance/get-advice-before-you-apply-for-an-environmental-permit>

2d.2

I am applying to update and modernise my permit.

2e Low impact installations (installations only)

This applies to low-risk installation activities only. If this is not applicable, answer 'No' go straight to **section 3** on the application form.

Read the low impact installation guidance in **appendix 1** to check whether your installations fit the criteria. You must tell us how you meet the criteria in a separate document, giving the document reference in this section.

You must complete the low installation checklist in **appendix 1**. Tick the box to confirm you have filled it in.

2 About your proposed changes, continued

2e.1 Will the changes mean the facility qualifies as a low impact installation?

- No Now go to section 3
- Yes If yes, tell us how you meet the low impact installation criteria (see the guidance notes in **Appendix 1**)

Document reference

- Tick the box to confirm you have filled in the low impact installation checklist in Appendix 1 for each regulated facility

3 Your ability as an operator

If you are applying to add waste installations or waste operations (relevant waste operations) to a permit that has not previously had them, you need to fill in all of section 3. Otherwise, complete the relevant questions as indicated by the accompanying guidance.

Relevant waste operations are one or both of the following:

- A waste operation (not carried on at an installation or by means of a Part B mobile plant).
- A specified waste management activity (certain installations carrying out waste management activities).

For further details refer to <https://www.legislation.gov.uk/uksi/2018/1227/regulation/4/made>

When deciding such applications we consider whether you will be competent operator. We look at any unspent relevant convictions; your technical ability; financial competence; and check that you have a management system.

3a Convictions for any relevant offences

This question applies to relevant waste operations only. Complete the question if you are applying to add a relevant waste operation to a permit that has not had one before.

It does not apply to applications from public bodies or government departments.

Relevant convictions are explained at: <https://www.gov.uk/government/publications/relevant-conviction-guidance-for-permit-applications-for-waste-activities-and-installations-only>

Do you, or any other relevant person, have any unspent convictions for any relevant offence?

- No Now go to **question 3b**
- Yes Please give details below

3 Your ability as an operator, continued

Name of the relevant person

Title (Mr, Mrs, Miss and so on)

First name

Last name

Position held at the time of the offence

Name of the court where the case was dealt with

Date of the conviction (DD/MM/YYYY)

Offence and penalty set

Date any appeal against the conviction will be heard (DD/MM/YYYY)

If necessary, use a separate sheet to give us details of other relevant offences and tell us below the reference number you have given the extra sheet.

Document reference

Tick this box to confirm you have provided dates of birth for each relevant person in **Appendix 2**.

Relevant person

For individuals or groups of individuals

A 'relevant person' is:

- the individual where the permit holder is a sole individual
- all individuals where the permit holder is a group of individuals, (such as individuals in a general or limited partnership)

For registered companies

A 'relevant person' is the company itself and any:

- director
- company secretary
- manager
- similar corporate officer

3 Your ability as an operator, continued

For limited liability partnerships

A ‘relevant person’ is:

- the partnership itself
- all partners

For other organisations or bodies

A relevant person is any person who is part of the controlling or guiding mind of the organisation or body. This could be, for example any:

- trustee
- chairperson
- treasurer
- secretary
- person with a similar position

Relevant unspent convictions must be declared whether the relevant person has been:

- convicted of a relevant offence themselves
- held one of the positions above at a time when the organisation or body was convicted of a relevant offence

3b Technical ability

Section 3b applies to relevant waste operations only.

Complete the questions if:

- you are adding a relevant waste operation to a permit that has not had one before; or
- your proposed variation will change your current technical competence requirements

‘Relevant waste operations’ are one or both of the following:

- a waste operation (not carried on at an installation or by means of a Part B mobile plant).
- a specified waste management activity (certain installations carrying out waste management activities). For further details about specified waste management activities refer to 2(4) and 2(5) of <https://www.legislation.gov.uk/ukxi/2018/1227/regulation/4/made>

3b.1 Which technical competence scheme are you using?

We need to be satisfied that you will have sufficient technical ability to operate your facility.

To demonstrate your technical ability, you must comply with one of the government approved technical competence schemes. The two schemes currently approved are:

- Chartered Institute of Wastes Management/Waste Management Industry Training and Advisory Board (CIWM/WAMITAB) scheme: <https://ciwmquals.co.uk/competence/>.
- Energy and Utility Skills/Environmental Services Association/ (EU skills/ESA) scheme: <https://www.euskills.co.uk/about/our-industries/waste-management/competence-management-system/>.

3 Your ability as an operator, continued

Tick the scheme(s) you are using to demonstrate your technical competence.

CIWM/WAMITAB. Go to question 3b.2

EU skills/ESA. **Go to question 3b.3**

3b.2 CIWM/WAMITAB scheme

The information you provide in this section must be for the person(s) providing technical competence once the new or changed waste operation starts.

Note: grace periods do not apply to variation applications.

Provide the following information for each technically competent manager (TCM).

Use a separate sheet to provide the information for each TCM where more than one is being provided.

Document reference for continuation sheet, (if applicable):

Supporting Report Section 2.1.1

a. Details of the technically competent manager

Title (Mr, Mrs, Miss and so on)

Mr

First name

Steve

Last name

Craggs

Phone

07825603478

Email

steve.craggs@augean.co.uk

Tick this box to confirm you have provided the date of birth for the TCM in **Appendix 2**.

Complete table 2 for any other sites where the manager provides technical competence. This includes permits held by other operators and any other sites where they are intending to provide technically competent management.

3 Your ability as an operator, continued

Continue on a separate sheet as required.

Table 2		
Permit number	Site address	Postcode
EPR/YP3234XR	Port Clarence Waste Recovery Park, Port Clarence Landfill	TS2 1UE

Document reference of the extra sheet (if applicable)

Supporting Report Section 1.1

For information on how much time the TCM must be on site, see: <https://www.gov.uk/guidance/legal-operator-and-competence-requirements-environmental-permits#how-much-time-your-technically-competent-manager-must-be-on-site>.

b. Provide evidence of relevant technical competence

Tick the document(s) you are submitting to show evidence of technical competence. The original and continuing competence must be relevant to the activity you are applying for.

Primary competence qualification

- a copy of the primary competence qualification certificate(s)
- copy of current continuing competence certificate(s). This is required when the original qualification is over 2 years old.

Deemed competence

- evidence of deemed competence and current continuing competence certificate(s)

Environment Agency assessed competence

- evidence of passing an Environment Agency assessment and current continuing competence certificate(s)

Transitional provisions (for previously exempt activities)

- generic knowledge test certificate and current continuing competence certificate(s).

The generic knowledge test option only applies to managers nominated under the 2010 exemption transitional arrangements.

3 Your ability as an operator, continued

3b.3 EU skills/ESA scheme

Provide evidence of technical competence.

- Tick this box to confirm you have included a copy of your Competence Management System (CMS) certificate and any appendices

Now go to question 3c

3c Finances

Section 3c applies to installations, waste operations and mining waste operations only.

Complete question 3c.1 if you are applying to add a relevant waste operation to a permit that has not had one before.

Otherwise start at question 3c.2 for variations to all landfills, Category A and hazardous waste mining waste facilities.

If you want to change your permit to extend the area of a landfill or mining waste facility as described above, you will need to discuss when is necessary to review the expenditure plan/cost profile for variation.

3c.1 Financial competence – adding a relevant waste operation to a permit that has not had one before.

Do you or any relevant person or a company in which you (or they) (or any relevant person) were a relevant person, have current or past bankruptcy or insolvency proceedings against you?

- No
- Yes Please give details below, including the required set-up costs (including infrastructure), maintenance and clean-up costs for the proposed facility against which a credit check may be assessed.

We may contact a credit reference agency for a report about your business's finances.

See **Environmental permits privacy notice** – <https://www.gov.uk/guidance/environmental-permits-privacy-notice> for how we use your personal information to support environmental permitting.

3 Your ability as an operator, continued

Financial provision – variations to a landfill, Category A or hazardous waste mining waste facilities.

When you apply to change your permit, you must also review your financial provision. This is to make sure it covers any changes in liability.

For further guidance for landfills see: <https://www.gov.uk/guidance/landfill-operators-environmental-permits/calculate-your-financial-provision#review-and-change-your-financial-provision>

For further guidance for mining waste facilities see: the ‘Financial guarantees’ section of ‘Environmental Permitting Guidance – The Mining Waste Directive’ <https://www.gov.uk/government/publications/environmental-permitting-guidance-the-mining-waste-directive>

3c.2 Do you need to change the amount of financial provision?

You need to provide an expenditure plan. Tell us the document reference here and send the documents with the application form when you’ve completed it.

Yes Go to question 3c.3

No Provide an explanation in the box below and then go to **question 3d**

n/a

3c.3 How do you plan to make financial provision?

You need to satisfy us that you are financially capable of meeting the obligations of the permit, including during aftercare.

Tick the type of financial provision you intend to use:

Renewable bonds

Cash deposits with the Environment Agency

3c.4 Submit your revised expenditure plan

For landfills, include any updated monitoring point plan or monitoring and extraction point plan. For guidance see: (<https://www.gov.uk/guidance/landfill-operators-environmental-permits/calculate-your-financial-provision>).

Document reference for revised expenditure plan

3 Your ability as an operator, continued

3d Management systems

You must complete section 3d for all variation applications

You must have an effective, written management system in place that identifies and reduces the risk of pollution. You can show this by using a certified scheme or your own system. For guidance on developing a management system see: <https://www.gov.uk/guidance/develop-a-management-system-environmental-permits>

If you operate more than one site, you need to be able to explain what happens at each site and which parts of the overall management system apply. For example, at some sites you may need to show you are carrying out additional measures to prevent pollution because they are nearer to sensitive locations than others.

For waste and installation activities only: your management system must also explain your resilience to climate change. Explained at: <https://www.gov.uk/guidance/climate-change-risk-assessment-and-adaptation-planning-in-your-management-system>.

For small sewage treatment activities only: your management system must ensure that your sewage treatment system is maintained and run effectively. <https://www.gov.uk/guidance/develop-a-management-system-environmental-permits>

You can find guidance on management systems here: <https://www.gov.uk/guidance/develop-a-management-system-environmental-permits>

- Tick this box to confirm that you have read the guidance and that your management system will meet our requirements

What management system are you providing for your regulated facility?

- ISO 14001
- BS 8555 (Phases 1–5)
- BS EN ISO 14005:2019
- Green dragon
- EMAS Global
- Other
- Own management system

Please send us a summary of your updated management system and a copy of your accreditation (if applicable) with your application.

Document reference/s

Supporting Report Section 2.1

4 Environmental risk assessment

Your environmental risk assessment will need updating to consider any additional or other changes in risk. The risk assessment must show the measures in place to reduce and control risks.

The risk assessment must follow the methodology set out in ‘Risk assessments for your environmental permit’ (see <https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit>), or an equivalent method.

Include modelling reports and files where you have carried out detailed modelling.

If a habitat site is within screening distance, then an additional fee will be required. See <https://www.gov.uk/government/publications/environmental-permits-and-abstraction-licences-tables-of-charges>

You must provide an updated environmental risk assessment. Your risk assessment should clearly identify any additional or other changes in risk. This does not apply when we can do the risk assessment for you. We can do the risk assessment for you where you are:

- a farmer discharging certain substances to ground
- discharging domestic treated sewage, (depending on volume and site sensitivities)

See ‘Risk assessments for your environmental permit’ at <https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit#when-the-environment-agency-can-do-your-risk-assessment> for further details on when we can do your risk assessment for you.

Document reference(s) for the updated risk assessment, including modelling reports and files where applicable

Supporting Report Section 6

5 Site condition report

This section is applicable to Part A installations, waste and mining waste operations only. Do not complete for mining waste facilities.

This section does not apply to areas of land where waste is permanently deposited, for example areas of landfill, mining waste operations and deposit for recovery. It does apply to any parts of the site where waste will not be permanently deposited, for example a weighbridge area that will not be backfilled with waste.

You can contact us for pre-application advice on site condition reports, see: <https://www.gov.uk/guidance/get-advice-before-you-apply-for-an-environmental-permit>

If you want to make any of the changes listed in question 5a, you will need to submit an updated site condition report (SCR). This must include an updated site plan. For details of what to include on the site plan, see the H5 template linked below.

If you do not currently have an SCR, you should use the **H5 Site Condition Report word template** <https://www.gov.uk/government/publications/environmental-permitting-h5-site-condition-report> to prepare one.

You should keep your SCR up to date throughout the life of your permit. It will help you show how you have protected land and groundwater when you come to surrender your permit.

For SCR guidance and a template see:

<https://www.gov.uk/government/publications/environmental-permitting-h5-site-condition-report>.

5 Site condition report, continued

5a Are you proposing to make any of the following changes:

- extend your site boundary
- add an installation
- use, produce or release any new hazardous substances
- relocate hazardous substances to a new area within your site?

No **Go to section 6**

Yes Provide a site condition report, or an updated site condition report together with a summary of the changes.

Document reference(s) of your site condition report

Supporting Report Section 5

Document reference(s) of your change summary document

Supporting Report Section 5

For installations, go to question 5b

For waste and mining waste operations, go to **section 6**.

5b Stage 1 to 3 assessment for hazardous substances (installations only)

Question 5b only applies to installations.

If you want to make any of the changes listed in question 5b, you will need to update your stage 1 to 3 assessment. If you do not already have a stage 1 to 3 assessment, you will need to carry one out.

For guidance on producing a stage 1 to 3 assessment, see ‘EC Commission Guidance concerning baseline reporting (2014/C 136/03)’ ([https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0506\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0506(01)&from=EN))

We have also produced a stage 1 to 3 assessment guidance document with worked examples. To request a copy, contact our pre-application service and ask for ‘EPR advice note: Stage 1 to 3 assessment’. See: <https://www.gov.uk/guidance/get-advice-before-you-apply-for-an-environmental-permit>

Are you proposing to make any of the following changes:

- use, produce or release any new hazardous substances
- relocate any hazardous substances you currently use, produce or release to a new area within your site boundary?

No **Go to section 6**

Yes Tick to confirm you have included a stage 1 to 3 assessment as part of your updated site condition report

Go to question 5c

5 Site condition report, continued

5c Baseline reference data (installations only)

Section 5c only applies to installations.

If your stage 1 to 3 assessment identifies a risk to soil and groundwater from relevant hazardous substances, you must provide baseline reference data for those substances. You may be unable to provide this information as part of your application. In this situation, it is likely that we will include an improvement condition in your permit. This will require you to submit baseline reference data within a given timeframe.

You will also be required to do periodic monitoring of soil and groundwater if your stage 1 to 3 assessment identified there is a risk to soil and groundwater from relevant hazardous substances.

It is recommended that you plan for this and include details of your proposed monitoring plan in your updated site condition report. The monitoring period in your permit will depend on the severity of the risk.

If your stage 1 to 3 assessment identifies a risk to soil and groundwater from any other potentially polluting substances, we recommend you establish baseline reference data.

5c.1 Has your stage 1 to 3 assessment identified a risk to soil and groundwater from relevant hazardous substances?

- No
 Yes Go to question 5c.2

5c.2 Have you have provided baseline reference data in your site condition report?

- No
 Yes

5c.3 Has your stage 1 to 3 assessment identified a risk to soil and groundwater from any other potentially polluting substances?

- No Go to section 6
 Yes Go to question 5c.4

5c.4 Have you have provided baseline reference data in your site condition report?

- No
 Yes

6 Other supporting information

6a Provide a non-technical summary of your application

Write a summary that explains your application. Summarise the key technical standards and control measures for your proposed changes. Use non-technical language wherever possible and avoid detailed data and scientific discussion. Other parts of the application form will ask for these details when necessary.

For mobile plant, tell us how the proposed changes could impact land quality. Describe the mobility of your plant and how you intend to operate.

6 Other supporting information, continued

Document reference of the non-technical summary

Supporting Report – Executive Summary

6b Updated site plans (not for mobile plant)

If you are extending your site boundary or adding a discharge point you must send us a revised site plan or plans.

For an example of a suitable plan please see **Appendix 3**.

If you are sending us a paper copy of your plan it must be either A3 or A4 size. Alternatively, you can send us an electronic copy. For both formats, the plan must be legible at A4 size, drawn to scale, and include a scale bar. The plan should also include a date, a reference and local features.

For installations, waste and mining waste operations your site plan must also:

- identify all the land on which your activities will take place
- clearly show the outline of the site (preferably in a green colour)

It may be possible to incorporate your site plan into your site condition report plan.

For water discharge or groundwater activity permits your site plan must also show:

- any treatment plant
- the sample point
- the point where the effluent is discharged to the receiving environment

Are you extending your site boundary or adding a discharge point?

No

Yes

Document reference/s of the plans

6c Fire prevention plan (not for mobile plant)

You may need to submit a fire prevention plan (FPP) if you want to start storing combustible waste.

You may need to submit a revised FPP if your changes will increase the fire risk in other ways. This could be an increase in the risk of a fire occurring or an increase in the environmental risk if a fire occurs.

You will not need an FPP if both of the following apply:

- you only store waste with low combustibility
- we are satisfied that you can meet the 3 fire prevention objectives without using any of the measures in our FPP guidance (or alternative measures)

See our FPP guidance at: <https://www.gov.uk/government/publications/fire-prevention-plans-environmental-permits>

6 Other supporting information, continued

Complete this question if you accept or propose to accept combustible waste.

6c.1 Does our Fire Prevention Plan guidance apply to any of your activities?

- No Go to section 7
 Yes Go to question 6c.2

6c.2 Do you want to start storing combustible waste or will the fire risk increase in other ways?

- No
 Yes Provide a fire prevention plan or revised fire prevention plan that meets our guidance.

Document reference of the fire prevention plan

7 Consultation

Complete questions 7a to 7c for installations and waste operations and 7d for installations only. You will only need to answer the following questions if your proposed changes will result in the release of any substances to sewer or certain waters.

Does the change or addition to the waste operation or installation involve releasing any substance into any of the following?

7a A sewer managed by a sewerage undertaker?

- No
 Yes Please name the sewerage undertaker

7b A harbour managed by a harbour authority?

- No
 Yes Please name the harbour authority

7c Directly into inshore waters?

- No
 Yes Please name the relevant Inshore Fisheries and Conservation Authority (<https://association-ifca.org.uk/>)

7 Consultation, continued

7d Is the installation on a site for which:

7d.1 a nuclear site licence is needed under section 1 of the Nuclear Installations Act 1965?

No

Yes

7d.2 a policy document for preventing major accidents is needed under regulation 5 of the Control of Major Accident Hazards Regulations 2015, or a safety report is needed under regulation 7 of those Regulations?

No

Yes

8 How to contact us

If you have difficulty using this form, please contact the person who sent it to you or contact us as shown below.

General enquiries: 03708 506 506 (Monday to Friday, 8am to 6pm)

Textphone: 03702 422 549 (Monday to Friday, 8am to 6pm)

Email: enquiries@environment-agency.gov.uk

Website: www.gov.uk/government/organisations/environment-agency

If you are happy with our service, please tell us. It helps us to identify good practice and encourages our staff. If you're not happy with our service, please tell us how we can improve it.

Please tell us if you need information in a different language or format (for example, in large print) so we can keep in touch with you more easily.

Feedback

(You don't have to answer this part of the form, but it will help us improve our forms if you do.)

We want to make our forms easy to fill in and our guidance notes easy to understand. Please use the space below to give us any comments you may have about this form or the guidance notes that came with it.

How long did it take you to fill in this form?

We will use your feedback to improve our forms and guidance notes

Would you like a reply to your feedback?

Yes please

No thank you

Appendix 1 – Low impact installation checklist (if you completed question 2f, low impact installations, you must also complete this checklist below).

Guidance for applicants on low impact installations

The Industrial Emissions Directive (IED) requires us to permit all installations regardless of their potential for environmental harm.

Consequently, we have developed the Low Impact Installation (LII) permit. If the criteria for LII are met, then a simpler permitting approach is adopted but all other aspects of the Environmental Permitting Regulations (EPR) still apply. LII sites are expected to require minimal regulatory effort by our staff.

Such reduction in regulatory effort can be reflected in lower subsistence charges for operators. The low impact qualifying criteria are demanding, as they are not designed to circumvent the purposes of the IED Directive or the Environment Permitting Regulations that implement them.

We do not consider the following waste activities under Schedule 1 of the Environmental Permitting Regulations to be eligible for the low impact approach:

- Section 5.1 – Incineration and co-incineration of waste
- Section 5.2 – Disposal of waste by landfill
- Section 5.3 – Disposal or recovery of hazardous waste, (except for standard rules SR2012 No13 for the treatment of incinerator bottom ash)
- Section 5.4 – Disposal, recovery or a mix of disposal and recovery of non-hazardous waste
- Section 5.6 – Temporary or underground storage of hazardous waste Requirements on the operator

Requirements on the operator

If you can comply with this guidance, you may pay the lower subsistence charge, as set out in our charges scheme. You must first demonstrate to us that your installation can have only a low impact on the environment through your variation application. We will check that the application is duly made and meets the criteria set out in this guidance. If we do not agree that the installation meets these criteria, we will not proceed to determine the application.

An application for a permit variation must address all the matters set out in the guidance on environmental permitting applications in sufficient detail to allow us to determine it, even if you believe that you are likely to satisfy the LII criteria. You must show through your application that your installation meets each of the conditions set out below. The application might not have to be as detailed as that required for installations that do not meet these criteria. However, it will still need to be made in the proper manner, advertised and entered on the Public Register in the usual way. In coming to our view, we will consider any comments that we receive about the application as part of the consultation process.

The permit conditions for a LII will meet the requirements of the Environmental Permitting Regulations. The permit conditions will also aim to ensure that an installation is operated in such a way that all appropriate measures are taken to avoid pollution, in particular through the application of best available techniques (BAT) and achieving a high level of protection of the environment as a whole. The operator will be required to report each year that the installation is still running as set out in the application and certify that actual releases remain below the levels set out in this guidance.

Appendix 1 – Low impact installation checklist, continued

Installation reference

Low impact installation criterion	Section of supporting document that shows how your proposed activity meets the LII criterion	Do you meet LII criterion?
A – Management techniques		<input type="checkbox"/> Yes <input type="checkbox"/> No
B – Aqueous waste		<input type="checkbox"/> Yes <input type="checkbox"/> No
C – Abatement systems/ releases to air		<input type="checkbox"/> Yes <input type="checkbox"/> No
D – Emissions to groundwater		<input type="checkbox"/> Yes <input type="checkbox"/> No
E – Waste production		<input type="checkbox"/> Yes <input type="checkbox"/> No
F – Energy consumption		<input type="checkbox"/> Yes <input type="checkbox"/> No
G – Accident prevention		<input type="checkbox"/> Yes <input type="checkbox"/> No
H – Noise		<input type="checkbox"/> Yes <input type="checkbox"/> No
I – Emissions of polluting substances		<input type="checkbox"/> Yes <input type="checkbox"/> No
J – Odours		<input type="checkbox"/> Yes <input type="checkbox"/> No
K – Compliance history		<input type="checkbox"/> Yes <input type="checkbox"/> No

If you answered 'No' to any of the questions above, your installation cannot be considered as a low impact installation.

Appendix 1 – Low impact installation checklist, continued

Determination of low impact installations

We will determine what constitutes a low impact installation according to the principles set out below. You must demonstrate to our satisfaction that such is the nature of the installation, there is no reasonable likelihood that you will fail to meet any of these criteria.

- A. **Management techniques:** All the criteria described below must be met without having to rely on significant management effort. In other words, the installation intrinsically must have only a low environmental impact, including under start up, shut down, or abnormal operating conditions.
- B. **Wastewater:** The installation must not release more than 50 m³ per day of water from process activities conducted at the installation giving rise to effluent. No account need be taken of the volume of water exported from the installation as product. Characterise and quantify any aqueous effluents released from the installation on a daily basis and provide justification that the installation releases no more than 50 m³ per day of water from process activities.
- C. **Abatement systems/releases to air:** The installation must comply with the criteria in this guidance without having to rely on active abatement for releases to the environment outside of any buildings. Releases must not be dependent on continuing or correct operation of equipment, where failure of active pollution prevention systems could result in an unacceptable external release. For example, if the installation depends on active abatement in the form of scrubbers, filters or electrostatic precipitators to achieve the releases to the environment set out in this guidance, it is unlikely that it can be treated as having only a low potential for impact. However, abatement systems installed solely for the protection of workers (where abatement is not to attenuate external environmental releases) need not be included in this assessment.
- D. **Emissions to groundwater:** There must be no planned or fugitive emission from the permitted installation into the ground, or any soak away. This does not preclude the discharge of clean rainwater run-off into soak ways.
- E. **Waste production:** The installation must not produce more than one tonne of waste or 10 kg of hazardous waste per day, averaged over a year, with no more than 20 tonnes of Directive waste or 200 kg of hazardous waste being produced in any one day.
- F. **Energy consumption:** The installation must not consume energy at a rate greater than 3 MW or, if the installation uses a combined heat and power installation to supply any internal process heat, 10 MW. These limits apply to the sum of energy imported as electricity and produced on site through the combustion of fuels.
- G. **Accident prevention:** You must have in place satisfactory containment measures to prevent fugitive emissions to surface water, sewer or land and ensure that these are adequately maintained at all times. This requirement applies to all substances present on site and in any quantity.
- H. **Noise:** There must be only a low potential for causing offence due to noise. An installation will not be considered as a low impact installation if it may give rise to noise noticeable outside the installation boundary. This requires the exercise of judgement, taking account of any history of noise complaint arising from the installation and consideration of the likely offsite noise levels and proximity of sensitive receptors. Describe the main sources of noise from the installation, the nearest noise sensitive locations and any relevant noise measurement surveys which have been undertaken, and the proposed techniques and measures for the control of noise. Provide justification that there is only a low potential for offence due to noise.

Appendix 1 – Low impact installation checklist, continued

- I. **Emissions of polluting substances:** Justify that there will be no likelihood of a release to the environment of any particular substance from the whole installation at a rate greater than that determined as insignificant as set out in our guidance note (search for ‘Control and monitor emissions for your environmental permit’ at: <https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit>). Describe the nature, quantities and sources of foreseeable emissions from the installation.
 - J. **Odour:** There must be only a low potential for giving offence due to odour. An installation will not be considered as a low impact installation if it may give rise to an offensive smell noticeable outside the installation boundary. This requires the exercise of judgement, taking account of any history of odour complaint from the installation and whether this class of activity is known by experience to give rise to smells. A significant possibility or actual history of excursions or fugitive emissions, for example from stored materials, would suggest that the installation could not be treated as having a low impact. Provide details of potential sources of odour from the installation, for example from stored materials, and justify that there is only a low potential for offence due to odour.
 - K. **Compliance history:** If any of the following enforcement actions have taken place at the same installation under the same management (and where appropriate, have not been overturned on appeal), then it will not normally be considered further as a low impact installation:
 - prosecution*
 - formal caution*
 - suspension notice*
 - enforcement notice relating to an actual or potential environment incident*
- * (All under EPR or the equivalent under previous environmental regimes)

Appendix 2 – Date of birth information for Relevant offences and/or Technical competence questions only

Date of birth information in this appendix will not be put onto our Public Register

1 Relevant Offences – date of birth information for each relevant person

Please give us the following details if you have answered ‘Yes’ to question 3a1

Name of relevant person 1

Steve Craggs

Date of birth (DD/MM/YY)

[REDACTED]

Name of relevant person 2

Date of birth (DD/MM/YY)

Name of relevant person 3

Date of birth (DD/MM/YY)

Name of relevant person 4

Date of birth (DD/MM/YY)

Continue on a separate sheet as required

Document reference of continuation sheet

Appendix 2 – Date of birth information for Relevant offences and/or Technical competence questions only, continued

2 Technical competence – date of birth information for each technically competent manager

Please give us the following details (relevant waste operations only)

Name of technically competent manager 1

Date of birth (DD/MM/YY)

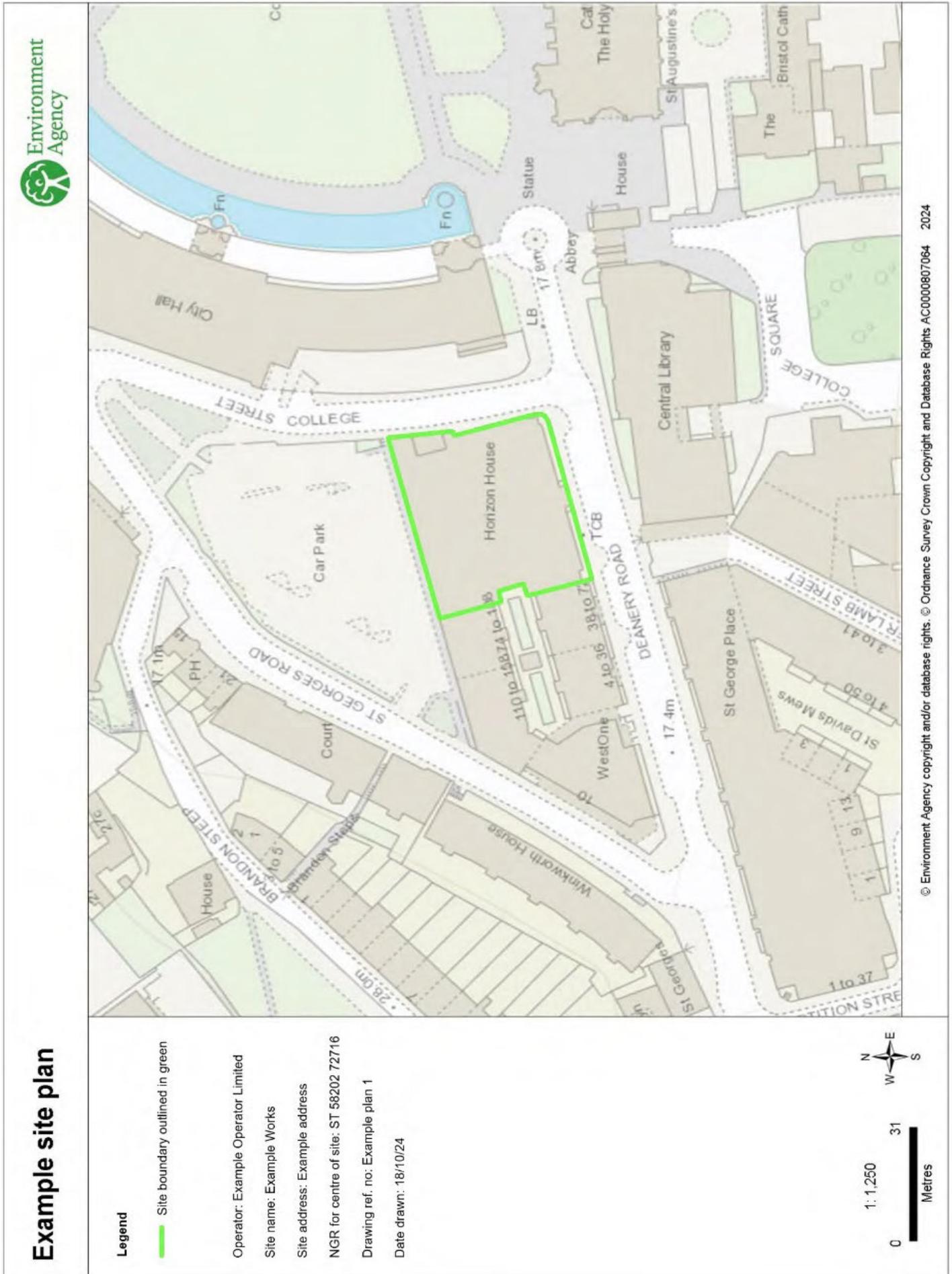
Name of technically competent manager 2

Date of birth (DD/MM/YY)

Continue on a separate sheet as required

Document reference of continuation sheet

Appendix 3 – Example site plan



Copyright issue

Please note that some plans and maps will be copyright. Unless you are using your own maps or plans or have paid for the copyright (for example with Ordnance Survey) you may not have the right to reproduce the map or plan.

Application for an environmental permit

Part C3 – Variation to a bespoke installation permit



Fill in this part of the form, together with part A, part C2 and part F1, if you are applying to vary (change) the conditions or any other part of the permit.

Please check that this is the latest version of the form available from our website.

You only need to give us details in this application for the parts of the permit that will be affected (for example, if you are adding a new facility or making changes to existing ones).

You do not need to resend any information from your original permit application if it is not affected by your proposed changes.

Please read through this form and the guidance notes that go with it.

The form can be:

- 1) saved onto a computer and then filled in. Please note that the form follows a logic that means questions will open or stay closed depending on a previous answer. So you may not be able to enter text in some boxes.
- 2) printed off and filled in by hand. Please write clearly in the answer spaces.

It will take less than three hours to fill in this part of the application form.

Contents

- 1 What activities are you applying for?
- 2 Point source emissions to air, water and land
- 3 Operating techniques
- 4 Monitoring
- 5 Environmental impact assessment
- 6 Resource efficiency and climate change
- Appendix 1 – Specific questions for the combustion sector
- Appendix 2 – Specific questions for the chemical sector
- Appendix 3 – Specific questions for the waste incineration sector
- Appendix 4 – Specific questions for the landfill sector and recovery of hazardous waste on land activities

1 What activities are you applying to vary?

Fill in Table 1a below with details of all the activities listed in schedule 1 or other references (see note 1) of the Environmental Permitting Regulations (EPR) and all directly associated activities (DAAs) (in separate rows), that you propose to vary.

Note: if you want to add a Medium Combustion Plant or Specified Generator (MCP/SG) to your installation please use part C2.5 instead. If you want to vary an intensive farm permit please use part C3.5 instead.

Fill in a separate table for each installation you are applying to vary. Use a separate sheet if you have a long list and send it to us with your application form. Tell us below the reference you have given the document.

Document reference

Supporting Report Section 1.3

1 What activities are you applying to vary?, continued**Table 1a – Types of activities**

Schedule 1 listed activities						
Installation name	Schedule 1 or other references (See note 1)	Description of the activity (See note 2)	Activity capacity (See note 3)	Annex I (D codes) and Annex II (R codes) and descriptions	Hazardous waste treatment capacity (if this applies) (See note 3)	Non-hazardous waste treatment capacity (if this applies) (See note 3)
If there are not enough rows, send a separate document and give the document reference number here	Put your main activity first			For installations that take waste only	For installations that take waste only	For installations that take waste only
Port Clarence Waste Recovery	S5.3 A(1)(a)(ii)	Disposal or recovery of	60,000 tpa	R7, R11	60,000 tpa	
Port Clarence Waste Recovery	S5.6 A(1)(a)(i)	Temporary storage of	26,000 tpa			
Port Clarence Waste Recovery	S5.4 A(1)(a)(ii)	Disposal of non-	120,000 m3 (per	R5, R11	120,000m3 (per year)	
Directly associated activities (See note 4)						
Name of DAA If there are not enough rows, send a separate document and give the document reference number here		Description of the DAA (please identify the schedule 1 activity it serves)				
Receipt, handling and storage of incoming wastes		APCr material accepted at the facility.				
Receipt, handling and storage of raw materials (e.g.		Raw materials required for wastewater treatment, which is under S5.4 A(1)(a)(ii).				
Management of processed sludges and wastewater		Handling throughout the conditioning process and wastewater treatment.				
For installations that take waste (See note 5 below)		Total storage capacity				60,000
		Annual throughput (tonnes each year)				60,000

1 What activities are you applying to vary?, continued

Notes

1. Quote the section number, part A1 or A2 or B, then paragraph and sub paragraph number as shown in EPR part 2 of schedule 1.
2. Use the description from schedule 1 of EPR. Include any extra detail that you think would help to accurately describe what you want to do.
3. By ‘capacity’, we mean:
 - the total incineration capacity (tonnes every hour) for waste incinerators
 - the total landfill capacity (cubic metres) for landfills
 - the total capacity (cubic metres) for the recovery of hazardous waste on land
 - the total treatment capacity (tonnes each day) for waste treatment operations
 - the total storage capacity (tonnes) for waste storage operations
 - the processing and production capacity for manufacturing operations, or
 - the thermal input capacity for combustion activities
4. Fill this in as a separate line and give an accurate description of any other activities associated with your schedule 1 activities. You cannot have Directly Associated Activities (DAAs) as part of a mobile plant application.
5. By ‘total storage capacity’, we mean the maximum amount of waste, in tonnes, you store on the site at any one time.

Types of waste accepted

For those installations that take waste, for each line in Table 1a (including DAAs), fill in a separate document to list those wastes you will accept on to the site for that activity. Give the List of Wastes catalogue code and description (see <https://www.gov.uk/government/publications/waste-classification-technical-guidance>).

If you need to exclude waste from your activity or facility by restricting the description, quantity, physical nature, hazardous properties, composition or characteristic of the waste, include these in the document. Send it to us with your application form.

Please provide the reference for each document.

You can use Table 1b as a template.

If you want to accept any waste with a code ending in 99, you must provide more information and a full description of the waste in the document, (for example, detailing the source, nature and composition of the waste). Where you only want to receive specific wastes within a waste code you can provide further details of the waste you want to receive. Where a waste is dual coded you should use both codes for the waste.

Document reference of this extra information

n/a - Supporting Report Section 1.3.2

1 What activities are you applying to vary?, continued**Table 1b – Template example – types of waste accepted and restrictions**

Waste code	Description of the waste
Example	Example
02 01 08*	Agrochemical waste containing hazardous substances
18 01 03*	Infectious clinical waste, not contaminated with chemicals or medicines – human healthcare (may contain sharps) for alternative treatment
17 05 03*/17 06 05*	Non-hazardous soil from construction or demolition contaminated with fragments of asbestos cement sheet

1c Recovery of hazardous waste on land

Are you applying for a waste recovery activity involving the permanent deposit of inorganic hazardous waste on land for construction or land reclamation?

No Now go to question 2

Yes

Have you written a waste recovery plan (WRP) that shows that you will use waste to perform the same function as non waste materials you would have used?

No You must write a WRP to support your application.

Yes

Have we advised you during pre-application discussions that we believe the activity is waste recovery?

No

Yes

Have there been any changes to your proposal since the discussions?

No

Yes

Please send us a copy of your current waste recovery plan that complies with our guidance at <https://www.gov.uk/government/publications/deposit-for-recovery-operators-environmental-permits/waste-recovery-plans-and-deposit-for-recovery-permits>. You need to highlight any changes you may have made since your pre-application discussions.

Document reference _____

Please note that there is an additional charge for the assessment or re assessment of a waste recovery plan that must be submitted as part of this application. For the charge see <https://www.gov.uk/government/publications/environmental-permitting-charges-guidance/environmental-permitting-charges-guidance>

2 Point source emissions to air, water and land

Fill in Table 2 below with details of the point source emissions that result from the operating techniques at each of your installations.

Fill in one table for each installation, continuing on a separate sheet if necessary.

Table 2 – Emissions (releases)

Installation name	Port Clarence Waste Recovery Park			
Point source emissions to air				
Emission point reference and location	Source	Parameter	Quantity	Unit
See Supporting Report - Section 4.1				
Point source emissions to water (other than sewers)				
Emission point reference and location	Source	Parameter	Quantity	Unit
N/A				
Point source emissions to sewers, effluent treatment plants or other transfers off site				
Emission point reference and location	Source	Parameter	Quantity	Unit
N/A				
Point source emissions to land				
Emission point reference and location	Source	Parameter	Quantity	Unit
N/A				

You will also need to complete application form part C6 if your variation includes changing or adding a point source emission(s) to:

- water
- groundwater or
- sewer

Supporting information

3 Operating techniques

3a Technical standards

Fill in Table 3a for each activity at the installation you refer to in Table 1a above and list the ‘Best Available Techniques’ you are planning to use. If you use the standards set out in the relevant BAT conclusion(s), BAT reference document(s) (BREF) and/or technical guidance(s) (TGN) there is no need to justify using them within your documents in Table 3a.

For Part A(2) activities refer to <https://www.gov.uk/government/collections/integrated-pollution-prevention-and-control-sector-guidance-notes> and for Part B and Schedule 14 activities see <https://www.gov.uk/government/collections/local-air-pollution-prevention-and-control-lappc-process-guidance-notes>

You must justify your decisions in a separate document if:

- there is no technical standard
- the technical guidance provides a choice of standards, or
- you plan to use another standard

This justification could include a reference to the Environmental Risk Assessment provided in part C2 (general bespoke permit) of the application form.

For each of the activities listed in Table 1a, the documents in Table 3a should summarise:

- the operations undertaken
- the measures you will use to control the emissions from your process, as identified in your risk assessment or the relevant BAT conclusions, BREF or technical guidance
- how you will meet other standards set out in the relevant BAT conclusions document, BREF or technical guidance

Table 3 – Technical standards

Fill in a separate table for each activity at the installation.

Installation name	Port Clarence Waste Recovery Park	
Description of the schedule 1 activity or directly associated activity	Best available technique (BATC, BREF or TGN reference) (see footnote below)	Document reference (if appropriate)
S5.3 A(1)(a)(ii): Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical	Waste Treatment BREF and BAT Conclusions (2018)	Supporting Report Appendix C and D
S5.6 A(1)(a)(i): Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes	Waste Treatment BREF and BAT Conclusions (2018)	Supporting Report Appendix C and D
S5.4 A(1)(a)(ii): Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving physico-chemical	Waste Treatment BREF and BAT Conclusions (2018)	Supporting Report Appendix C and D

* Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)

In all cases, describe the type of facility or operation you are applying for and provide site infrastructure plans, location plans and process flow diagrams or block diagrams to help describe the operations and processes undertaken. Give the document references you use for each plan, diagram and description.

Document reference Supporting Report Section 3, Appendix B and Appendix F

3a1 Does your permit (in Table 1.2 Operating Techniques or similar table in the permit) have references to any of your own documents or parts of documents submitted as part of a previous application for this site?

No Now go to 3b

Yes Please tell us in a separate document what document references are no longer valid or have been superseded and why

Please also tell us below the reference number you have given the document and send it in with your application

Document reference _____

3b General requirements

Fill in a separate Table 4 for each installation.

Table 4 – General requirements

Name of the installation	Port Clarence Waste Recovery Park
If the technical guidance or your risk assessment shows that emissions of substances not controlled by emission limits are an important issue, send us your plan for managing them	Document reference or references n/a Supporting Report Section 6.3.3
Where the technical guidance or your risk assessment shows that odours are an important issue, send us your odour management plan	Document reference or references n/a Supporting Report Section 6.3.6
If the technical guidance or your risk assessment shows that noise or vibration are important issues, send us your noise or vibration management plan (or both)	Document reference or references n/a Supporting Report Section 6.3.5

For guidance on risk assessments for your environmental permit see <https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit>

3c Types and amounts of raw materials

Fill in Table 5 for all schedule 1 activities. Fill in a separate table for each installation.

Table 5 – Types and amounts of raw materials

Name of the installation		Port Clarence Waste Recovery Park		
Capacity (See note 1 below)		Supporting Report Sections 1.3.2 and 2.3		
Schedule 1 activity	Description of raw material and composition	Maximum amount (tonnes) (See note 2 below)	Annual throughput (tonnes each year)	Description of the use of the raw material including any main hazards (include safety data sheets)

Notes

- By 'capacity', we mean the total storage capacity (tonnes) or total treatment capacity (tonnes each day).
 - By 'maximum amount', we mean the maximum amount of raw materials on the site at any one time.
- Use a separate sheet if you have a long list of raw materials, and send it to us with your application form. Please also provide the reference of this extra sheet.

Document reference

Supporting Report Section 2.3

3d Information for specific sectors

For some of the sectors, we need more information to be able to set appropriate conditions in the permit. This is as well as the information you may provide in sections 5, 6 and 7. For those activities listed below, you must answer the questions in the related document.

Table 6 – Questions for specific sectors

Sector	Appendix
Combustion	See the questions in appendix 1
Chemicals	See the questions in appendix 2
Incinerating waste	See the questions in appendix 3
Landfill and recovery of hazardous waste on land	See the questions in appendix 4

General information

Complete section 4 if you are proposing to change or add an emission point(s).

4 Monitoring

4a Describe the measures you use for monitoring emissions by referring to each emission point in Table 2 above

You should also describe any environmental monitoring. Tell us:

- how often you use these measures
- the methods you use
- the procedures you follow to assess the measures

Document reference

Supporting Report Section 4

4b Point source emissions to air only

4b1 Has the sampling location been designed to meet BS EN 15259 clause 6.2 and 6.3?

No

Yes

4b2 Are the sample ports large enough for monitoring equipment and positioned in accordance with section 6 and appendix A of BS EN 15259?

No

Yes

4b3 Is access adjacent to the ports large enough to provide sufficient working area, support and clearance for a sample team to work safely with their equipment throughout the duration of the test?

No

Yes

4b4 Are the sample location(s) at least 5 HD from the stack exit

No

Yes

4b5 Are the sample location(s) at least 2 HD upstream from any bend or obstruction?

No

Yes

4b6 Are the sample location(s) at least 5 HD downstream from any bend or obstruction?

No

Yes

4b7 Does the sample plane have a constant cross sectional area?

No

Yes

4b8 If horizontal, is the duct square or rectangular (unless it is less than or equal to 0.35 m in diameter)

No

Yes

4b9 If you have answered 'No' to any of the questions 4b1 to 4b8 above, provide an assessment to how the standards in BS EN 15259 will be met.

Document reference of the assessment

5 Environmental impact assessment

5a Have your proposals been the subject of an environmental impact assessment under Council Directive 85/337/EEC of 27 June 1985 [Environmental Impact Assessment] (EIA)?

No Now go to question 6

Yes Please provide a copy of the environmental statement and, if the procedure has been completed:

- a copy of the planning permission
- the committee report and decision on the EIA

Document reference of the copy

6 Resource efficiency and climate change

If the site is a landfill or a recovery of hazardous waste on land activity, you only need to fill in this section if the application includes gas engines.

6a Describe the basic measures for improving how energy efficient your activities are

Document reference of the description

Supporting Report - Section 2.2

6b Provide a breakdown of any changes to the energy your activities use up and create

Document reference of the description

Supporting Report - Section 2.2

6c Have you entered into, or will you enter into, a climate change levy agreement?

No Describe the specific measures you use for improving your energy efficiency

Document reference of the description

Supporting Report - Section 2.2

Yes Please give the date you entered
(or the date you expect to enter)
into the agreement (DD/MM/YYYY)

Please also provide documents that prove you are taking part in the agreement.

Document reference of the proof

6d Explain and justify the raw and other materials, other substances and water that you will use

Document reference of the justification

Supporting Report - Section 2.3

6e Describe how you avoid producing waste in line with Council Directive 2008/98/EC on waste

If you produce waste, describe how you recover it. If it is technically and financially impossible to recover the waste, describe how you dispose of it while avoiding or reducing any effect it has on the environment.

Document reference of the description

Supporting Report - Section 2.4

7 How to contact us

If you need help filling in this form, please contact the person who sent it to you or contact us as shown below.

General enquiries: 03708 506 506 (Monday to Friday, 8am to 6pm)

Textphone: 03702 422 549 (Monday to Friday, 8am to 6pm)

Email: enquiries@environment-agency.gov.uk

Website: <https://www.gov.uk/government/organisations/environment-agency>

If you are happy with our service, please tell us. It helps us to identify good practice and encourages our staff. If you're not happy with our service, please tell us how we can improve it.

Please tell us if you need information in a different language or format (for example, in large print) so we can keep in touch with you more easily.

Feedback

(You don't have to answer this part of the form, but it will help us improve our forms if you do.)

We want to make our forms easy to fill in and our guidance notes easy to understand. Please use the space below to give us any comments you may have about this form or the guidance notes that came with it.

How long did it take you to fill in this form? _____

We will use your feedback to improve our forms and guidance notes, and to tell the Government how regulations could be made simpler.

Would you like a reply to your feedback?

Yes please

No thank you



For Environment Agency use only

Date received (DD/MM/YYYY)

Payment received?

No

Our reference number

Yes

Amount received

£ _____

Plain English Campaign's Crystal Mark does not apply to appendices 1 to 4.

Appendix 1 – Specific questions for the combustion sector

1 Identify the type of fuel burned in your combustion units (including when your units are started up, shut down and run as normal). If your units are dual fuelled (that is, use two types of fuel), list both the fuels you use

Fill in a separate table for each installation.

Installation reference			
Type of fuel	When run as normal	When started up	When shut down
Coal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gas oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heavy fuel oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Natural gas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WID waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biomass (see notes 1 and 2 below)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biomass (see notes 1 and 2 below)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biomass (see notes 1 and 2 below)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biomass (see notes 1 and 2 below)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biomass (see notes 1 and 2 below)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landfill gas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Notes

1. Not covered by Industrial Emissions Directive 2010/75/EU.
2. 'Biomass' is referred to The Renewables Obligation Order 2002 (<https://www.legislation.gov.uk/uksi/2002/914/contents/made>)

Give extra information if it helps to explain the fuel you use.

Document reference

Appendix 1 – Specific questions for the combustion sector, continued

2 Give the composition range of any fuels you are currently allowed to burn in your combustion plant

Fill in a separate table for each installation, continuing on a separate sheet if necessary

Fuel use and analysis					
Installation reference					
Parameter	Unit	Fuel 1	Fuel 2	Fuel 3	Fuel 4
Maximum percentage of gross thermal input	%				
Moisture	%				
Ash	% wt/wt dry				
Sulphur	% wt/wt dry				
Chlorine	% wt/wt dry				
Arsenic	% wt/wt dry				
Cadmium	% wt/wt dry				
Carbon	% wt/wt dry				
Chromium	% wt/wt dry				
Copper	% wt/wt dry				
Hydrogen	% wt/wt dry				
Lead	% wt/wt dry				
Mercury	% wt/wt dry				
Nickel	% wt/wt dry				
Nitrogen	% wt/wt dry				
Oxygen	% wt/wt dry				
Vanadium	mg/kg dry				
Zinc	mg/kg dry				
Net calorific value	MJ/kg				

Appendix 1 – Specific questions for the combustion sector, continued

3 If NO_x factors are necessary for reporting purposes (that is, if you do not need to monitor emissions), please provide the factors associated with burning the relevant fuels

Fill in a separate table for each installation.

Installation reference	
Fuel	NO _x factor (kg t ⁻¹)
Fuel 1	
Fuel 2	
Fuel 3	
Fuel 4	

Note: kg t⁻¹ means kilograms of nitrogen oxides released for each tonne of fuel burned.

4 Will your combustion plant be subject to Chapter III of the Industrial Emissions Directive 2010/75/EU?

No Now fill in application form part F

Yes

5 What is your plant?

an existing one A plant licensed before 1 July 1987

a new one A plant licensed on or after 1 July 1987 but before 27 November 2002, or a plant for which an application was made before 27 November 2002 and which was put into operation before 27 November 2003

a new-new one A plant for which an application was made on or after 27 November 2002 If you run more than one type of plant or a number of the same type of plant on your installation, please list them in the table below

6 If you run more than one type of plant or a number of the same type of plant on your installation, please list them in the table below

Fill in a separate table for each installation.

Installation reference	
Type of plant	Number within installation
Existing	
New	
New-new	
Gas turbine (group A)	
Gas turbine (group B)	

Appendix 1 – Specific questions for the combustion sector, continued

7 If you run an existing plant, have you submitted a declaration for the ‘limited life derogation’ set out in Article 33 of Chapter III of the Industrial Emissions Directive?

No Now go to question 9

Yes

8 Have you subsequently withdrawn your declaration?

No

Yes

9 List the existing large combustion plants (LCPs) which have annual mass allowances under the National Emission Reduction Plan (NERP), and those with emission limit values (ELVs) under the LCPD

Installation reference	
LCPs under NERP	LCPs with ELVs

10 Do you meet the monitoring requirements of Chapter III of the Industrial Emissions Directive?

No

Yes Document reference

11 Are you substantially refurbishing an existing installation according to the meaning given in Article 14 of the Energy Efficiency Directive?

No

Yes Now go to question 12

12 Have you carried out a cost–benefit assessment (CBA) of opportunities for cogeneration (combined heat and power) or district heating under Article 14 of the Energy Efficiency Directive?

No Please provide supporting evidence of why a CBA is not required (for example, an agreement from us)

Document reference of this evidence

Yes Please submit a copy of your CBA

Document reference of the CBA

Appendix 2 – Specific questions for the chemical sector

1 Please provide a technical description of your activities

- The description should be enough to allow us to understand:
 - the process
 - the main plant and equipment used for each process
 - all reactions, including significant side reactions (that is, the chemistry of the process)
 - the material mass flows (including by products and side streams) and the temperatures and pressures in major vessels
 - the all emission control systems (both hardware and management systems), for situations which could involve releasing a significant amount of emissions – particularly the main reactions and how they are controlled
- a comparison of the indicative BATs and benchmark emission levels standards: technical guidance notes (TGNs) (see <https://www.gov.uk/government/collections/technical-guidance-for-regulated-industry-sectors-environmental-permitting>); additional guidance ‘The production of large volume organic chemicals’ (EPR 4.01); ‘Speciality organic chemicals sector’ (EPR 4.02); ‘Inorganic chemicals sector’ (EPR 4.03); and best available techniques reference documents (BREFs) for the chemical sector

Document reference _____

2 If you are applying for a multi-purpose plant, do you have a multi-product protocol in place to control the changes?

No

Yes Provide a copy of your protocol to accompany this application

Document reference _____

3 Does Chapter V of the Industrial Emissions Directive (IED) apply to your activities?

No

Yes Fill in the following

3a List the activities which are controlled under the IED

Installation reference	
Activities	

3b Describe how the list of activities in question 3a above meets the requirements of the IED

Document reference _____

Appendix 3 – Specific questions for the waste incineration sector

If you are proposing to accept clinical waste, please complete your answer to question 3a ‘Technical standards’ with reference to relevant parts of our healthcare waste appropriate measures guidance (see <https://www.gov.uk/guidance/healthcare-waste-appropriate-measures-for-permitted-facilities>)

1a Do you run incineration plants as defined by Chapter IV of the Industrial Emissions Directive (IED)?

- No You do not need to answer any other questions in this appendix
 Yes IED applies

1b Are you subject to IED as

- An incinerator?
 A co-incinerator?

2 Do any of the installations contain more than one incineration line?

- No Now go to question 4
 Yes

3 How many incineration lines are there within each installation?

Fill in a separate table for each installation.

Installation reference		
Number of incineration lines within the installation		
Reference identifiers for each line		

You must provide the information we ask for in questions 4, 5 and 6 below in separate documents. The information must at least include all the details set out in section 2 (‘Key Issues’) of S5.01 ‘Incineration of waste: additional guidance’ (under the sub heading ‘European legislation and your application for an EP Permit’). See <https://www.gov.uk/government/collections/technical-guidance-for-regulated-industry-sectors-environmental-permitting>.

You must answer questions 7 to 13 on the form below.

4 Describe how the plant is designed, equipped and will be run to make sure it meets the requirements of IED, taking into account the categories of waste which will be incinerated

Document reference

5 Describe how the heat created during the incineration and co-incineration process is recovered as far as possible (for example, through combined heat and power, creating process steam or district heating)

Document reference

Appendix 3 – Specific questions for the waste incineration sector, continued

6 Describe how you will limit the amount and harmful effects of residues and describe how they will be recycled where this is appropriate

Document reference _____

For each line identified in question 3, answer questions 7 to 13 below

Question 3 identifier, if necessary _____

7 Do you want to take advantage of the Article 45 (1)(f) allowance (see below) if the particulates, CO or TOC continuous emission monitors (CEM) fail?

No

Yes This allows ‘abnormal operation’ of the incineration plant under certain circumstances when the CEM for releases to air have failed. Annex VI, Part 3(2) sets maximum half hourly average release levels for particulates (150 mg/m³), CO (normal ELV) and TOC (normal ELV) during abnormal operation.

Describe the other system you use to show you keep to the requirements of Article 13(4) (for example, using another CEM, providing a portable CEM to insert if the main CEM fails, and so on).

8 Do you want to replace continuous HF emission monitoring with periodic hydrogen fluoride (HF) emission monitoring by relying on continuous hydrogen chloride (HCl) monitoring as allowed by IED Annex VI, Part 6 (2.3)?

Under this you do not have to continuously monitor emissions for hydrogen fluoride if you control hydrogen chloride and keep it to a level below the HCl ELVs.

No

Yes Please give your reasons for doing this

Appendix 3 – Specific questions for the waste incineration sector, continued

9 Do you want to replace continuous water vapour monitoring with pre-analysis drying of exhaust gas samples, as allowed by IED Annex VI, Part 6 (2.4)?

Under this you do not have to continuously monitor the amount of water vapour in the air released if the sampled exhaust gas is dried before the emissions are analysed.

No

Yes Please give your reasons for doing this

10 Do you want to replace continuous hydrogen chloride (HCl) emission monitoring with periodic HCl emission monitoring, as allowed by IED Annex VI, Part 6 (2.5), first paragraph?

Under this you do not have to continuously monitor emissions for hydrogen chloride if you can prove that the emissions from this pollutant will never be higher than the ELVs allowed.

No

Yes Please give your reasons for doing this

Appendix 3 – Specific questions for the waste incineration sector, continued

11 Do you want to replace continuous HF emission monitoring with periodic HF emission monitoring, as allowed by IED Annex VI, Part 6 (2.5), first paragraph?

Under this you do not have to continuously monitor emissions for hydrogen fluoride if you can prove that the emissions from this pollutant will never be higher than the ELVs allowed.

No

Yes Please give your reasons for doing this

12 Do you want to replace continuous SO₂ emission monitoring with periodic sulphur dioxide (SO₂) emission monitoring, as allowed by IED Annex VI, Part 6 (2.5), first paragraph?

Under this you do not have to continuously monitor emissions for sulphur dioxide if you can prove that the emissions from this pollutant will never be higher than the ELVs allowed.

No

Yes Please give your reasons for doing this

Appendix 3 – Specific questions for the waste incineration sector, continued

13 If your plant uses fluidised bed technology, do you want to apply for a derogation of the CO WID ELV to a maximum of 100 mg/m³ as an hourly average, as allowed by IED Annex VI, Part 3?

No

Does not apply

Yes Please give your reasons for doing this

14 Are you substantially refurbishing an existing installation according to the meaning given in Article 14 of the Energy Efficiency Directive?

No

Yes Please go to question 15

Document reference of the CHP-ready assessment

15 Have you carried out a cost–benefit assessment (CBA) of opportunities for cogeneration (combined heat and power) or district heating under Article 14 of the Energy Efficiency Directive?

No Please provide supporting evidence of why a CBA is not required (for example, an agreement from us)

Document reference of this evidence

Yes Please submit a copy of your CBA

Document reference of the CBA

Appendix 4 – Specific questions for the landfill sector and recovery of hazardous waste on land activities

1. For the landfill sector, provide your Environmental Setting and Installation Design (ESID) report and any other risk assessments to control emissions.

For recovery of hazardous waste on land activities, provide your Environmental Setting and Site Design (ESSD) report and any other risk assessments to control emissions

Document reference _____

2. For recovery of hazardous waste on land activities, provide your Waste Acceptance Procedures (including Waste Acceptance Criteria)

Document reference _____

Refer to our guidance at

<https://www.gov.uk/government/publications/deposit-for-recovery-operators-environmental-permits/waste-acceptance-procedures-for-deposit-for-recovery>

3. Provide your hydrogeological risk assessment (HRA) for the site

Document reference _____

4. Provide your outline engineering plan for the site

Document reference _____

5. Provide your stability risk assessment (SRA) for the site

Document reference _____

6. Provide your landfill gas risk assessment (LFGRA) for the site

Document reference _____

We have developed guidance on these assessments and their reports which can be found at

<https://www.gov.uk/government/collections/environmental-permitting-landfill-sector-technical-guidance>

7. For recovery of hazardous waste on land activities, have you completed a monitoring plan for the site?

No Please refer to the section of your ESSD that explains why this is unnecessary for your site

Document reference of this evidence _____

Yes Document reference _____

8. Have you completed a proposed plan for closing the site and your procedures for looking after the site once it has closed?

No If you have answered 'no' for recovery of hazardous waste on land activities, refer to the section of your ESSD that explains why this is unnecessary for your site

Document reference of this evidence _____

Yes For landfill you must provide a closure and aftercare plan

Document reference _____

Application for an environmental permit Part F1 – Charges and declarations



We recommend you use an Adobe Acrobat product to complete the form. You may not be able to complete the form using different software, such as the PDF reader built into your internet browser

Fill in this part for all applications for:

- installations (excluding new permit and variation applications for intensive farming. Use application form Part B3.5 or C3.5 instead)
- waste operations
- mining waste operations
- medium combustion plant
- specified generators
- water discharges (excluding treated domestic sewage effluent discharges of up to 15 cubic metres (15m³) a day into ground or up to 20 cubic metres (20m³) a day to surface water)
- groundwater activities (excluding small discharges of 15m³ per day or less if using Part B6.5 OR existing small discharges to Source Protection Zone1 if using Part B6.6)

Please check that this is the latest version of the form available from our website.

Please read through this form and the guidance notes that came with it.

The form can be:

- 1) saved onto a computer and then filled in.
- 2) printed off and filled in by hand. Please write clearly in the answer spaces.

We anticipate it will take less than 3 hours to fill in this form if you have all the necessary information available.

Contents

- 1 Working out charges**
- 2 Payment**
- 3 Privacy notice**
- 4 Confidentiality and national security**
- 5 Declaration**
- 6 Application checklist**
- 7 How to contact us**
- 8 Where to send your application**

1 Working out charges

You must fill out this section for all applications except for waste mobile plant and Part B surrender notifications.

You have to submit an application fee with your application. For guidance on the fee and how to pay your charges, please see our charging guidance (<https://www.gov.uk/government/publications/environmental-permitting-charges-guidance>) and the current charging scheme <https://www.gov.uk/government/publications/environmental-permits-and-abstraction-licences-tables-of-charges>. You can also contact us for pre-application advice to help work out the charges.

Please note that there is an annual subsistence charge to cover the costs we incur in the ongoing regulation of the permit.

Table 1 – Type and number of facilities being applied for

For example, if you are submitting one installation application, enter the number one into the first column.

Installation	Waste	Mining waste	Medium Combustion Plant (MCP)/ Specified Generator (SG)	Water discharge	Groundwater activity
1					

Table 2 – General application charge (A)

Charge activity reference from the charging scheme tables	Charge activity description from the charging scheme tables	What are you applying for? For example, a new permit, minor variation, normal variation, substantial variation, surrender, low risk surrender, transfer	Amount
e.g. 1.17.3	e.g. Section 5.2 – landfill for hazardous waste	e.g. transfer application	e.g. £5,561
1.16.1.2	Section 5.3 (a) (ii)	Substantial variation	£14,401
1.16.4	Section 5.6	Substantial variation	£1,216.70
1.16.2.2	Section 5.4 (a)(ii)	Substantial variation	£6,049.50
Total A			£21,667.20

1 Working out charges, continued

Table 3 – Additional assessment charges (B)

Part 1.19 Charges for plans and assessments			Tick appropriate
Reference	Plan or assessment	Charge	
1.19.1	Waste recovery plan or variation or revision of a waste recovery plan.	£1,231	<input type="checkbox"/>
1.19.2	Habitats assessment (except where the application activity is a flood risk activity, water discharge or groundwater activity).	£779	<input type="checkbox"/>
1.19.3	Fire prevention plan (except where the application activity is a farming installation).	£1,241	<input type="checkbox"/>
1.19.4	Pests management plan (except where the application activity is a farming installation).	£1,241	<input type="checkbox"/>
1.19.5	Emissions management plan (except where the application activity is a farming installation).	£1,241	<input type="checkbox"/>
1.19.6	Odour management plan (except where the application activity is a farming installation).	£1,246	<input type="checkbox"/>
1.19.7	Noise and vibration management plan (except where the application activity is a farming installation).	£1,246	<input type="checkbox"/>
1.19.8	Ammonia modelling assessment	£620	<input type="checkbox"/>
1.19.9	Dust and bio-aerosol management plan.	£620	<input type="checkbox"/>
1.19.10	Habitats assessment for discharges to water and groundwater activities.	£2,218	<input type="checkbox"/>
1.19.11	Specific Substances Assessment for a water discharge activity to surface water.	£4,114	<input type="checkbox"/>
1.19.12	Specific Substances Assessment for a groundwater activity.	£1,685	<input type="checkbox"/>
	Advertising	£538	<input type="checkbox"/>
Total B			

Total charges

Add the total charges from Table 1 to the total charges from Table 2 (total A plus total B)

£21,667.20

2 Payment

You must fill out this section for all applications except for waste mobile plant and Part B surrender notifications.

Tick below to show how you have paid.

- Cheque
- Credit or debit card
- Electronic transfer (for example, BACS)

Cheques

You should make cheques payable to 'Environment Agency' and make sure they have 'A/c Payee' written across them if it is not already printed on.

2 Payment, continued

Please write the name of your company and application reference number on the back of your cheque. We will not accept cheques with a future date on them.

Credit/debit cards

If you are paying by credit or with debit card we will call you. We can accept payments by Visa, MasterCard or Maestro card only.

Call me to arrange payment by debit or credit card

Electronic transfer BACS

If you choose to pay by electronic transfer, you will need to use the following information to make your payment:

Company name	Environment Agency
Company address	SSCL (Environment Agency), PO Box 797, Newport Gwent, NP10 8FZ
Bank	RBS/NatWest
Address	London Corporate Service Centre, CPB Services, 2nd Floor, 280 Bishopsgate, London EC2M 4RB
Sort code	60-70-80
Account number	10014411
Account name	EA RECEIPTS
Payment reference number	PSCAPPXXXXYYY

You need to create your own reference number. It should begin with PSCAPPWASTE (Waste), PSCAPPINST (Installation), PSCAPPWQ (Water Quality) (to reflect the facility type) and it should include the first five letters of the company name (replacing the X's in the above reference number) and a unique numerical identifier (replacing the Y's in the above reference number). The reference number that you supply will appear on our bank statements.

You should also email your payment details and reference number to ea_fsc_ar@gov.sscl.com.

If you are making your payment from outside the United Kingdom, it must be in sterling. Our IBAN number is GB23NWBK60708010014411 and our SWIFTBIC number is NWBKGB2L.

If you do not quote your reference number, there may be a delay in processing your payment and application.

Provide a unique reference number for the application, i.e. do not only use the company name only

PSCAPPAUGEA001

State who is paying (full name and whether this is the agent/applicant/other)

Augean Treatment Limited - Applicant

Fee paid

£ 21,667.20

Date payment sent (DD/MM/YYYY)

31/10/2025

3 Privacy notice

The Environment Agency runs the environmental permit application service.

See <https://www.gov.uk/guidance/environmental-permits-privacy-notice> for how we use your personal information in services to support environmental permitting.

4 Confidentiality and national security

Confidentiality

We will normally put all the information in your application on a public register of environmental information. However, we may not include certain information in the public register if this is in the interests of national security, or because the information is confidential.

You can ask for information to be made confidential by enclosing a letter with your application giving your reasons. If we agree with your request, we will tell you and not include the information in the public register. If we do not agree with your request, we will let you know how to appeal against our decision, or you can withdraw your application. You can find guidance on confidentiality in ‘Environmental permitting guidance: core guidance’, published by Defra and available at <https://www.gov.uk/government/publications/environmental-permitting-guidance-core-guidance--2>.

Only tick the box below if you wish to claim confidentiality for parts of your application

Please treat the specified information in my application as confidential

National security

You can tell the Secretary of State that you believe including information on a public register would not be in the interests of national security. You must enclose a letter with your application telling us that you have told the Secretary of State and you must still include the information in your application. We will not include the information in the public register unless the Secretary of State decides that it should be included.

You can find guidance on national security in ‘Environmental permitting guidance: core guidance’, published by Defra and available at <https://www.gov.uk/government/publications/environmental-permitting-guidance-core-guidance--2>

You cannot apply for national security via this application.

Now fill in section 5

5 Declaration

If you knowingly or recklessly make a statement that is false or misleading to help you get an environmental permit (for yourself or anyone else), you may be committing an offence under the Environmental Permitting (England and Wales) Regulations 2016.

A relevant person should make the declaration (see the guidance notes on part F1). An agent acting on behalf of an applicant is NOT a relevant person.

Each individual (or individual trustee) who is applying for their name to appear on the permit must complete this declaration. You will have to print a separate copy of this page for each additional individual to complete.

If you are transferring all or part of your permit, both you and the person receiving the permit must make the declaration. You must fill in the declaration directly below; the person receiving the permit must fill in the declaration under the heading ‘For transfers only’.

5 Declaration, continued

Note: we will issue a letter to both current and new holders to confirm the transfer. If you are changing address we will need to send this letter to your new address; therefore please tell us your new address in a separate letter.

If you are unable to trace one or more of the current permit holders please see below under the transfers declaration.

I declare that the information in this application is true to the best of my knowledge and belief. I understand that this application may be refused or approval withdrawn if I give false or incomplete information.

If you deliberately make a statement that is false or misleading in order to get approval you may be prosecuted.

- Tick this box to confirm that you understand and agree with the declaration above, then fill in the details below (you do not have to provide a signature as well)
- I confirm that my standard facility will fully meet the rules that I have applied for (this only applies if the application includes standard facilities)
- Tick this box if you do not want us to use information from any ecological survey that you have supplied with your application (for further information please see the guidance notes on part F1)

Name

Title

Mr

First name

Gary

Last name

Bower

on behalf of (if relevant; for example, a company or organisation and so on)

Augean Treatment Limited

Position (if relevant; for example, a company or organisation and so on)

Director of Corporate Stewardship

Today's date (DD/MM/YYYY)

31/10/2025

For transfers only – declaration for person receiving the permit

A relevant person should make the declaration (see the guidance notes on part F1). An agent acting on behalf of an applicant is NOT a relevant person.

I declare that the information in this application to transfer an environmental permit to me is true to the best of my knowledge and belief. I understand that this application may be refused or approval withdrawn if I give false or incomplete information.

Note: If you cannot trace a person or persons holding the permit you may be able to transfer the permit without their declaration as above. Please contact us to discuss this and supply evidence in your application to confirm you are unable to trace one or all of the permit holders.

If you deliberately make a statement that is false or misleading in order to get approval you may be prosecuted.

5 Declaration, continued

- Tick this box to confirm that you understand and agree with the declaration above, then fill in the details below (you do not have to provide a signature as well)

Name

Title

First name

Last name

on behalf of (if relevant; for example, a company or organisation and so on)

Position (if relevant; for example, a company or organisation and so on)

Today's date (DD/MM/YYYY)

Now go to section 6

6 Application checklist

You must fill in this section.

If your application is not complete, we will return it to you. If you aren't sure about what you need to send, contact us before you submit your application. For further information on pre-application advice, see <https://www.gov.uk/guidance/get-advice-before-you-apply-for-an-environmental-permit>.

You must do the following:

- Complete legibly all parts of the application form that are relevant to you and your activities
- Identify relevant supporting information in the form and send it with the application
- List all the documents you are sending in the table below.
- For new permit applications or any changes to the site plan, provide a plan that meets the standards given in the guidance note on part F1
- Provide a supporting letter for any claim that information is confidential
- Get the declaration completed by a relevant person (not an agent)
- Send the correct fee

7 How to contact us

If you have difficulty filling in this form, please contact the person who sent it to you or contact us as shown below.

General enquiries: 03708 506 506 (Monday to Friday, 8am to 6pm)

Textphone: 03702 422549 (Monday to Friday, 8am to 6pm)

Email: enquiries@environment-agency.gov.uk

Website: www.gov.uk/government/organisations/environment-agency

If you are happy with our service, please tell us. It helps us to identify good practice and encourages our staff. If you're not happy with our service, please tell us how we can improve.

Please tell us if you need information in a different language or format (for example, in large print) so we can keep in touch with you more easily.

8 Where to send your application

For how many copies to send see the guidance note on part F1.

Please send your filled in application form and supporting documents to:

For water discharges and groundwater activities by email to

PSC-WaterQuality@environment-agency.gov.uk

For waste, installations, medium combustion plant and specified generators by email to

PSC@environment-agency.gov.uk

For large electronic documents (too large for email attachment) you can upload your applications to file sharing sites and send us a link to download the documents. Alternatively, you can send more than one email with documents attached.

Or by post to:

Permitting Support, NPS Sheffield
Quadrant 2
99 Parkway Avenue
Parkway Business Park
Sheffield
S9 4WF

Do you want all information to be sent to you by email?

- Please tick this box if you wish to have all communication about this application sent via email (we will use the details provided in the Part A form).

Feedback

(You don't have to answer this part of the form, but it will help us improve our forms if you do.)

We want to make our forms easy to fill in and our guidance notes easy to understand. Please use the space below to give us any comments you may have about this form or the guidance notes that came with it.

How long did it take you to fill in this form?

We will use your feedback to improve our forms and guidance notes.

Would you like a reply to your feedback?

- Yes please
 No thank you

For Environment Agency use only

Date received (DD/MM/YYYY)

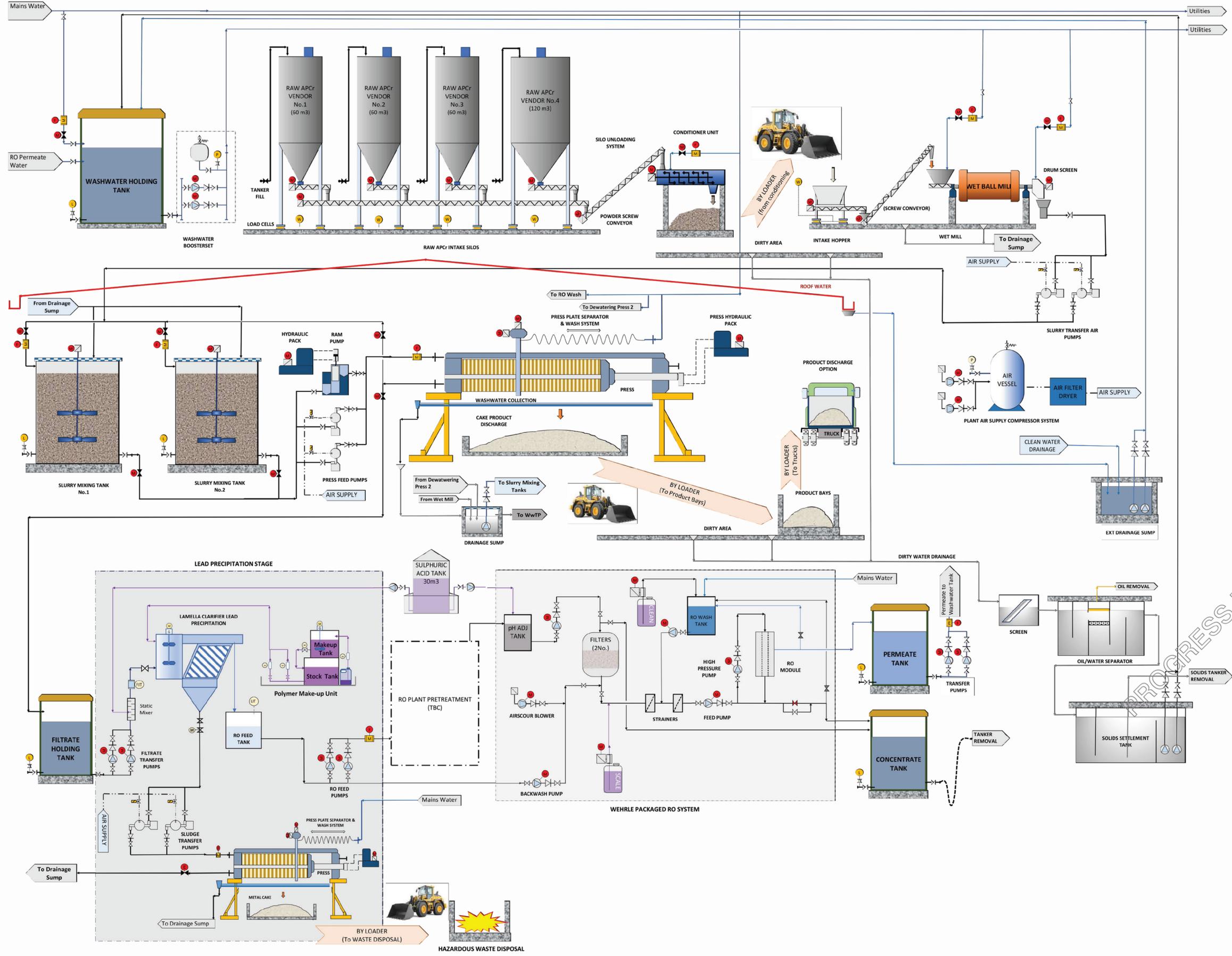
Our reference number

Payment received?

- No
 Yes

Amount received (£)

Appendix B – Process Flow Diagram



Rev	Date	By	Description	Chkd.
2	24/09/24	SA	ISSUE 3 - FOR REVIEW	HvdP
1	17/09/24	SA	ISSUE 2 - FOR REVIEW	HvdP
0	9/09/24	SA	ISSUE 1 - FOR REVIEW	HvdP

REVISION DETAILS

Innovative Ash Solutions Ltd
Levensat, by Forth, Limerick, M11 8P
Ph: 0151 24228 Fax: 113
Mobile: 0754131165
Email: innovativeashsolutions@outlook.com
Company Registration No SC365613
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WEW Engineering Ltd
388 Hebron Business Park,
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email: info@weweng.ie
www.weweng.ie

Client: **INNOVATIVE ASH SOLUTIONS**

Title: **LEVENSAT APCR PLANT
PROCESS FLOW DIAGRAM**

Plot Scale:	Drawn:	Checked:	Date Drawn:	Revision:
NTS	SA	HvdP	24/09/2024	2

Drawing No: 572-101 File Name: 572-101.dwg

Appendix C – BAT Assessment



Augean Treatment Limited

WASTE TREATMENT BAT CONCLUSIONS ASSESSMENT

Permit Variation Application





Augean Treatment Limited

WASTE TREATMENT BAT CONCLUSIONS ASSESSMENT

Permit Variation Application

TYPE OF DOCUMENT (VERSION) CONFIDENTIAL

PROJECT NO. UK0042762.3116

DATE: OCTOBER 2025



Augean Treatment Limited

WASTE TREATMENT BAT CONCLUSIONS ASSESSMENT

Permit Variation Application

WSP

8 First Street
Manchester
M15 4RP

Phone: +44 161 200 5000

WSP.com



QUALITY CONTROL

Issue/revision	First issue	Revision 1
Remarks	Draft v1	Final v1
Date	22/10/2025	31/10/2025
Prepared by	Claudia Lee	Claudia Lee
Checked by	Jack Stevens	Jack Stevens
Authorised by	Stuart Clayton	Stuart Clayton
Project number	UK0042762.3116	UK0042762.3116



CONTENTS

BAT CONCLUSIONS

1



WASTE TREATMENT BREF DOCUMENT (OCTOBER 2018) - BAT CONCLUSIONS

BAT Conclusion	Current / Proposed Arrangements	Compliant?
GENERAL BAT CONCLUSIONS		
Overall Environmental Performance		
<p>BAT 1: In order to improve the overall environmental performance, BAT is to implement and adhere to an environmental management system (EMS) that incorporates all of the following features:</p> <ol style="list-style-type: none"> I. commitment of the management, including senior management; II. definition, by the management, of an environmental policy that includes the continuous improvement of the environmental performance of the installation; III. planning and establishing the necessary procedures, objectives and targets, in conjunction with financial planning and investment; IV. implementation of procedures paying particular attention to: <ol style="list-style-type: none"> a. structure and responsibility, b. recruitment, training, awareness and competence, c. communication, d. employee involvement, e. documentation, f. effective process control, 	<p>The Port Clarence WRP currently operates under an EMS which is certified to ISO 14001 (certificate ref. EMS 77070, effective date 07/10/2024). The EMS is currently compliant with BAT and the new activities proposed in this variation will be incorporated into the EMS once the permit has been approved. This will include new relevant operational procedures and processes related to the new APCr ash washing process.</p> <p>The current EMS for the Port Clarence WRP is integral to Auegan's wider UK operations where the EMS is reviewed by senior management on a regular basis and is an important management system within the companies' operations.</p>	Yes

<ul style="list-style-type: none"> g. maintenance programmes, h. emergency preparedness and response, i. safeguarding compliance with environmental legislation; <p>V. checking performance and taking corrective action, paying particular attention to:</p> <ul style="list-style-type: none"> a. monitoring and measurement (see also the JRC Reference Report on Monitoring of emissions to air and water from IED installations – ROM), b. corrective and preventive action, c. maintenance of records, d. independent (where practicable) internal or external auditing in order to determine whether or not the EMS conforms to planned arrangements and has been properly implemented and maintained; <p>VI. review, by senior management, of the EMS and its continuing suitability, adequacy and effectiveness;</p> <p>VII. following the development of cleaner technologies;</p> <p>VIII. consideration for the environmental impacts from the eventual decommissioning of the plant at the stage of designing a new plant, and throughout its operating life;</p> <p>IX. application of sectoral benchmarking on a regular basis;</p> <p>X. waste stream management (see BAT 2);</p> <p>XI. an inventory of waste water and waste gas streams (see BAT 3);</p>		
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<p>XII. residues management plan (see description in Section 6.6.5);</p> <p>XIII. accident management plan (see description in Section 6.6.5);</p> <p>XIV. odour management plan (see BAT 12);</p> <p>XV. noise and vibration management plan (see BAT 17).</p>		
<p>BAT 2: In order to improve the overall environmental performance of the plant, BAT is to use all of the techniques given below.</p> <ul style="list-style-type: none"> a. Set up and implement waste characterisation and pre-acceptance procedures b. Set up and implement waste acceptance procedures c. Set up and implement a waste tracking system and inventory d. Set up and implement an output quality management system e. Ensure waste segregation f. Ensure waste compatibility prior to mixing or blending of waste g. Sort incoming solid waste 	<p>The environmental impacts of Augean’s activities are controlled via the EMS and site-specific design/infrastructure considerations, coupled with continuous improvement commitments to environmental performance.</p> <p>The proposed new activities at the installation utilises APCr, which is a waste that is already accepted at the facility, therefore existing BAT compliant procedures will require no amendments to support the changes. For example, the installation already has existing pre-acceptance, acceptance and waste tracking procedures in place.</p> <p>A new change to the installation will be procedures to manage the output quality of the end of waste (EoW) material. This will be managed in accordance with the Environment Agency’s EoW decision notice with a quality management system being incorporated into the installations existing EMS.</p>	<p>Yes</p>
<p>BAT 3: In order to facilitate the reduction of emissions to water and air, BAT is to establish and to maintain an inventory of waste water and waste gas streams, as part of the environmental management system (see BAT 1), that incorporates all of the following features:</p> <ul style="list-style-type: none"> i. information about the characteristics of the waste to be treated and the waste treatment processes, including: 	<p>The proposed activities will have no new emissions to air or water, under normal operation. There will be four new emission points associated with the PRVs on the storage silos, emission release from these points will only be under conditions of high pressure within the silos and will be suitably abated by reverse jet bag filter systems, to prevent release of APCr material.</p> <p>The installation will be collecting information on the waste/APCr characteristics to ensure compliance with the EoW product and through waste acceptance procedures.</p>	<p>Yes</p>

<ul style="list-style-type: none"> a. simplified process flow sheets that show the origin of the emissions; b. descriptions of process-integrated techniques and waste water/waste gas treatment at source including their performances; ii. information about the characteristics of the waste water streams, such as: <ul style="list-style-type: none"> a. average values and variability of flow, pH, temperature, and conductivity; b. average concentration and load values of relevant substances and their variability (e.g. COD/TOC, nitrogen species, phosphorus, metals, priority substances / micropollutants); c. data on bioeliminability (e.g. BOD, BOD to COD ratio, Zahn-Wellens test, biological inhibition potential (e.g. inhibition of activated sludge)) (see BAT 52); iii. information about the characteristics of the waste gas streams, such as: <ul style="list-style-type: none"> a. average values and variability of flow and temperature; b. average concentration and load values of relevant substances and their variability (e.g. organic compounds, POPs such as PCBs); c. flammability, lower and higher explosive limits, reactivity; d. presence of other substances that may affect the waste gas treatment system or plant safety (e.g. oxygen, nitrogen, water vapour, dust). 	<p>Wastewater streams will also be monitored for recirculation into the process with some quantities of wastewater being tankered off site to an appropriately permitted facility.</p> <p>A simplified process flow diagram is included in Appendix B and the expected composition values for waste water are included in the Supporting Report in Section 2.4.</p>	
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<p>BAT 4: In order to reduce the environmental risk associated with the storage of waste, BAT is to use all of the techniques given below.</p> <ul style="list-style-type: none"> a. Optimised storage location b. Adequate storage capacity c. Safe storage operation d. Separate area for storage and handling of packaged hazardous waste 	<p>APCr will be stored in specifically designed storage silos away from other activities to allow for their safe acceptance onto the installation. This is in a secure area within the current permit boundary. Adequate storage capacity will be provided by the ash storage silo, including sufficient buffer capacity to allow for any periods of planned or unplanned processing downtime. There will be no packaged hazardous waste introduced to the site as a result of this permit variation.</p> <p>Processed APCr will be stored in specifically designed storage bays to allow for the material to mature and to allow compliance with the EoW process. Again, adequate storage capacity has been designed within a suitable safe and optimised location.</p>	<p>Yes</p>
<p>BAT 5: In order to reduce the environmental risk associated with the handling and transfer of waste, BAT is to set up and implement handling and transfer procedures.</p>	<p>As the site is operational, there are suitably trained and experienced staff already on site. All handling of APCr will continue to be undertaken by trained and competent staff and procedures will be adhered to for the pre-acceptance, acceptance and transfer of APCr.</p>	<p>Yes</p>
<p>Monitoring</p>		
<p>BAT 6: For relevant emissions to water as identified by the inventory of waste water streams (see BAT 3), BAT is to monitor key process parameters (e.g. waste water flow, pH, temperature, conductivity, BOD) at key locations (e.g. at the inlet and/or outlet of the pretreatment, at the inlet to the final treatment, at the point where the emission leaves the installation).</p>	<p>There are to be no new emissions to water as a result of the changes outlined in this permit variation application.</p>	<p>N/A</p>
<p>BAT 7: BAT is to monitor emissions to water with at least the frequency given, and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.</p>	<p>There are to be no new emissions to water as a result of the changes outlined in this permit variation application.</p>	<p>N/A</p>



<p>BAT 8: BAT is to monitor channelled emissions to air with at least the frequency given, and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.</p>	<p>There will be four new emission points introduced in the new APCr washing plant. These will be associated with the PRVs fitted to the raw APCr intake silos, and so under normal operation, there will be no release from such emission points. Release via these emission points will be under abnormal operation only in the unlikely scenario when there is high pressure detected within a silo. Emission points will be suitably abated, with a reverse jet bag filter.</p>	<p>N/A</p>
<p>BAT 9: BAT is to monitor diffuse emissions of organic compounds to air from the regeneration of spent solvents, the decontamination of equipment containing POPs with solvents, and the physico-chemical treatment of solvents for the recovery of their calorific value, at least once per year using one or a combination of the techniques given below.</p> <ul style="list-style-type: none"> a. Measurement b. Emissions factors c. Mass balance 	<p>Solvent use is not a feature of the new process to be introduced to the WRP as part of this permit variation application.</p>	<p>N/A</p>
<p>BAT 10: BAT is to periodically monitor odour emissions.</p>	<p>No odorous emissions are expected to be produced as a result of the new process being introduced. The process is to be enclosed and there will be no odorous material involved. Therefore, monitoring of odour emissions is not required at the WRP.</p>	<p>N/A</p>
<p>BAT 11: BAT is to monitor the annual consumption of water, energy and raw materials as well as the annual generation of residues and waste water, with a frequency of at least once per year.</p>	<p>Annual consumption of water, energy, raw materials, residues and wastewater is already recorded at the site, and this will be continued to be monitored across the facility (incorporating the proposed changes), with PLC / HMI / SCADA flowmeters used for incoming and process flows. Plant HMI will record water usage.</p>	<p>Yes</p>
<p>Emissions to Air</p>		

<p>BAT 12: In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:</p> <ul style="list-style-type: none"> ▪ a protocol containing actions and timelines; ▪ a protocol for conducting odour monitoring as set out in BAT 10; ▪ a protocol for response to identified odour incidents, e.g. complaints; ▪ an odour prevention and reduction programme designed to identify the source(s); to characterise the contributions of the sources; and to implement prevention and/or reduction measures. 	<p>An odour management plan is not required at the facility, as the processes do not involve inherently odorous materials. The process to be introduced as a result of this permit variation is not expected to increase the likelihood of odour generation at the facility and so an odour management plan is not required.</p>	<p>N/A</p>
<p>BAT 13: In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to use one or a combination of the techniques given below.</p> <ul style="list-style-type: none"> a. Minimising residence times b. Using chemical treatment c. Optimising aerobic treatment 	<p>It is not anticipated that odour generation at the site will be increased as a result of the changes outlined in this permit variation.</p>	<p>N/A</p>
<p>BAT 14: In order to prevent or, where that is not practicable, to reduce diffuse emissions to air, in particular of dust, organic compounds and odour, BAT is to use an appropriate combination of the techniques given below.</p> <ul style="list-style-type: none"> a. Minimising the number of potential diffuse emission sources b. Selection and use of high-integrity equipment c. Corrosion prevention d. Containment, collection and treatment of diffuse emissions 	<p>Organic compounds and odour are not expected to require mitigation, due to the nature of the waste being processed in the ash washing process.</p> <p>Ash storage silos are to be fitted with a high-pressure alarm and a pressure vents, which is filtered by a reverse jet bag filter in order to avoid any spillages from the silo. Conditioning bays are stored under cover, which will prevent the release of fugitive emissions. The conditioning process involves the addition of water, which also acts as a dampening mechanism to prevent dust release. Water can be added, as and when required, to further dampen the material. Further to this, the</p>	<p>Yes</p>

<ul style="list-style-type: none"> e. Dampening f. Maintenance g. Cleaning of waste treatment and storage areas h. Leak detection and repair (LDAR) programme 	<p>majority of the equipment to be used in relation to the process will be enclosed.</p>	
<p>BAT 15: BAT is to use flaring only for safety reasons or for non-routine operating conditions (e.g. start-ups, shutdowns) by using both of the techniques given below.</p> <ul style="list-style-type: none"> a. Correct plant design b. Plant management 	<p>Not applicable.</p>	<p>N/A</p>
<p>BAT 16: In order to reduce emissions to air from flares when flaring is unavoidable, BAT is to use both of the techniques given below.</p> <ul style="list-style-type: none"> a. Correct design of flaring devices b. Monitoring and recording as part of flare management 	<p>Not applicable.</p>	<p>N/A</p>
<p>Noise and Vibrations</p>		
<p>BAT 17: In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to set up, implement and regularly review a noise and vibration management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:</p> <ul style="list-style-type: none"> I. a protocol containing appropriate actions and timelines; II. a protocol for conducting noise and vibration monitoring; III. a protocol for response to identified noise and vibration events, e.g. complaints; 	<p>Using the EA's Noise Advisory Tool, the need for a Noise Impact Assessment and also a Noise Management Plan have been screened out. Full details and justification is provided in the Supporting Report 4.5. The basis for screening out noise is predominantly that equipment required for the new APCr washing process will be sheltered and there is also a large distance from infrastructure to the nearest receptors. Nearest receptors are also located in an area that will be susceptible to other noise-generating sources. Therefore, there is no significant increased risk of noise-related nuisance and therefore, the requirement for a noise and vibration management plan is ruled out.</p>	<p>N/A</p>

<p>IV. a noise and vibration reduction programme designed to identify the source(s), to measure/estimate noise and vibration exposure, to characterise the contributions of the sources and to implement prevention and/or reduction measures.</p>		
<p>BAT 18: In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to use one or a combination of the techniques given below.</p> <ul style="list-style-type: none"> a. Appropriate location of equipment and buildings b. Operational measures c. Low-noise equipment d. Noise and vibration control equipment e. Noise attenuation 	<p>As stated above and discussed in more detailed in Supporting Report 4.5, the location of new equipment and buildings for the new ash washing process is suitable as it is far from receptors and there will be sheltering of noisy equipment via enclosure within buildings.</p> <p>During the design phase, infrastructure has been designed to use equipment that has low noise generation and adequate sound insulation wherever possible to reduce the overall noise impact from the new activities where possible. The new operational procedures will be integrated to those already undertaken on site to ensure that there is no double handling of materials for example to avoid any unnecessary operations that could result in noise being generated.</p>	<p>Yes</p>
<p>Emissions to Water</p>		
<p>BAT 19: To optimise water consumption, to reduce the volume of waste water generated and to prevent, or, where that is not practicable, to reduce emissions to soil and water, BAT is to use an appropriate combination of the following techniques:</p> <ul style="list-style-type: none"> a. Water management; b. Water recirculation; c. Impermeable surface; d. Techniques to reduce the likelihood and impact of overflows and failures from tanks and vessels; e. Roofing of waste storage and treatment areas; f. Segregation of water streams; 	<p>Water is a key aspect of the new ash washing treatment process. As outlined above, to provide for the required 300,000 m³ of water per annum (based on a 5:1 wash cycle of 60,000 tpa throughput of the plant) mains supply will be supplemented by rainwater capture and water re-use, using reverse osmosis treatment. Mains supply will provide for the start-up water, as well as rainwater harvested water. Reverse osmosis will treat and recovery 60% of this for reuse, meaning that there is a balance of 120,000 m³ required per annum, which will be supplied by mains supply and rainwater capture, equally.</p> <p>Water balancing is to be managed by PLC / HMI / SCADA systems.</p>	<p>Yes</p>

<ul style="list-style-type: none"> g. Adequate drainage infrastructure; h. Design and maintenance provisions to allow detection and repair of leaks; and i. Appropriate buffer storage capacity. 	<p>All washing and yard run-off will be captured for reuse in the ash washing process. 'Clean' and 'dirty' rainwater from the operational area is recovered and reused. This will be from all possible areas, including roof run-off and from yard surfacing. These areas will be served by separate drainage arrangements to ensure that they are not combined, causing unnecessary contamination.</p> <p>Concentrated brine that is produced from treatment of water for reuse will be tankered off-site to a third-party treatment facility, where it will undergo further treatment (e.g. metal precipitation) and discharge / disposal.</p> <p>Developments in the water treatment available are currently being investigated by Augean, including salt recovery options which aims to reduce the volume of reverse osmosis concentrate that is tankered off-site, which would therefore allow a greater volume to be reused in the process.</p> <p>The drainage systems will continue to be subject to routine planned preventative inspection and maintenance regimes. This will ensure integrity is maintained and that loss of water that could be reused is prevented as far as possible. Inspections and preventative maintenance will extend to all infrastructure involved in the APCr recovery process that is discussed as part of this permit variation application. This will ensure that all necessary containment remains effective, and water loss is prevented. Any defects or leaks identified will be repaired. New tanks and equipment will be designed and installed as above ground components in order to facilitate inspection and maintenance regimes.</p>	
<p>BAT 20: In order to reduce emissions to water, BAT is to treat waste water using an appropriate combination of the techniques given below.</p> <p>Preliminary and primary treatment, e.g.</p> <ul style="list-style-type: none"> a. Equilisation 	<p>There are no new emissions to water introduced by this permit variation, as wastewater arising from the wastewater treatment process will be tankered off-site (non-hazardous composition) to an alternative waste treatment facility. Prior to dispatch from site, wastewater from the process / collected surface water run-off undergoes a reverse osmosis treatment, to remove and concentrate contaminants</p>	<p>Yes</p>

<ul style="list-style-type: none"> b. Neutralisation c. Physical separation, e.g. screens, sieves, grit separators, grease separators, oil-water separation or primary settlement tanks <p>Physico-chemical treatment, e.g.</p> <ul style="list-style-type: none"> d. Adsorption e. Distillation/rectification f. Precipitation g. Chemical oxidation h. Chemical reduction i. Evaporation j. Ion exchange k. Stripping <p>Biological treatment</p> <ul style="list-style-type: none"> l. Activated sludge process m. Membrane bioreactor n. Nitrification/denitrification when the treatment includes a biological treatment <p>Solids removal, e.g.</p> <ul style="list-style-type: none"> o. Coagulation and flocculation p. Sedimentation q. Filtration (e.g. sand filtration, microfiltration, ultrafiltration) r. Flotation 		
<p>Emissions from Accident and Incidents</p>		

<p>BAT 21: In order to prevent or limit the environmental consequences of accidents and incidents, BAT is to use all of the techniques given below, as part of the accident management plan (see BAT 1).</p> <ul style="list-style-type: none"> a. Protection measures b. Management of incidental / accidental emissions c. Incident / accident registration and assessment system 	<p>As the site is operational, an accident management plan is already implemented. Arrangements will be reviewed and updated (where necessary) to ensure that the new APCr washing process is accounted for. Various measures are to be embedded into the new process that are discussed in more detail in the Supporting Report Section 6.</p>	<p>BAT</p>
<p>Material Efficiency</p>		
<p>BAT 22: In order to use materials efficiently, BAT is to substitute materials with waste.</p>	<p>The key material to be processed through the ash washing process at the Port Clarence WRP is a waste material (APCr) itself, that is already accepted at the facility. Therefore, there are no additional risks imposed in relation to hazardous materials, as APCr is already accepted and handled – it will simply be reallocated to this process, for recovery and production of an EoW product.</p> <p>Other raw materials that will be used are required for the new water treatment processes. These include flocculants / coagulants and hydrochloric / sulphuric acid - these will be required to ensure that water can be reused throughout the process, reducing the demand on mains supply. These specific chemicals will be selected for the required resultant composition, and it will not be possible for them to be substituted with waste-derived materials.</p> <p>Water will also be a key factor within this process – as detailed above, water consumption will be optimised as far as possible within the new APCr recovery process, via run-off capture and wastewater reuse to be implemented. Further details on the reuse process are included in the Supporting Report Section 1.2.1. A significant proportion of the wastewater generated will be treated and recirculated for re-use in the process, reducing the consumption of mains supply water. Highlighted in Figure 2-5 in the Supporting Document,</p>	<p>Yes</p>

	areas from which run-off will be captured are segregated into 'clean' and 'dirty' areas, which prevents unnecessary throughput of the water treatment system.	
Energy Efficiency		
<p>BAT 23: In order to use energy efficiently, BAT is to use both of the techniques given below.</p> <ul style="list-style-type: none"> a. Energy efficiency plan b. Energy balance record 	As the installation is operational, measures to ensure energy efficiency are already undertaken and compliant with BAT. The new activities will be factored into the installation's current energy efficiency plan and energy balance record.	Yes
Reuse of Packaging		
<p>BAT 24: In order to reduce the quantity of waste sent for disposal, BAT is to maximise the reuse of packaging, as part of the residues management plan (see BAT 1).</p>	As a result of the introduction of the APCr washing at the facility, there will be no changes required to the handling of packaging as part of the residues management plan. This is because APCr is already accepted at the facility and there are already considerations in place for the packaging. There will not be any anticipated changes in the generation of contaminated packaging arising from the delivery of such materials.	Yes
BAT CONCLUSIONS FOR THE MECHANICAL TREATMENT OF WASTE		
General BAT Conclusions for the Mechanical Treatment of Waste		
<p>BAT 25: In order to reduce emissions to air of dust, and of particulate-bound metals, PCDD/F and dioxin-like PCBs, BAT is to apply BAT 14d and to use one or a combination of the techniques given below.</p> <ul style="list-style-type: none"> a. Cyclone b. Fabric filter c. Wet scrubbing d. Water injection into the shredder 	Mechanical treatment of waste does not form part of the proposed changes introduced in this permit variation.	N/A

BAT Conclusions for the Mechanical Treatment in Shredders of Metal Waste		
<p>BAT 26: In order to improve the overall environmental performance, and to prevent emissions due to accidents and incidents, BAT is to use BAT 14g and all of the techniques given below:</p> <ul style="list-style-type: none"> a. implementation of a detailed inspection procedure for baled waste before shredding; b. removal of dangerous items from the waste input stream and their safe disposal (e.g. gas cylinders, non-depolluted EoLVs, non-depolluted WEEE, items contaminated with PCBs or mercury, radioactive items); c. treatment of containers only when accompanied by a declaration of cleanliness. 	<p>Mechanical treatment in shredders does not form part of the proposed changes introduced in this permit variation.</p>	<p>N/A</p>
<p>BAT 27: In order to prevent deflagrations and to reduce emissions when deflagrations occur, BAT is to use technique a. and one or both of the techniques b. and c. given below.</p> <ul style="list-style-type: none"> a. Deflagration management plan b. Pressure relief dampers c. Pre-shredding 	<p>Mechanical treatment in shredders does not form part of the proposed changes introduced in this permit variation.</p>	<p>N/A</p>
<p>BAT 28: In order to use energy efficiently, BAT is to keep the shredder feed stable.</p>	<p>Mechanical treatment in shredders does not form part of the proposed changes introduced in this permit variation.</p>	<p>N/A</p>
BAT Conclusions for the Treatment of WEEE Containing VFCs and / or VHCs		
<p>BAT 29: In order to prevent or, where that is not practicable, to reduce emissions of organic compounds to air, BAT is to apply BAT 14d, BAT 14h and to use technique a. and one or both of the techniques b. and c. given below.</p>	<p>Treatment of WEEE does not form part of the proposed changes introduced in this permit variation.</p>	<p>N/A</p>



<ul style="list-style-type: none"> a. Optimised removal and capture of refrigerants and oils b. Cryogenic condensation c. Adsorption 		
<p>BAT 30: In order to prevent emissions due to explosions when treating WEEE containing VFCs and/or VHCs, BAT is to use either of the techniques given below.</p> <ul style="list-style-type: none"> a. Inert atmosphere b. Forced ventilation 	<p>Treatment of WEEE does not form part of the proposed changes introduced in this permit variation.</p>	<p>N/A</p>
<p>BAT Conclusions for the Mechanical Treatment of Waste with Calorific Value</p>		
<p>BAT 31: In order to reduce emissions to air of organic compounds, BAT is to apply BAT 14d and to use one or a combination of the techniques given below.</p> <ul style="list-style-type: none"> a. Adsorption b. Biofilter c. Thermal oxidation d. Wet scrubbing 	<p>Mechanical treatment of waste does not form part of the proposed changes introduced in this permit variation.</p>	<p>N/A</p>
<p>BAT Conclusions for the Mechanical Treatment of WEEE Containing Mercury</p>		
<p>BAT 32: In order to reduce mercury emissions to air, BAT is to collect mercury emissions at source, to send them to abatement and to carry out adequate monitoring.</p>	<p>Mechanical treatment and treatment of WEEE do not form part of the proposed changes introduced in this permit variation.</p>	<p>N/A</p>
<p>BAT CONCLUSIONS FOR THE BIOLOGICAL TREATMENT OF WASTE</p>		
<p>General BAT Conclusions for the Biological Treatment of Waste</p>		

<p>BAT 33: In order to reduce odour emissions and to improve the overall environmental performance, BAT is to select the waste input.</p>	<p>Biological treatment of waste does not form part of the proposed changes introduced in this permit variation.</p>	<p>N/A</p>
<p>BAT 34: In order to reduce channelled emissions to air of dust, organic compounds and odorous compounds, including H₂S and NH₃, BAT is to use one or a combination of the techniques given below.</p> <ul style="list-style-type: none"> a. Adsorption b. Biofilter c. Fabric filter d. Thermal oxidation e. Wet scrubbing 	<p>Biological treatment of waste does not form part of the proposed changes introduced in this permit variation.</p>	<p>N/A</p>
<p>BAT 35: In order to reduce the generation of waste water and to reduce water usage, BAT is to use all of the techniques given below.</p> <ul style="list-style-type: none"> a. Segregation of water streams b. Water recirculation c. Minimisation of the generation of leachate 	<p>Biological treatment of waste does not form part of the proposed changes introduced in this permit variation.</p>	<p>N/A</p>
<p>BAT Conclusions for the Aerobic Treatment of Waste</p>		
<p>BAT 36: In order to reduce emissions to air and to improve the overall environmental performance, BAT is to monitor and/or control the key waste and process parameters.</p>	<p>Aerobic treatment of waste does not form part of the proposed changes introduced in this permit variation</p>	<p>N/A</p>
<p>BAT 37: In order to reduce diffuse emissions to air of dust, odour and bioaerosols from open-air treatment steps, BAT is to use one or both of the techniques given below.</p> <ul style="list-style-type: none"> a. Use of semipermeable membrane covers 	<p>Aerobic treatment of waste does not form part of the proposed changes introduced in this permit variation</p>	<p>N/A</p>

<p>b. Adaptation of operations to the meteorological conditions</p>		
<p>BAT Conclusions for the Anaerobic Treatment of Waste</p>		
<p>BAT 38: In order to reduce emissions to air and to improve the overall environmental performance, BAT is to monitor and/or control the key waste and process parameters.</p>	<p>Anaerobic treatment of waste does not form part of the proposed changes introduced in this permit variation</p>	<p>N/A</p>
<p>BAT Conclusions for the Mechanical Biological Treatment (MBT) of Waste</p>		
<p>BAT 39: In order to reduce emissions to air, BAT is to use both of the techniques given below.</p> <ul style="list-style-type: none"> a. Segregation of the waste gas streams b. Recirculation of waste gas 	<p>Mechanical biological treatment of waste does not form part of the proposed changes introduced in this permit variation.</p>	<p>N/A</p>
<p>BAT CONCLUSIONS FOR THE PHYSICO-CHEMICAL TREATMENT OF WASTE</p>		
<p>BAT Conclusions for the Physico-Chemical Treatment of Solid and / or Pasty Waste</p>		
<p>BAT 40: In order to improve the overall environmental performance, BAT is to monitor the waste input as part of the waste pre-acceptance and acceptance procedures (see BAT 2)</p>	<p>APCr that is to be processed through the new ash washing plant is already accepted at the WRP. Therefore, pre-acceptance and acceptance procedures for APCr are already well-established at the site and will continue to be used to support these changes that are being introduced. The APCr will be constantly monitored throughout its time on site to ensure that it complies with the EoW compliant product.</p>	<p>Yes</p>
<p>BAT 41: In order to reduce emissions of dust, organic compounds and NH₃ to air, BAT is to apply BAT 14d and to use one or a combination of the techniques given below.</p> <ul style="list-style-type: none"> a. Adsorption b. Biofilter c. Fabric filter 	<p>There will be four new emission points introduced in the new APCr washing plant. These will be associated with the PRVs fitted to the raw APCr intake silos, and so under normal operation, there will be no release from such emission points. In the unlikely scenario where there is a high-pressure build-up in an APCr storage silo, emission via the PRV will be released, however this will be suitably abated by a reverse jet bag system.</p>	<p>N/A</p>



d. Wet scrubbing		
BAT Conclusions for the Re-Refining of Waste Oil		
BAT 42: In order to improve the overall environmental performance, BAT is to monitor the waste input as part of the waste pre-acceptance and acceptance procedures (see BAT 2).	Re-refining of waste oil does not form part of the proposed changes introduced in this permit variation.	N/A
BAT 43: In order to reduce the quantity of waste sent for disposal, BAT is to use one or both of the techniques given below. a. Material recovery b. Energy recovery	Re-refining of waste oil does not form part of the proposed changes introduced in this permit variation.	N/A
BAT 44: In order to reduce emissions of organic compounds to air, BAT is to apply BAT 14d and to use one or a combination of the techniques given below. a. Adsorption b. Thermal oxidation c. Wet scrubbing	There will be no emissions of organic compounds to air from the new activities.	N/A
BAT Conclusions for the Physico-Chemical Treatment of Waste with Calorific Value		
BAT 45: In order to reduce emissions of organic compounds to air, BAT is to apply BAT 14d and to use one or a combination of the techniques given below. a. Adsorption b. Cryogenic condensation c. Thermal oxidation d. Wet scrubbing	Treatment of waste with a calorific value does not form part of the proposed changes introduced in this permit variation.	N/A



BAT Conclusions for the Regeneration of Spent Solvents		
BAT 46: In order to improve the overall environmental performance of the regeneration of spent solvents, BAT is to use one or both of the techniques given below. <ul style="list-style-type: none">a. Material recoveryb. Energy recovery	Regeneration of spent solvents does not form part of the proposed changes introduced in this permit variation.	N/A
BAT 47: In order to reduce emissions of organic compounds to air, BAT is to apply BAT 14d and to use a combination of the techniques given below. <ul style="list-style-type: none">a. Recirculation of process off-gases in a steam boilerb. Adsorptionc. Thermal oxidationd. Condensation or cryogenic condensatione. Wet scrubbing	Regeneration of spent solvents does not form part of the proposed changes introduced in this permit variation.	N/A
BAT Conclusions for the Thermal Treatment of Spent Activated Carbon, Waste Catalysts and Excavated Contaminated Soil		
BAT 48: In order to improve the overall environmental performance of the thermal treatment of spent activated carbon, waste catalysts and excavated contaminated soil, BAT is to use all of the techniques given below. <ul style="list-style-type: none">a. Heat recovery from the furnace off-gasb. Indirectly fired furnacec. Process-integrated techniques to reduce emissions to air	Thermal treatment does not form part of the proposed changes introduced in this permit variation.	N/A
BAT 49: In order to reduce emissions of HCl, HF, dust and organic compounds to air, BAT is to apply BAT 14d and to use one or a combination of the techniques given below.	Thermal treatment does not form part of the proposed changes introduced in this permit variation.	N/A



<ul style="list-style-type: none"> a. Cyclone b. Electrostatic precipitator (ESP) c. Fabric filter d. Wet scrubbing e. Adsorption f. Condensation g. Thermal oxidation 		
BAT Conclusions for the Water Washing of Excavated Contaminated Soil		
<p>BAT 50: In order to reduce emissions of dust and organic compounds to air from the storage, handling, and washing steps, BAT is to apply BAT 14d and to use one or a combination of the techniques given below.</p> <ul style="list-style-type: none"> a. Adsorption b. Fabric filter c. Wet scrubbing 	<p>Not applicable.</p>	<p>N/A</p>
BAT Conclusions for the Decontamination of Equipment Containing PCBs		
<p>BAT 51: In order to improve the overall environmental performance and to reduce channelled emissions of PCBs and organic compounds to air, BAT is to use all of the techniques given below.</p> <ul style="list-style-type: none"> a. Coating of the storage and treatment areas b. Implementation of staff access rules to prevent dispersion of contamination c. Optimised equipment cleaning and drainage d. Control and monitoring of emissions to air e. Disposal of waste treatment residues 	<p>Decontamination of equipment containing PCBs does not form part of the proposed changes introduced in this permit variation.</p>	<p>N/A</p>



f. Recovery of solvent when solvent washing is used		
BAT CONCLUSIONS FOR THE TREATMENT OF WATER-BASED LIQUID WASTE		
Overall Environmental Performance		
BAT 52: In order to improve the overall environmental performance, BAT is to monitor the waste input as part of the waste pre-acceptance and acceptance procedures (see BAT 2).	Raw APCr to be processed through the new APCr washing plant is not a water-based liquid waste.	N/A Yes
Emissions to Air		
BAT 53: In order to reduce emissions of HCl, NH ₃ and organic compounds to air, BAT is to apply BAT 14d and to use one or a combination of the techniques given below. a. Adsorption b. Biofilter c. Thermal oxidation d. Wet scrubbing	Raw APCr to be processed through the new APCr washing plant is not a water-based liquid waste.	N/A



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Appendix D – Appropriate Measures Assessment



Augean Treatment Limited

CHEMICAL WASTE APPROPRIATE MEASURES ASSESSMENT

Permit Variation Application





Augean Treatment Limited

CHEMICAL WASTE APPROPRIATE MEASURES ASSESSMENT

Permit Variation Application

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Augean Treatment Limited

CHEMICAL WASTE APPROPRIATE MEASURES ASSESSMENT

Permit Variation Application

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CHEMICAL WASTE: APPROPRIATE MEASURES FOR PERMITTED FACILITIES

Table 1 - General Management Appropriate Measures

Appropriate Measures	Current / Proposed Arrangements	Compliant?
Management System		
<p>1. You must have and follow an up-to-date, written management system that incorporates the following environmental performance features:</p> <p>You have:</p> <ul style="list-style-type: none">management commitment, including from senior managersan environmental policy that is approved by senior managers and includes the continuous improvement of the facility's environmental performance <p>You plan and establish the resources, procedures, objectives and targets needed for environmental performance alongside your financial planning and investment.</p> <p>You implement your environmental performance procedures, paying particular attention to:</p> <ul style="list-style-type: none">staff structure and relevant responsibilitiesstaff recruitment, training, awareness and competence	<p>Augean's sites, including the Port Clarence WRP are operated under EMS arrangements certified to ISO 14001 (certificate ref. EMS 77070, effective date 07/10/2024). The EMS is currently compliant to BAT and Environment Agency guidance, and arrangements will be reviewed and updated (if required) to reflect the changes outlined in this permit variation application. However, it is not anticipated that there will be any overarching changes to the EMS required as a result of this permit variation. New relevant operational procedures and processes related to the new APCr washing procedure will be developed, which will include arrangements for start-up and shutdown, inspection and maintenance measures, and various other associated considerations.</p>	<p>Yes</p>

- communication (for example, of performance measures and targets)
- employee involvement
- documentation
- effective process control
- maintenance programmes
- managing change
- emergency preparedness and response
- making sure you comply with environmental legislation

You check environmental performance and take corrective or preventative action, paying particular attention to:

- monitoring and measurement
- learning from incidents, near misses and mistakes, including those of other organisations
- records maintenance
- independent (where practicable) internal or external auditing of the management system to confirm it has been properly implemented and maintained

Senior managers review the management system to check it is still suitable, adequate and effective.

You review the development of cleaner technologies and their applicability to site operations.

When designing new plant, you make sure you assess the environmental impacts from the plant's operating life and eventual decommissioning.

You consider the risks a changing climate poses to your operations. You have appropriate plans in place to assess and manage future risks.

<p>You compare your site's performance against relevant sector guidance and standards on a regular basis, known as sectoral benchmarking.</p> <p>You have and maintain the following documentation:</p> <ul style="list-style-type: none"> ▪ inventory of emissions to air and water ▪ residues management plan ▪ accident management plan ▪ site infrastructure plan ▪ site condition report ▪ odour management plan, if required ▪ noise and vibration management plan, if required ▪ dust management plan, if required ▪ pest management plan, if required ▪ fire prevention plan, if required ▪ climate change risk assessment, if required <p>Your management system can also include, for example, product or service quality, operational efficiency and health and safety in the workplace.</p>		
<p>Staff Competence</p>		
<p>1. Your site must be operated at all times by an adequate number of staff with appropriate qualifications and competence.</p>	<p>As the site is operational, it is already operated by an adequate number of suitably qualified staff. The addition of the APCr washing process at the facility will be accounted for within the staffing arrangements on site.</p> <p>Technically competent managers are already employed on site.</p> <p>The proposed variation is not expected to change the current technical competence requirements. Technically</p>	<p>Yes</p>

	Competent Management (TCM) is in place across the site already. TCM personnel will be available to support the new APCr washing plant.	
2. The design, installation and maintenance of infrastructure, plant and equipment must be carried out by competent people.	<p>As the site is operational, appropriately trained or educated competent people are already involved in arrangements for design, installation and maintenance of infrastructure, plant and equipment. These arrangements will be reviewed and updated to ensure that the new APCr washing process and associated plant and infrastructure are included.</p> <p>The proposed waste activity is developed in a modular fashion by experienced staff with the appropriate knowledge of the proposed waste treatment activity. Should any skills gaps be identified, which is reviewed as part of the EMS, suitable training will be commissioned to be undertaken.</p>	Yes
3. You must have appropriately qualified managers for your waste activity who are members of a government-approved technical competency scheme.	<p>As the site is operational, technically competent managers are already employed on site.</p> <p>The proposed variation is not expected to change the current technical competence requirements.</p>	Yes
4. The person carrying out the technical appraisal of a waste's suitability for receipt at pre-acceptance must have the minimum of a Higher National Certificate (HNC) in chemistry (or equivalent qualification). For the following wastes, technical appraisals must be carried out by a person who has	Pre-acceptance for the APCr is carried out by the Technical Assessment team, which is separate to the Operations team at site level. Pre-acceptance checks would be undertaken by a member of staff with at least a HNC in Chemistry.	Yes

<p>had enough training to determine the suitability of the waste for the site:</p> <ul style="list-style-type: none"> ▪ asbestos ▪ contaminated clothing and rags ▪ 'articles', for example waste electronic equipment or batteries ▪ contaminated wood ▪ solid non-hazardous waste other than 'mirror entries' (where waste may be allocated to a hazardous entry or to a non-hazardous entry according to the European List of Waste) 	<p>APCr that is to be processed through the new APCr washing process to be introduced is already accepted at the WRP. Therefore, there are no required changes to the pre-acceptance procedures and arrangements that are already established. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p>	
<p>5. If you need to sample, check (other than visually), or test a hazardous waste when you accept it, acceptance must be supervised by someone with the minimum of an HNC in chemistry (or equivalent qualification). At sites where the waste needs only a visual check, the person who receives the waste must have had enough training to be able to identify and manage any non-conformances in the load received.</p>	<p>Analysis for the APCr to be received would be undertaken by a member of staff with at least a HNC in Chemistry.</p> <p>Raw APCr that is to be processed through the new APCr washing process to be introduced is already accepted at the WRP. Therefore, there are no required changes to the pre-acceptance procedures and arrangements that are already established.</p>	<p>Yes</p>
<p>6. You must make sure that any required sample is representative of the waste and has been taken by someone technically competent to do so.</p>	<p>Sampling would be undertaken by a suitably trained member of staff under the supervision of a member of staff with at least a HNC in Chemistry.</p> <p>Raw APCr that is to be processed through the new APCr washing process to be introduced is already accepted at the WRP. Therefore, there are no required changes to the pre-acceptance procedures and arrangements that are already established. Incoming</p>	<p>Yes</p>

	APCr will be assessed against different limits / requirements specific to the new APCr washing route.	
7. Any required analysis must be done by someone with the minimum of an HNC in chemistry (or equivalent qualification).	<p>Analysis for the APCr to be received would be undertaken by a member of staff with at least a HNC in Chemistry.</p> <p>Raw APCr that is to be processed through the new APCr washing process to be introduced is already accepted at the WRP. Therefore, there are no required changes to the pre-acceptance procedures and arrangements that are already established. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p>	Yes
8. Non-supervisory staff must be reliable and technically skilled. Their skills may be based on experience and relevant training.	<p>As the site is operational, it is already operated by an adequate number of suitably qualified staff. The addition of the APCr washing process at the facility will be accounted for within the staffing arrangements on site.</p> <p>Competence awareness and training requirements are co-ordinated in accordance with the relevant procedures. This will be reviewed and updated to encompass the necessary aspects of the new APCr washing process.</p>	Yes
Accident Management Plan		
1. As part of your written management system you must have a plan for dealing with any incidents or accidents that could result in pollution.	As outlined above, and discussed in Section 3 of the Supporting Report, the existing EMS arrangements at the WRP (and across Augean's portfolio of sites) are certified to ISO 14001. The arrangements account for a response to accidents and incidents. These will be	Yes

	<p>reviewed and updated (where required) to account for the new process that is being introduced at the WRP. Accidents and their potential impact from the proposed additional activities have been considered as part of the Environmental Risk Assessment (Section 6 of Supporting Report) supporting the application.</p>	
<p>2. The accident management plan must identify and assess the risks the facility poses to human health and the environment.</p>	<p>As outlined above, accident management arrangements are already established across the site and will be reviewed and updated (where necessary) to encompass the changes that are being introduced. These arrangements consider a range of potential risks to the environment or human health and outline how to respond to them. Accidents and their potential impact from the proposed additional activities have been considered as part of the Environmental Risk Assessment (Section 6 of Supporting Report) supporting the application and will be updated into the existing accident management arrangements where necessary.</p>	<p>Yes</p>
<p>3. Particular areas to consider may include:</p> <ul style="list-style-type: none"> ▪ waste types ▪ vessels overflowing ▪ failure of plant and equipment (for example over-pressure of vessels and pipework, blocked drains) ▪ failure of containment (for example, bund failure, or drainage sumps overflowing) ▪ failure to contain firefighting water 	<p>As outlined above, accident management arrangements are already established across the site and will be reviewed and updated (where necessary) to encompass the changes that are being introduced.</p> <p>In particular, measures will be installed within the new APCr washing process to prevent accidents, such as a high-pressure alarm system and pressure vent on the silo that is to receive incoming raw APCr that is to be processed, in order to prevent overflowing. Accidents and their potential impact from the proposed additional activities have been considered as part of the</p>	<p>Yes</p>

<ul style="list-style-type: none"> ▪ making the wrong connections in drains or other systems ▪ preventing incompatible substances coming into contact with each other ▪ unwanted reactions and runaway reactions ▪ checking the composition of an effluent before emission ▪ vandalism and arson ▪ extreme weather conditions, such as flooding or very high winds 	<p>Environmental Risk Assessment (ERA) (Section 6 of Supporting Report) supporting the application and will be updated into the existing accident management arrangements where necessary.</p>	
<p>4. You must assess the risk of accidents and their consequences. Risk is the combination of the likelihood that a hazard will occur, and the severity of the impact resulting from that hazard. Having identified the hazards, you can assess the risks by addressing 6 questions:</p> <ul style="list-style-type: none"> ▪ how likely is it that the accident will happen? ▪ what may be emitted and how much? ▪ where will the emission go – what are the pathways and receptors? ▪ what are the consequences? ▪ what is the overall significance of the risk? ▪ what can you do to prevent or reduce the risk? 	<p>As part of this permit variation application, an ERA has been developed that relates to the changes being introduced. This is included in the Supporting Report (Section 6) and discusses the hazards, potential impacts, likelihood, and overall risk rating.</p>	<p>Yes</p>
<p>5. In particular, you must identify any fire risks, for example from:</p> <ul style="list-style-type: none"> ▪ arson or vandalism ▪ self-combustion, for example due to chemical oxidation ▪ plant or equipment failure and electrical faults ▪ naked lights and discarded smoking materials 	<p>Fire risk from the proposed activities are considered low but the installation has an existing Emergency Plan which details how to respond to a fire for the relevant ignition sources that could occur at the installation.</p> <p>Fire-related risks have been considered in full in the ERA, included in the Supporting Report Section 6.</p>	<p>Yes</p>

<ul style="list-style-type: none"> ▪ hot works (for example welding or cutting), industrial heaters and hot exhausts ▪ reactions between incompatible materials ▪ neighbouring site activities ▪ sparks from loading buckets ▪ hot loads deposited at the site 		
<p>6. The depth and type of accident risk assessment you do will depend on the characteristics of the plant and its location. The main factors to take into account are the:</p> <ul style="list-style-type: none"> ▪ scale and nature of the accident hazard presented by the plant and its activities ▪ risks to areas of population and the environment (the receptors) ▪ nature of the plant and complexity of the activities, and how difficult it is to decide and justify adequate risk control techniques 	<p>An ERA has been developed in relation to the changes proposed, which is included in the Supporting Report Section 6.</p>	<p>Yes</p>
<p>7. Through your accident management plan, you must also identify the roles and responsibilities of the staff involved in managing accidents. You must give them clear guidance on how to manage each accident scenario, for example, whether to use containment or dispersion to extinguish fires, or let them burn.</p>	<p>As the site is operational, roles and responsibilities of staff in relation to accident management are clearly defined and established, particularly as part of the site's EMS arrangements. These will be reviewed and updated to ensure that understanding and management encompasses the new APCr washing process.</p>	<p>Yes</p>
<p>8. You must appoint one facility employee as an emergency co-ordinator who will take lead responsibility for implementing the plan. You must train your employees so they can perform their duties effectively and safely and know how to respond to an emergency.</p>	<p>As the site is operational, an emergency co-ordinator is already existing. Responsibilities and training received will be reviewed in relation to the changes that are being introduced and updated, if necessary.</p>	<p>Yes</p>

<p>9. You must also:</p> <ul style="list-style-type: none"> ▪ establish how you will communicate with relevant authorities, emergency services and neighbours (as appropriate) both before, during and after an accident ▪ have appropriate emergency procedures, including for safe plant shutdown and site evacuation ▪ have post-accident procedures that include making an assessment of the harm that may have been caused by an accident and the remediation actions you will take ▪ test the plan by carrying out emergency drills and exercises 	<p>As part of the site's existing EMS arrangements, emergency and accident response is established. This will be reviewed and updated (if necessary) to reflect changes that are being introduced as part of this permit variation. However, it is not expected that there will be any overarching changes required.</p>	<p>Yes</p>
<p>Accident Prevention Measures</p>		
<p>1. You must keep apart incompatible or segregated wastes and substances by their hazardous properties.</p>	<p>As the site is operational, arrangements for the segregation of waste are already established. APCr is already accepted at the facility and so there will be no additional risk or consideration required, as a result of the changes being introduced. Arrangements will be reviewed and updated to cover the new APCr washing plant, however, it is not expected that significant changes will be required.</p> <p>APCr will also be stored separately to the rest of the WRP, in the area designated for the new APCr washing process. Any acids / waste acids will be kept away from the APCr, near to the effluent treatment process in</p>	<p>Yes</p>

	suitable storage arrangements such as with adequate bunding and with spill kits located nearby.	
<p>2. You must segregate incompatible waste types into bays or store them in dedicated buildings. The minimum requirement is to use a kerbed perimeter and separate drainage collection. You must also have measures in place to prevent containers falling over into other storage areas.</p>	<p>As the site is operational, arrangements for the segregation of waste are already established. This will be reviewed and updated (if required) to reflect the changes outlined in this permit variation application. However, it is not anticipated that there will be any overarching changes required.</p> <p>APCr will be unloaded directly into specifically designed raw APCr intake storage silos, away from any other wastes. The silos will be located within an area with impermeable surfacing and a sealed drainage system.</p>	Yes
<p>3. You must make sure you contain the following (where appropriate) and route to the effluent system (where necessary):</p> <ul style="list-style-type: none"> ▪ process waters ▪ site drainage waters ▪ emergency firefighting water ▪ chemically contaminated waters ▪ spillages of chemicals 	<p>All process and drainage water within the APCr washing plant area will be captured, as this will be harvested for use within the process (once treated). Adequate buffer capacity has been installed to consider periods with high intensity rainfall and ongoing climate change implications.</p>	Yes
<p>4. You must be able to contain surges and storm water flows. You must provide enough buffer storage capacity to make sure you can achieve this. You can define this capacity using a risk-based approach, for example, by taking into account the:</p> <ul style="list-style-type: none"> ▪ nature of the pollutants ▪ effects of downstream waste water treatment ▪ sensitivity of the receiving environment 	<p>APCr will be stored in a dedicated silo, which would provide protection from high-intensity rainfall events. The wider site has existing, with extensions to be made of hardstanding impermeable surfaces with adequate storage capacity to contain storm water and reduce the likelihood for any release to the environment.</p>	Yes

<p>5. You can only discharge waste water from this buffer storage after you have taken appropriate measures, for example, to control, treat or reuse the water.</p>	<p>Any collected water will be tested for reuse if process water or used if collected rainwater.</p>	<p>Yes</p>
<p>6. You must have spill contingency procedures to minimise the risk of an accidental emission of raw materials, products and waste materials, and to prevent their entry into water.</p>	<p>APCr is already accepted onto site and has existing procedures to reduce the likelihood of accidental release of emissions. APCr will be stored in dedicated silos on arrival at the site, material will then be dampened to prevent the likelihood of dust being generated and for further storage in dedicated bays whilst the material matures to comply with the EoW decision.</p> <p>Spill contingency measures are already established on site and will be reviewed and updated (where necessary) to encompass the new APCr washing plant.</p>	<p>Yes</p>
<p>7. Your emergency firefighting water collection system must take account of additional firefighting water flows or firefighting foams. You may need emergency storage lagoons to prevent contaminated firefighting water reaching a receiving water body.</p>	<p>APCr to be accepted for this new treatment process is not combustible so is not expected to require additional fire water collection.</p> <p>APCr is also already accepted onto site and is therefore already accounted for in relation to firefighting water, as there is no increase in throughput or storage of waste at site.</p>	<p>Yes</p>
<p>8. You must consider and, if appropriate, plan for the possibility that you need to contain or abate accidental emissions from:</p> <ul style="list-style-type: none"> ▪ overflows ▪ vents ▪ safety relief valves ▪ bursting discs 	<p>APCr is a dry material that can be easily swept up if spilled and would not mobilise to water as there is a sealed drainage system.</p> <p>APCr is also already accepted onto site and is therefore already accounted for in relation to accidental emissions. The arrangements will be reviewed and</p>	<p>Yes</p>

<p>If this is not advisable on safety grounds, you must focus on reducing the probability of the emission.</p>	<p>updated (where necessary) to encompass the new APCr washing process and associated actions.</p>	
<p>9. You must have security measures (and staff) in place to prevent:</p> <ul style="list-style-type: none"> ▪ entry by intruders ▪ damage to equipment ▪ theft ▪ fly-tipping ▪ arson 	<p>As the site is operational, security measures, including staff, are already in place. The arrangements will be reviewed and updated (if necessary) to reflect the changes; however, as the new process will be conducted within the current environmental permitting boundary, it is not anticipated that there will be any significant changes to arrangements required.</p>	<p>Yes</p>
<p>10. Facilities must use an appropriate combination of the following measures:</p> <ul style="list-style-type: none"> ▪ security guards ▪ total enclosure (usually with fences) ▪ controlled entry points ▪ adequate lighting ▪ warning signs ▪ 24-hour surveillance, such as CCTV 	<p>As the site is operational, security measures, including staff, are already in place. The arrangements will be reviewed and updated (if necessary) to reflect the changes; however, as the new process will be conducted within the current environmental permitting boundary, it is not anticipated that there will be any significant changes to arrangements required.</p>	<p>Yes</p>
<p>11. There are 3 fire prevention objectives. You must:</p> <ul style="list-style-type: none"> ▪ minimise the likelihood of a fire happening ▪ aim for a fire to be extinguished within 4 hours ▪ minimise the spread of fire within the site and to neighbouring sites 	<p>As the site is operational, fire prevention measures are already established – these will be reviewed and updated (where necessary) to reflect the new APCr washing process. As APCr is not combustible and is also already accepted on site, it is not expected that there will be any significant changes required to arrangements.</p>	<p>Yes</p>
<p>12. You must have appropriate systems for fire prevention, detection and suppression or extinction.</p>	<p>As the site is operational, fire prevention measures are already established – these will be reviewed and updated (where necessary) to reflect the new APCr washing process. As APCr is not combustible and is</p>	<p>Yes</p>

	also already accepted on site, it is not expected that there will be any significant changes required to arrangements.	
13. You must have suitable procedures and provisions (such as fire resistant stores, automatic alarms and sprinklers) to store certain types of hazardous waste.	As the site is operational, fire prevention measures are already established – these will be reviewed and updated (where necessary) to reflect the new APCr washing process. As APCr is not combustible and is also already accepted on site, it is not expected that there will be any significant changes required to arrangements.	Yes
14. Your facility must have enough water supplies to extinguish fires. You must have an alternative type of fire protection system if you store or treat any water-reactive waste, for example dry powder extinguishers.	APCr is already accepted at the facility. APCr is also not combustible, so would not require an extensive supply of fire water.	Yes
15. You must isolate drainage systems from flammable waste storage areas to prevent fire spreading along the drainage system by solvents or other flammable hydrocarbons.	The new APCr washing process involves APCr, which is not combustible, and does not involve solvents or other flammable hydrocarbons.	N/A
16. You must regularly inspect and clean your site to prevent the build-up of loose combustible material (including waste and dust), particularly around treatment plant, equipment and other potential sources of ignition.	Any spilled APCr will be swept up by the operator and returned to the process for treatment. Regular housekeeping inspections and arrangements are carried out at the WRP, which will be reviewed and updated to encompass the new APCr washing plant.	Yes
17. You should share and communicate accident management and fire prevention plans with your local fire and rescue service.	As the site is operational, such arrangements are already established and communicated with the local fire and rescue service. These will be reviewed and	Yes

	updated (where necessary) to reflect the changes introduced.	
18. You must assess areas of the site where explosive atmospheres could occur and, where appropriate, classify them into hazardous zones in accordance with the Dangerous Substances and Explosive Atmospheres Regulations. Plant and equipment used in these zones must be ATEX compliant.	Most of the conveyance and vessels for the new APCr washing process are enclosed and so the risk is considered highly unlikely.	N/A
19. You must maintain plant control in an emergency – use one or a combination of the following measures: <ul style="list-style-type: none"> ▪ alarms ▪ process trips and interlocks ▪ automatic systems based on microprocessor control and valve control ▪ tank level readings such as ultrasonic gauges, high level warnings, process interlocks and process parameters 	<p>The plant and equipment are batch activities and can be easily turned off collectively or individually by the operator.</p> <p>Key processes have automatic controls such as the APCr storage silos which will trigger a monitoring alarm should the silos become close to being filled to prevent overfilling and spillages.</p>	Yes
20. You must: <ul style="list-style-type: none"> ▪ make sure all the measurement and control devices you would need in an emergency are easy to access and will operate in an emergency ▪ maintain the plant so it is in a good state through a preventive maintenance programme and a control and testing programme ▪ use techniques such as suitable barriers to prevent moving vehicles damaging equipment ▪ have procedures in place to avoid incidents due to poor communication between operating staff 	<p>The plant and equipment are batch activities and, along with any monitoring devices, can be easily turned off collectively or individually by the operator.</p> <p>The installation has an existing preventative maintenance programme which will be adapted to include the proposed new activities according to the manufacturer’s recommendations. Suitable barriers and aspects such as staff walkways are already existing at the installation and will be further incorporated into the new activities so that accidental vehicle damage is kept to a minimum. Existing staff handover procedures will be updated to reflect the new activities.</p>	Yes

<p>during shift changes and after maintenance or other engineering work</p>		
<p>21. You must:</p> <ul style="list-style-type: none"> ▪ keep an up-to-date record of all accidents, incidents, near misses, changes to procedures, abnormal events, and the findings of maintenance inspections ▪ investigate accidents, incidents, near misses and abnormal events and record the steps you take to stop them reoccurring ▪ maintain an inventory of substances, which are present (or likely to be) and which could have environmental consequences if they escape – many apparently innocuous substances can damage the environment if they escape ▪ have procedures for checking raw materials and wastes to make sure they are compatible with other substances they may accidentally come into contact with 	<p>As the site is operational, arrangements for record keeping for accidents and inventories are well-established. These will be reviewed and updated (where necessary) to reflect the changes introduced by this permit variation.</p>	<p>Yes</p>
<p>Contingency Plan and Procedures</p>		
<p>1. You must have and implement a contingency plan, which makes sure you:</p> <ul style="list-style-type: none"> ▪ comply with all your permit conditions and operating procedures during maintenance or shutdown at your site, or elsewhere ▪ do not exceed storage limits in your permit and you continue to apply appropriate measures for storing and handling waste 	<p>As the site is operational, Augean have an established contingency plan and associated arrangements. This will be reviewed and updated (where necessary) to include the new APCr washing process that is being introduced. In the event of a shutdown of the new APCr washing process, there are many measures that could be implemented in response: APCr could be diverted to other processes on site; APCr could be diverted to other operational Augean sites (with the provision of a</p>	<p>Yes</p>

<ul style="list-style-type: none"> stop accepting waste unless you have a clearly defined method of recovery or disposal and enough permitted storage capacity 	<p>D-code, rather than an R-code); or could be diverted to competitor sites with treatment capability (last resort).</p>	
<p>2. You should have contingency procedures to make sure that, as far as possible, you know in advance about any planned shutdowns at waste management facilities where you send waste.</p>	<p>As the site is operational, Augean have an established contingency plan and associated arrangements. This will be reviewed and updated (where necessary) to include the new APCr washing process that is being introduced and arrangements for removal of RO concentrate off-site. Material being removed off-site will go to another Augean site and the company will be able to utilise other sites for service flexibility should another site be unavailable.</p>	<p>Yes</p>
<p>3. You must make your customers aware of your contingency plan, and of the circumstances in which you would stop accepting waste from them.</p>	<p>As the site is operational, Augean have an established contingency plan and associated arrangements. This will be reviewed and updated (where necessary), to reflect the changes being introduced.</p>	<p>Yes</p>
<p>4. You should consider whether the sites or companies you rely on in your contingency plan:</p> <ul style="list-style-type: none"> can take the waste at short notice are authorised to do so in the quantities and types likely to be needed – in addition to carrying out their existing activities 	<p>As the site is operational, Augean have an established contingency plan and associated arrangements. This will be reviewed and updated (where necessary), to reflect the changes being introduced. Material being removed off-site will go to another Augean site and the company will be able to utilise other sites for service flexibility should another site be unavailable.</p>	<p>Yes</p>
<p>5. You should not discount alternative disposal or recovery options on the basis of extra cost or geographical distance if doing so means you could exceed your permitted storage limits or compromise your storage procedures.</p>	<p>The permitted storage limits and other consented limits within the permit will not be breached. Adequate storage capacity and throughputs have been considered as part of this variation with contingency measures applied. In the unlikely event of storage limits</p>	<p>Yes</p>

	reaching their maximum, Augean would divert material to another of their appropriate permitted sites to not breach any permit conditions.	
6. You must not include unauthorised capacity in your contingency plan. If your contingency plan includes using temporary storage for additional waste on your site, you must make sure your site is authorised for this storage and you have the appropriate infrastructure in place.	In the unlikely event of storage limits reaching their maximum, Augean would divert material to another of their appropriate permitted sites to not breach any permit conditions.	Yes
7. Your management procedures and contingency plan must: <ul style="list-style-type: none"> ▪ identify known or predictable malfunctions associated with your technology and the procedures, spare parts, tools and expertise needed to deal with them ▪ include a record of spare parts held, especially critical spares – or state where you can get them from and how long it would take ▪ have a defined procedure to identify, review and prioritise items of plant which need a preventative maintenance regime ▪ include all equipment or plant whose failure could directly or indirectly lead to an impact on the environment or human health ▪ identify ‘non-productive’ or redundant items such as tanks, pipework, retaining walls, bunds, mobile plant, reusable waste containers (for example wheeled carts), ducts, filters and security systems 	The installations existing management and contingency procedures comprehensively includes the outlined requirements such as identifying critical components of key infrastructure and a preventative maintenance programme. These procedures will be reviewed and updated for the proposed new activities.	Yes

<ul style="list-style-type: none"> ▪ make sure you have the spare parts, tools, and competent staff needed before you start maintenance 		
<p>8. If you produce an end-of-waste material at your facility, your contingency planning must consider issues with storage capacity for end-of-waste products and materials that fail the end-of-waste specification.</p>	<p>In the unlikely event that material has failed the EoW specification, the material will be reprocessed. If there was no capacity to preprocess on site, material would be suitable for disposal to on-site landfill (last resort). Adequate storage has been designed for EoW material and in the unlikely event that this storage capacity is exceeded, Augean will utilise its network of other sites and off-takers to handle the material.</p>	<p>Yes</p>
<p>9. Your management system must include procedures for auditing your performance against all of these contingency measures and for reporting the audit results to the site manager.</p>	<p>The EMS will be updated to incorporate the new activities.</p>	<p>Yes</p>
<p>Plant Decommissioning</p>		
<p>1. You must consider how you will decommission the plant at the design stage, and plan how you will minimise risks during decommissioning.</p>	<p>Decommissioning has been factored into the design of the infrastructure for the new activities in that modular components allow for easier decommissioning. There will be minimal risks during decommissioning.</p>	<p>Yes</p>
<p>2. For existing plants where potential risks are identified, you must have a programme of design improvements. These design improvements need to make sure you:</p> <ul style="list-style-type: none"> ▪ avoid using underground tanks and pipework – if it is not economically possible to replace them, 	<p>The new activity to be included as part of this variation will be a new activity and not classed as existing.</p>	<p>N/A</p>

<p>you must protect them by secondary containment or a suitable monitoring programme</p> <ul style="list-style-type: none"> ▪ drain and clean out vessels and pipework before dismantling ▪ use insulation which you can dismantle easily without dust or hazard ▪ use recyclable materials, taking into account operational or other environmental objectives 		
<p>3. You must have and maintain a decommissioning plan to demonstrate that:</p> <ul style="list-style-type: none"> ▪ plant will be decommissioned without causing pollution ▪ the site will be returned to a satisfactory condition 	<p>This will be updated for the new activities as part of the EMS and also the installations site condition report to ensure that the land is returned to a satisfactory state and as per the land at the time of the original permit application.</p>	<p>Yes</p>
<p>4. Your decommissioning plan should include details on:</p> <ul style="list-style-type: none"> ▪ whether you will remove or flush out pipelines and vessels (where appropriate) and how you will empty them of any potentially harmful contents ▪ site plans showing the location of all underground pipes and vessels ▪ the method and resources needed to clear any on-site lagoons ▪ the method for closing any on-site landfills ▪ how asbestos or other potentially harmful materials will be removed, unless we have agreed it is reasonable to leave such liabilities to future owners 	<p>This will be updated for the new activities as part of the EMS and also the installations site condition report to ensure that the land is returned to a satisfactory state and as per the land at the time of the original permit application.</p>	<p>Yes</p>

<ul style="list-style-type: none"> ▪ methods for dismantling buildings and other structures, and for protecting surface water and groundwater during construction or demolition at your site ▪ any soil testing needed to check for pollution caused by site activities, and information on any remediation needed to return the site to a satisfactory state when you stop activities, as defined by the initial site condition report ▪ the measures proposed, once activities have definitively stopped, to avoid any pollution risk and to return the site of operation to a satisfactory state (including, where appropriate, measures relating to the design and construction of the plant) ▪ the clearing of deposited residues, waste and any contamination resulting from the waste treatment activities 		
<p>5. You should make sure that equipment taken out of use is decontaminated and removed from the site.</p>	<p>All plant will be cleaned in situ to ensure they are fully decontaminated before removal off-site. The cleaning and inspection of the equipment will be recorded.</p>	<p>Yes</p>

Table 2 - Waste Pre-Acceptance, Acceptance and Tracking Appropriate Measures

Appropriate Measure	Current / Proposed Arrangements	Compliant?
Waste Pre-Acceptance		

<p>1. You must implement waste pre-acceptance procedures so that you know enough about a waste (including its composition) before it arrives at your facility. You need to do this to assess and confirm the waste is technically and legally suitable for your facility. Your procedures must follow a risk-based approach, considering:</p> <ul style="list-style-type: none"> ▪ The source and nature of the waste ▪ Its hazardous properties ▪ Potential risks to process safety, occupational safety and the environment (e.g. from odour and other emissions) ▪ Knowledge about the previous waste holder 	<p>Raw APCr that is to be processed through the new APCr washing plant is already accepted at the WRP. Therefore, pre-acceptance and acceptance procedures for APCr are already well-established at the site and will continue to be used to support these changes that are being introduced. A review of arrangements will be carried out and any necessary updates will be made; however, it is not expected that any amendments will be required. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p> <p>The pre-acceptance procedure outlines that the information that the waste disposal enquiry should obtain, which encompasses the information outlined in this appropriate measure.</p>	<p>Yes</p>
<p>2. When you receive a customer query, and before the waste arrives at your facility, you must obtain the following in writing or in an electronic form:</p> <ul style="list-style-type: none"> ▪ details of the waste producer including their organisation name, address and contact details ▪ the source of the waste (the producer's business and the specific process that has created the waste) ▪ where the holder of the waste is not the producer, details of the waste holder including their organisation name, address and contact details ▪ information on the nature and variability of the waste production process and the waste 	<p>As stated above, pre-acceptance procedures are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p> <p>The pre-acceptance procedure outlines that the information that the waste disposal enquiry should obtain, which encompasses the information outlined in this appropriate measure.</p>	<p>Yes</p>

<p>You must also obtain (in writing or electronic form) details about the waste including:</p> <ul style="list-style-type: none"> ▪ a description ▪ the List of Waste code (European Waste Classification (EWC) code) ▪ its physical form ▪ its composition (based on safety data sheets, where appropriate, or representative samples and robust laboratory analysis) ▪ any hazardous properties ▪ any persistent organic pollutant (POPs) present ▪ the potential for self-heating, self-reactivity or reactivity to moisture or air ▪ any odour ▪ its age, that is when it first became waste ▪ the type of packaging ▪ an estimate of the quantity you expect to receive in each load and in a year. <p>You must also obtain confirmation that the waste does not contain a radioactive source. If there is a risk of radioactive contamination you must obtain confirmation that the waste is not radioactive, unless your facility is permitted to accept such waste.</p>		
<p>3. You must consider whether specific wastes, from among those you are permitted to receive, have properties that can pose unacceptable risks to the site or process, for example due to:</p> <ul style="list-style-type: none"> ▪ a risk of explosion ▪ corrosion caused by strong acids ▪ a risk of uncontrolled reactions ▪ a risk of the evolution of gases 	<p>As APCr is already accepted at the facility under existing pre-acceptance procedures, there will be no additional unacceptable risk introduced to the site as a result of the changes introduced in this permit variation. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p> <p>The pre-acceptance procedure outlines examples of waste that are likely to be prohibited at the permitted site, comprising explosives or mixtures that have</p>	<p>Yes</p>

<p>You should establish a list of such wastes.</p>	<p>explosive properties, infectious wastes (HP9 coded wastes), animal by-products, controlled substances, and radioactive wastes.</p>	
<p>4. You can verify the pre-acceptance information by contacting or visiting the producer. Dealing with staff directly involved in waste production will help to fully characterise a waste.</p>	<p>As stated above, pre-acceptance procedures for APCr are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p>	<p>Yes</p>
<p>5. You must obtain and analyse a representative sample of a waste if:</p> <ul style="list-style-type: none"> ▪ the chemical composition or variability of the waste is unclear from the information supplied by the customer ▪ there are doubts about whether the sample analysed is representative of the waste ▪ you will treat the waste at your facility (this allows you to carry out tests to determine if the planned treatment will be safe and effective) <p>Where you rely on a customer sample you must record that you have done this and the reason why the customer sample is acceptable.</p>	<p>As stated above, pre-acceptance procedures for APCr are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p> <p>The pre-acceptance procedure accounts for the need for a representative sample of waste in the scenarios outlined in this appropriate measure.</p>	<p>Yes</p>
<p>6. You may not need a representative sample where, for example, the waste is:</p> <ul style="list-style-type: none"> ▪ asbestos ▪ a pure product chemical or aerosol where the chemical composition and hazardous properties 	<p>As stated above, pre-acceptance procedures for APCr are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p>	<p>Yes</p>

<p>are available in a REACH compliant safety data sheet</p> <ul style="list-style-type: none"> ▪ packaged cosmetics and pharmaceuticals ▪ contaminated clothing, packaging or rags ▪ an 'article', for example batteries, lighting tubes, waste electrical or electronic equipment, end-of-life vehicles or parts of vehicles, metal waste and scrap metal ▪ solid non-hazardous waste (except for mirror entries when the waste composition is unknown) ▪ contaminated wood and roofing material ▪ produced in an emergency – you must not treat or offload such wastes until you have completed a full characterisation 		
<p>6.1 You also may not need a representative sample if the waste is laboratory smalls in containers of less than 5 litres.</p> <p>Laboratory smalls generally contain pure chemical elements and compounds from laboratories or arise when laboratory stores are cleared.</p> <p>When drums are used for laboratory smalls, a list of the contents must be stored within the drum below the lid or attached to the drum. Similarly for other types of packages containing laboratory smalls, a list of contents is appropriately stored within (or attached to) the packaging. Each packed drum (or other package) is then labelled with the hazard for carriage, for example under the International Carriage of Dangerous Goods by Road (ADR) treaty.</p>	<p>Laboratory smalls are not associated with the proposed changes introduced in this permit variation.</p>	<p>N/A</p>

<p>You should provide packaging guidance to your customer or their intermediary if the person packing the laboratory smalls does not work for you.</p>		
<p>6.2 You also may not need a representative sample of waste oil for treatment. Pre acceptance sampling is not critical for a waste oil treatment plant, but it would be required if the waste will be treated at a mineral oil refinery. Typically waste oil comes from a large number of small volume sources, such as garages, but its composition is essentially fixed. Waste oil is any mineral-based or synthetic lubrication, or industrial oil which has become unfit for its original use. Waste oil includes:</p> <ul style="list-style-type: none"> ▪ used combustion engine oils ▪ gearbox oils ▪ mineral lubricating oils ▪ oils for turbines ▪ hydraulic oils <p>Waste oil contaminated with more than 50 ppm of polychlorinated biphenyls (PCBs) is not included as a waste oil.</p>	<p>Waste oils are not associated with the proposed changes introduced in this permit variation.</p>	<p>N/A</p>
<p>6.3 You should obtain a representative sample of the following types of waste oil, from:</p> <p>industrial sites that do not normally produce waste oil other sources where chemicals and potential contaminants may be handled, for example from chemical manufacturing</p>	<p>Waste oils are not associated with the proposed changes introduced in this permit variation.</p>	<p>N/A</p>

<p>You should advise your customers that they must avoid contaminating waste oil. This is because during treatment low flashpoint solvents or petrol will cause handling difficulties, increase volatile organic compound (VOC) emissions and increase the risk of accidents.</p> <p>Contamination with PCBs can transfer those PCBs either to the:</p> <ul style="list-style-type: none"> ▪ product (which may cause dioxin formation if used in a subsequent combustion process) ▪ tank bottom oil sludges ▪ effluent <p>If you suspect that waste oil has become contaminated, for example by solvents, petrol or PCBs, you must identify the contamination.</p>		
<p>6.4 If you do not take a pre-acceptance sample of any hazardous waste you must record the reason.</p>	<p>As stated above, pre-acceptance procedures for APCr are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p>	<p>Yes</p>
<p>6.5 If the customer has a number of containers holding the same waste, you can apply 'the square root of (N) + 1' rule to sampling those containers. Producing a composite sample of this waste may be appropriate. If the waste is variable, you will need a sample from each container.</p>	<p>As stated above, pre-acceptance procedures for APCr are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p>	<p>Yes</p>
<p>7. After fully characterising a waste, you must technically assess the waste's suitability for treatment</p>	<p>As stated above, pre-acceptance procedures for APCr are already established at the WRP, and it is not</p>	<p>Yes</p>

<p>or storage to make sure you can meet permit conditions. You must also do this to meet any Control of Major Accident Hazards (COMAH) requirements, because wastes, raw materials and end-of-waste materials all contribute to COMAH limits. You must make sure that the waste complies with the site's treatment capabilities. In the case of water based liquid waste, you may perform laboratory scale tests to predict the treatment's performance, for example on breaking of emulsion or biodegradability.</p>	<p>anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p>	
<p>8. You can use material flow analysis to help identify the flow and fate of the components in the waste. This analysis can be helpful in choosing the most appropriate forms of treatment for the waste, either directly at the site or at any subsequent treatment site.</p>	<p>As stated above, pre-acceptance procedures for APCr are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p> <p>The pre-acceptance procedures provide a flow analysis to ensure that incoming wastes are handled appropriately.</p>	<p>Yes</p>
<p>9. You must keep pre-acceptance records for at least 3 years (in a computerised waste tracking system) following receipt of the waste. If an enquiry from a waste producer does not lead to the receipt of waste, you do not need to keep records.</p>	<p>As stated above, pre-acceptance procedures for APCr are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p> <p>The pre-acceptance procedure outlines that records will be maintained for cross-reference and verification at the waste acceptance stage and that these records will be kept for a minimum of 3 years.</p>	<p>Yes</p>

<p>10. You must reassess the information required at pre-acceptance if the:</p> <ul style="list-style-type: none"> ▪ waste changes ▪ process giving rise to the waste changes ▪ waste received does not conform to the pre-acceptance information <p>In all cases, you must reassess the information required at pre-acceptance on an annual basis.</p>	<p>As stated above, pre-acceptance procedures for APCr are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p>	<p>Yes</p>
<p>11. You must apply odour criteria to decide whether to accept wastes that are already releasing, or have the potential to release:</p> <ul style="list-style-type: none"> ▪ mercaptans or other VOCs ▪ low molecular weight amines ▪ acrylates ▪ other similarly highly odorous materials <p>These substances are only suitable for acceptance under special handling requirements.</p>	<p>As stated above, pre-acceptance procedures for APCr are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p> <p>The waste involved in the new APCr washing process is not expected to release or have the potential to release the substances outlined in this appropriate measure.</p>	<p>N/A</p>
<p>12. You must keep the roles and responsibilities of sales staff and technical staff separate. If sales staff are involved in waste enquiries then technical staff must do a final technical check before approval. You must keep this final technical check independent of commercial considerations, to make sure you:</p> <ul style="list-style-type: none"> ▪ only accept wastes that are suitable for the site ▪ avoid accumulating waste 	<p>As stated above, pre-acceptance procedures for APCr are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p>	<p>Yes</p>

<ul style="list-style-type: none"> ▪ have enough storage and treatment capacity 	<p>The pre-acceptance procedure ensures distinct roles and responsibilities for sales and technical staff.</p>	
<p>13. Fully characterising the waste’s composition is an essential step in the pre-acceptance procedure because hazardous wastes can be very complex. You must be sure you know what is in the waste so that you can safely handle or treat it. You must select analytical tests based on knowing the process that generates the waste. You must characterise the waste’s composition at the pre-acceptance stage. You need to do this to make sure you comply with regulatory requirements and to work out the most appropriate waste storage, transfer or treatment route.</p>	<p>As stated above, pre-acceptance procedures for APCr are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p> <p>The pre-acceptance procedure ensures that waste is properly characterised.</p>	<p>Yes</p>
<p>14. For liquid waste, any or all of the following may be appropriate:</p> <ul style="list-style-type: none"> ▪ measure the density of the sample ▪ measure the water content ▪ measure the ash content after calcination at 550°C ▪ test whether the stream might inhibit biological treatment ▪ test for cyanide, and if present determine the free and complexed cyanide levels ▪ test for POPs ▪ check the content of volatile and semi volatile substances ▪ check the mass balance of liquid waste <p>You can also measure the pH, redox potential and electrical conductivity of liquid wastes. For pastes and oils, perform these measurements on a water extract of</p>	<p>Liquid waste is not accepted onto site as part of the changes that are introduced in this permit variation.</p>	<p>N/A</p>

<p>crude sample using a ratio of 10 l/kg of dry matter. You should mix the water with the sample in a closed container to limit exchanges with the atmosphere.</p> <p>You can also test for the 12 heavy metals (As, Ba, Cd, Cr, Cu, Hg, Mo, Ni, Pb, Sb, Se, Zn) and determine their levels individually and quantitatively. You may use any specific classical method of (partial) extraction of these metals. Where it is present, check specifically for chromium (VI). If the waste is saline (conductivity > 0.15 S/m), measure the chlorides and preferably all the halogens that are soluble in water to make sure you correctly speciate the metals.</p> <p>You can also test for other metal content and other elements (for example silicon, sulphur and phosphorous).</p>		
<p>15. If you suspect the analysis methods applied to a liquid sample will not extract and quantify the compounds present in any solid particles or in any separate phases, separate the sample into 2 fractions by a suitable method. For example, this could be by filtration, centrifugation or decantation. Then you can determine the mass of each fraction, and perform a comprehensive analysis of the separated liquid fraction and solid fraction, or of each phase.</p>	<p>Liquid waste is not accepted onto site as part of the changes that are introduced in this permit variation.</p>	<p>N/A</p>
<p>16. For solid waste, any or all of the following may be appropriate:</p> <ul style="list-style-type: none"> ▪ measure the bulk density of the sample, without pre-treatment of the sample ▪ measure the water content 	<p>As stated above, pre-acceptance procedures for APCr are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p>	<p>Yes</p>

<ul style="list-style-type: none"> ▪ measure the ash content after calcination at 550°C ▪ test for cyanide, and if present determine the free and complexed cyanide levels ▪ test for POPs ▪ check the content of volatile and semi volatile substances ▪ check the mass balance of solid waste <p>You can also measure the pH, redox potential and electrical conductivity on a water extract of crude sample using a ratio of 10 l/kg of dry matter.</p> <p>You can also test for the 12 heavy metals (As, Ba, Cd, Cr, Cu, Hg, Mo, Ni, Pb, Sb, Se, Zn) and determine their levels individually and quantitatively. You may use any specific classical method of (partial) extraction of these metals. Where it is present, check specifically for chromium (VI). If the waste is saline (conductivity > 0.15 S/m), measure the chlorides and preferably all the halogens to make sure you correctly speciate the metals.</p> <p>You can also test for other metal content and other elements (for example silicon, sulphur and phosphorous).</p>		
<p>17. When multiple immiscible phases or fractions are present in a waste, you can perform the analysis on each phase and combine them to provide the final result.</p>	<p>As stated above, pre-acceptance procedures for APCr are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure.</p>	<p>Yes</p>
<p>18. Analyses must be carried out by laboratories that have robust quality assurance procedures and use</p>	<p>As stated above, pre-acceptance procedures for APCr are already established at the WRP, and it is not</p>	<p>Yes</p>

<p>recognised test methods. The EN ISO 17025 accreditation represents best practice.</p>	<p>anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p>	
<p>19. When you agree that you will accept waste from a customer, you should decide and record what parameters you will check at the acceptance stage. The checks could be visual (for example colour, phase, fuming), physical (for example pumpability, form), chemical (for example pH range, maximum acceptable metals content) or odour based parameters. You should define the acceptable tolerance for each acceptance test result and record which of these criteria could lead to further testing, non-conformance or rejection. The person checking the waste for acceptance can also decide on their own additional parameters.</p>	<p>As stated above, pre-acceptance procedures for APCr are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p>	<p>Yes</p>
<p>Waste Acceptance</p>		
<p>1. You must follow waste acceptance procedures to check that the characteristics of the waste you receive match your pre-acceptance information. This is to confirm that the waste is as expected and you can accept it. If it is not, you must confirm that you can accept it as a non-conforming waste, or you must reject it.</p>	<p>APCr that is to be processed through the new APCr washing plant is already accepted at the WRP. Therefore, pre-acceptance and acceptance procedures for APCr are already well-established at the site and will continue to be used to support these changes that are being introduced. A review of arrangements will be carried out and any necessary updates will be made; however, it is not expected that any amendments will be required. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p>	<p>Yes</p>

	The acceptance procedure outlines information obtained at pre-acceptance stages should match the waste received.	
<p>2. Your procedures should follow a risk-based approach, considering:</p> <ul style="list-style-type: none"> ▪ the source, nature and age of the waste ▪ the waste's hazardous properties ▪ potential risks to process safety, occupational safety and the environment (for example, from odour and other emissions) ▪ potential for self-heating, self-reactivity or reactivity to moisture or air ▪ knowledge about the previous waste holder(s) 	<p>As stated above, acceptance procedures are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p> <p>The acceptance procedure ensures that a risk-based approach is taken, encompassing all of the points outlined in this appropriate measure.</p>	Yes
<p>3. Other than in an emergency (for example, taking waste from an emergency incident clean-up), you must only receive pre-booked wastes onto site that have been adequately pre-accepted and are consistent with the pre-acceptance information.</p>	<p>As stated above, acceptance procedures are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p>	Yes
<p>4. All relevant storage areas (quarantine, reception and general) and treatment processes in your facility must have physical capacity for the waste you receive. You must not receive wastes if this capacity is not available. The amount of waste you receive must also comply with storage limits in your permit and the limits set under COMAH.</p>	<p>As stated above, acceptance procedures are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. The new APCr washing process will be considered in terms of capacity and updates to the procedures will be made accordingly.</p>	Yes

<p>5. You must visually check wastes or their packaging and verify them against pre-acceptance information and transfer documentation before you accept them on site. The extent of the initial visual check is determined by the waste type and how it is packaged.</p>	<p>As stated above, acceptance procedures are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p> <p>The acceptance procedure accounts for visual checking.</p>	<p>Yes</p>
<p>6. You must check and validate all transfer documentation and resolve discrepancies before you accept the waste. If you believe the incoming waste classification and description is incorrect or incomplete, then you must address this with the customer during waste acceptance. You must record any non-conformances. If you have assessed the waste as acceptable for on-site storage or treatment, you must document this.</p>	<p>As stated above, acceptance procedures are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p> <p>The acceptance procedure outlines that discrepancies are to be resolved before progressing to the next stage of acceptance.</p>	<p>Yes</p>
<p>7. You must have clear criteria for non-conforming wastes including rejection of such waste. You must also have a written procedure for recording, reporting and tracking non-conforming wastes, including notifying the relevant customer or waste producer, and the regulator.</p>	<p>As stated above, acceptance procedures are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.</p> <p>A non-conforming waste, quarantine and rejection procedure is also already established on site. This will be reviewed and updated; however, it is not expected</p>	<p>Yes</p>

	that amendments will be required in response to changes introduced as part of this permit variation.	
8. You must weigh each load of waste on arrival to confirm the quantities against the accompanying paperwork, unless alternative reliable systems are available (for example, based upon density and volume). You must record the weight in the computerised waste tracking system.	As stated above, acceptance procedures are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route.	Yes
9. The person carrying out waste acceptance checks must be trained to effectively identify and manage any non-conformances in the loads received, complying with this guidance and your permit conditions.	As stated above, acceptance procedures are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route. An adequately trained person will continue to conduct acceptance checks, with no expected changes required in response to this permit variation.	Yes
10. If there is a known risk of radioactive contamination, you must check the waste to determine that it does not include radioactive material, unless you are permitted to accept these materials.	Radioactive contamination is not expected to be a risk in relation to the wastes to be accepted and processed through the new APCr washing process.	N/A
11. You must minimise the manual handling of waste. You should use mechanical unloading technologies where it is possible, safe and practicable to do so.	As stated above, acceptance procedures are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Manual handling is considered throughout current arrangements, and this will be extended to encompass the new APCr washing process. Mechanical unloading technologies are	Yes

	embedded into the new process, as detailed in the process description in the Supporting Report, Section 1.2.1.	
12. Offloading, sampling, general storage, reception and quarantine areas must have an impermeable surface with self-contained drainage, to prevent any spillage entering the storage systems or escaping off site.	As stated above, acceptance procedures are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. For the new area that will comprise the APCr washing plant, an impermeable hardstanding surface will be in place, and this area will be served by a sealed drainage system.	Yes
13. The designated sampling point or reception area must be close to the laboratory or checking area and needs to be visible.	The intake storage silos that will receive the raw APCr material will be considered during design to modify them to include sampling points that are suitably located, visible and easily accessible.. Augean's acceptance procedures stipulate the location of the sampling point being close to the laboratory or checking area and being visible.	Yes
Acceptance of containerised waste		
14. After you have completed the initial visual inspection and confirmatory checks, you must offload waste containers into a dedicated reception area to await detailed checks or sampling. Wastes that do not require further checking can go directly into the appropriate storage area. You must not unload wastes if you do not have enough space.	APCr will be received via enclosed power tankers, entering the site via the main weighbridge.	N/A

<p>15. All waste containers must be fit for purpose, and, where appropriate, be:</p> <ul style="list-style-type: none"> ▪ in sound condition ▪ undamaged ▪ not corroded, if metal ▪ have well-fitting lids ▪ suitable for the contents ▪ with caps, valves and bungs in place and secure <p>You must risk assess containers, particularly those made of plastic, if they have exceeded the manufacturer's use by date.</p> <p>You must quarantine non-conforming containers and deal with them immediately and appropriately. You must record all non-conformances.</p>	<p>Intake storage silos will receive the incoming APCr. The storage silo will be subject to routine inspection and maintenance arrangements, to ensure that integrity of the structure is upheld and that it remains fit for purpose.</p>	<p>Yes</p>
<p>16. You must check, and where appropriate sample and analyse, the contents of all containers in the reception area within one working day of receipt. You must then transfer compliant containers to the relevant appropriate storage area on site.</p>	<p>As stated above, acceptance procedures are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure.</p> <p>Incoming raw APCr material will be unloaded into suitable storage silos, rather than stored in containers.</p>	<p>N/A</p>
<p>17. You must move non-compliant containers to a dedicated quarantine area unless you can safely store the waste in a general storage area with other compatible wastes whilst you investigate the non-conformance. You must label non-compliant containers to identify that they are quarantined. You must record the non-conformance and where the waste is stored. If you use a dedicated quarantine area, you must</p>	<p>Incoming raw APCr material is to be delivered via enclosed powder tankers that will unload directly into dedicated storage silos.</p>	<p>N/A</p>

<p>segregate or isolate incompatible wastes. You must contain and abate wastes which are quarantined due to odour.</p>		
<p>18. Quarantine storage must be for a maximum of 5 working days. You must have written procedures for dealing with wastes you hold in quarantine, and a maximum storage volume. For some limited and specific cases (for example the detection of radioactivity), you can extend quarantine storage time if the Environment Agency agrees.</p>	<p>As stated above, acceptance procedures are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Protocols for use of the quarantine areas are outlined within acceptance procedures.</p>	<p>Yes</p>
<p>19. Where containers hold laboratory smalls, you must open each container held in reception within one working day of receipt to check that the contents remain undamaged and that the inventory is as expected. All of the contents in each drum must be compatible. Once checked the container can be moved to the appropriate storage area. Laboratory smalls that need to be sorted must be moved to a dedicated repackaging area and repackaged immediately.</p>	<p>Laboratory smalls are not associated with the proposed changes introduced in this permit variation.</p>	<p>N/A</p>
<p>20. You must make sure that all waste packages you receive are marked or labelled with:</p> <ul style="list-style-type: none"> ▪ a description of the waste that also gives its chemical identity and composition ▪ a unique tracking system reference ▪ the date of arrival on site ▪ a hazard code or codes (using a product or transport symbol) 	<p>APCr that is be processed through the new APCr washing plant is already accepted at the site, for which measures will remain the same following the changes.</p> <p>Incoming raw APCr material is to be delivered via enclosed powder tankers that will unload directly into dedicated storage silos</p>	<p>N/A</p>



<p>The unique reference must allow you to track the waste and easily identify the producer of the waste.</p>		
<p>21. If waste containers are received shrink-wrapped on pallets, or you shrink-wrap containers, you can label the shrink wrap with all the relevant information. If a shrink wrapped load is split, you must make sure you mark or label each individual container with all the relevant information.</p>	<p>APCr will be delivered to site in enclosed powder tankers.</p>	<p>N/A</p>
<p>22. Where bar code systems are used for labelling, the hazardous property of the waste and the date of receipt of the container must be directly visible.</p>	<p>APCr that is be processed through the new APCr washing plant is already accepted at the site, for which measures will remain the same following the changes.</p>	<p>Yes</p>
<p>23. You should, wherever possible, keep wastes segregated in reception, to minimise the risk of incompatible materials reacting together.</p>	<p>No new waste types will be accepted at the facility, with APCr at the site to be stored separately away from other wastes. The EoW product will also be stored separately to avoid any mixing of materials.</p>	<p>Yes</p>
<p>Acceptance of bulk wastes</p>		
<p>24. Bulk loads (liquid or solid) can only be offloaded after they have been fully verified as compliant. You must not accept a non-compliant bulk load for interim storage except in an emergency. Verification testing should include:</p> <ul style="list-style-type: none"> ▪ checking consistency with the pre-acceptance information 	<p>As stated above, acceptance procedures are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. Protocols for use of the quarantine areas are outlined within acceptance procedures.</p>	<p>Yes</p>

<ul style="list-style-type: none"> ▪ compatibility with the receiving vessel contents ▪ where appropriate, checking treatability by using laboratory scale simulation 		
<p>25. Deliveries in a tanker must be accompanied by a 'wash out' certificate or a declaration of the previous load so that contamination by this route can be checked.</p>	<p>As stated above, acceptance procedures are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure</p> <p>As the type of tanker that will be delivering raw APCr material will not be suitable for a wash out, there will not be a requirement for a wash out certificate as part of acceptance procedures. Tankers are to be operated on a dedicated round and will therefore only carry APCr or lime to and from the Energy from Waste (EfW) plants and Augean sites. Therefore, there is no risk of cross-contamination with other wastes. In the event of a contamination issue being identified, the haulier will be able to produce a record of loads and deliveries to support an investigation.</p>	<p>Yes</p>
<p>26. Samples from tankers should wherever possible be taken representatively by taking a core sample from the top hatch and from a suitable gantry. You must sample from each compartment where the tanker is divided into multiple compartments. If you have to take a sample from the back valve, you must take precautions to avoid spillages.</p>	<p>As stated above, acceptance procedures are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. APCr sampling will be carried out via the sampling point on the silo delivery system, or information will be obtained from a sample provided by site as a separate sample on delivery.</p>	<p>Yes</p>
<p>Acceptance sampling</p>		

<p>27. You must representatively sample all wastes, bulk or containerised (including from every container) at the acceptance stage, and carry out verification and compliance testing. You must not just rely on the written information supplied. The requirement to sample does not apply to some wastes, for example:</p> <ul style="list-style-type: none"> ▪ pure product chemicals ▪ asbestos ▪ contaminated clothing, packaging or rags ▪ ‘articles’ ▪ laboratory smalls ▪ packaged cosmetics and pharmaceuticals ▪ solid non-hazardous waste (except for mirror entries when the waste composition is unknown) ▪ contaminated wood and roofing material ▪ waste received directly from a householder ▪ green wastes and food wastes <p>Where a sample is not required, you must still visually check the waste is as expected and that no contrary materials are present. You must record the reason why you did not sample the waste in your computerised waste tracking system.</p> <p>You must empty and repack containers of contaminated clothing, packaging or rags to check for items that should not be there.</p> <p>You must obtain a representative sample and analyse waste oil, from:</p>	<p>Sampling and acceptance procedures are already established at the WRP, and it is not anticipated that the changes introduced as part of this permit variation will require an updated procedure. APCr is also already accepted at the facility, so these processes are well-established.</p>	<p>Yes</p>
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<ul style="list-style-type: none"> ▪ industrial sites that do not normally produce waste oil ▪ other sources where chemicals and potential contaminants may be handled, for example from chemical manufacturing <p>For other waste oil you must obtain a representative sample of the waste but you do not have to analyse it unless a problem is found at the treatment plant.</p>		
<p>28. A representative sample is one that takes account of the full variation and any partitioning of the load so you can account for worst case scenarios.</p>	<p>Samples are obtained via the sampling procedures that are already established on site. These procedures, particularly because APCr that is to be processed through the APCr washing plant is already accepted at the facility, are not expected to require any significant changes as a result of the changes being introduced.</p>	<p>Yes</p>
<p>29. You must take a sample from every container. You can make a composite sample if each of the containers making up the composite holds the same waste and the waste is known not to be variable. You must obtain a representative sample by taking a core sample down to the base of the container. You must make sure you replace lids, bungs and valves immediately after sampling.</p>	<p>Samples are obtained via the sampling procedures that are already established on site. These procedures, particularly because APCr that is to be processed through the APCr washing plant is already accepted at the facility, are not expected to require any significant changes as a result of the changes being introduced.</p>	<p>Yes</p>
<p>30. On-site sampling must take place under the supervision of the site's qualified staff. Where a driver arrives at the site with a sample taken elsewhere, the sample:</p>	<p>Samples are obtained via the sampling procedures that are already established on site. These procedures, particularly because APCr that is to be processed through the APCr washing plant is already accepted at the facility, are not expected to require any significant changes as a result of the changes being introduced.</p>	<p>Yes</p>

<ul style="list-style-type: none"> ▪ must be verified as representative, reliable and obtained by a person technically competent to take it ▪ is only acceptable if it was taken for specific health or safety purposes 	<p>As the site is operational, staff with suitable training and experience will undertake the sampling procedures.</p>	
<p>31. Sampling must not increase the risk of incompatible substances coming into contact with one another, for example within a sump serving the sampling point, or due to contaminated sampling equipment.</p>	<p>Samples are obtained via the sampling procedures that are already established on site. These procedures, particularly because APCr that is to be processed through the APCr washing plant is already accepted at the facility, are not expected to require any significant changes as a result of the changes being introduced.</p>	<p>Yes</p>
<p>32. You must have suitable absorbents and spill kit material available to deal with any spills.</p>	<p>APCr is easily swept up in the event of a spill. Therefore, absorbents are not likely to be required. However, spills kits will be available at the installation for any process materials/liquids that may be subject to spillages.</p>	<p>Yes</p>
<p>33. You must keep a record of the sampling regime, process and justification in your computerised waste tracking system.</p>	<p>Augean's Computerised Waste Management System is used and will continue to be used for records of sampling regimes, process and justification.</p>	<p>Yes</p>
<p>34. You should keep acceptance samples on site for at least 2 working days after you have:</p> <ul style="list-style-type: none"> ▪ treated a waste and removed its treatment residues from the facility ▪ transferred a waste from your site <p>Where you are transferring waste oil from your site you must keep acceptance samples for at least 2 working days after the waste has been treated off site. You must</p>	<p>Augean's Sampling Procedure states that samples must be kept for a minimum of two months before their safe disposal.</p>	<p>Yes</p>

<p>analyse the waste oil sample if a problem is found at the off-site treatment plant. You only need to keep samples that you did not analyse at acceptance.</p>		
<p>35. You must have a sampling and analysis procedure. You must design it based on the risk factors for the waste, for example:</p> <ul style="list-style-type: none"> ▪ the type of waste (for example hazardous or non-hazardous) ▪ knowledge of the customer (for example waste producer) ▪ the impact of potential mixing or blending and the possibilities for subsequent treatment 	<p>Samples are obtained via the sampling procedures that are already established on site. These procedures, particularly because APCr that is to be processed through the APCr washing plant is already accepted at the facility, are not expected to require any significant changes as a result of the changes being introduced.</p>	<p>Yes</p>
<p>36. You must check any relevant physico-chemical parameters using, for example, viscometry, infrared, chromatography and mass spectrometry.</p>	<p>This is not deemed to be appropriate to the proposed activities and waste types being managed. However, samples are obtained via the sampling procedures that are already established on site.</p> <p>All analysis is currently, as part of existing arrangements, and will be, following the introduction of APCr washing at the site, be conducted in accordance with current analytical laboratory methods – these are the best laboratory practice and are recognised, standard methods for the determinant in question. Where in house methods are utilised, they are documented fully and validated before employed as in-house test methods.</p>	<p>Yes</p>
<p>37. Sampling procedures must be customised for:</p> <ul style="list-style-type: none"> ▪ bulk liquid ▪ bulk solids 	<p>The site's Sampling of Waste procedures outlines the sampling regime for each type of waste. As APCr is already accepted on site, there are no expected</p>	<p>Yes</p>

<ul style="list-style-type: none"> ▪ large and small containers or vessels (the number of samples increases with the number of containers or vessels and the variability of the waste) ▪ laboratory smalls 	<p>changes required to this procedure as a result of the changes introduced in this permit variation.</p>	
<p>38. You must determine and record the following information:</p> <ul style="list-style-type: none"> ▪ the sampling regime for each load, together with your justification for selecting each option ▪ where and how the sample was taken ▪ the capacity of the sampled vessel (for samples from drums, an additional parameter would be the total number of drums) ▪ the number of samples and degree of consolidation ▪ the operating conditions at the time of sampling 	<p>Samples are obtained via the sampling procedures that are already established on site. These procedures, particularly because APCr that is to be processed through the APCr washing plant is already accepted at the facility, are not expected to require any significant changes as a result of the changes being introduced.</p>	<p>Yes</p>
<p>39. Wherever possible you should sample waste in accordance with:</p> <ul style="list-style-type: none"> ▪ EN 14899 Characterization of waste. Sampling of waste materials. Framework for the preparation and application of a sampling plan ▪ CEN/TR 15310-1 Characterization of waste. Sampling of waste materials. Guidance on the selection and application of criteria for sampling under various conditions ▪ CEN/TR 15310-2 Characterization of waste. Sampling of waste materials. Guidance on sampling techniques ▪ CEN/TR 15310-3 Characterization of waste. Sampling of waste materials. Guidance on procedures for sub-sampling in the field 	<p>Samples are obtained via the sampling procedures that are already established on site. These procedures, particularly because APCr that is to be processed through the APCr washing plant is already accepted at the facility, are not expected to require any significant changes as a result of the proposed changes being introduced. Sampling procedures are based on the guidance provided in WM3.</p>	<p>Yes</p>

<ul style="list-style-type: none"> ▪ CEN/TR 15310-4 Characterization of waste. Sampling of waste materials. Guidance on procedures for sample packaging, storage, preservation, transport and delivery ▪ CEN/TR 15310-5 Characterization of waste. Sampling of waste materials. Guidance on the process of defining the sampling plan <p>For more information see guidance on the classification and assessment of waste WM3.</p>		
<p>Testing and analysis</p>		
<p>40. You must test each waste for acceptance according to the parameters decided at pre-acceptance, plus any appropriate additional checks. You should record the results of the tests in the computerised waste tracking system. You should note and investigate any discrepancies.</p>	<p>Samples are obtained via the sampling procedures that are already established on site. These procedures, particularly because APCr that is to be processed through the APCr washing plant is already accepted at the facility, are not expected to require any significant changes as a result of the changes being introduced.</p> <p>The sampling procedure stipulates that all details obtained in relation to the waste at the time of sampling shall be recorded in accordance with those parameters defined at pre-acceptance. The pre-acceptance procedure established on site outlines a flow chart to enable sampling parameters to be defined.</p>	<p>Yes</p>
<p>41. Analysis of waste must be carried out by a laboratory with suitably recognised test methods. Where the waste received is hazardous, the laboratory should be on site, or routinely available at another site capable of providing test results within one working day of receipt of the waste at your site.</p>	<p>Samples are obtained via the sampling procedures that are already established on site. These procedures, particularly because APCr that is to be processed through the APCr washing plant is already accepted at the facility, are not expected to require any significant changes as a result of the changes being introduced.</p>	<p>Yes</p>

	Sampling procedures on site state that all hazardous waste streams will be sampled prior to delivery, subject to risk assessment and practicality.	
Waste Tracking		
1. You must use a computerised tracking system to hold up-to-date information about the available capacity of the waste quarantine, reception, general and bulk storage areas of your facility, including treatment residues and end-of-waste product materials.	As the site is operational, waste tracking procedures are already established. These will be reviewed and amended to reflect the changes introduced at the site as part of this permit variation.	Yes
2. Your waste tracking system must hold all the information generated during: <ul style="list-style-type: none"> ▪ pre-acceptance ▪ acceptance ▪ non-conformance or rejection ▪ storage ▪ repackaging ▪ treatment ▪ removal off site This information must be easily accessible.	The installation already implements a waste tracking system which will not change as APCr is already accepted onto site and subject to inspection and acceptance procedures which are recorded and accessible.	Yes
3. You must create records and update them to reflect deliveries, on-site treatment and despatches. Your tracking system will also operate as a waste inventory and stock control system. It must include this information as a minimum: <ul style="list-style-type: none"> ▪ the date the waste arrived on site ▪ the original producer's details ▪ the previous holder 	The installation already implements a waste tracking system which will not change as APCr is already accepted onto site. The process will be updated to ensure that EoW material is incorporated into the tracking and recording system.	Yes

<ul style="list-style-type: none"> ▪ a unique reference number ▪ waste pre-acceptance and acceptance information ▪ any analysis results ▪ the package type and size ▪ the intended treatment or transfer route ▪ accurate records of the nature and quantity of wastes held on site, including all hazards – and identifying the primary hazards ▪ where the waste is located on site ▪ where the waste is in the designated treatment or transfer route ▪ the names of staff who have taken any decisions about accepting or rejecting waste streams and who have decided on recovery or disposal options ▪ details that link each container accepted to its consignment or transfer note ▪ details of any non-conformances and rejections 		
<p>4. The tracking system must be able to report:</p> <ul style="list-style-type: none"> ▪ the total quantity of waste present on site at any one time ▪ a breakdown by type of the waste quantities you are storing pending treatment or transfer ▪ a breakdown of the waste quantities by hazardous property ▪ an indication of where a batch or consignment of waste is located on a site plan ▪ the quantity of waste on site compared with the limits authorised by your permit ▪ the length of time the waste has been on site 	<p>The installation already implements a waste tracking system which is compliant with the listed appropriate measures. The process will be updated to ensure that EoW material is incorporated into the system.</p>	<p>Yes</p>

<ul style="list-style-type: none"> the quantity of end-of-waste product materials on site at any one time, where applicable 		
5. You must store back-up copies of computer records off site. Records must be easily accessible in an emergency.	Appropriate records are stored on Augean's systems software which covers multiple sites within the UK.	Yes
6. You must hold acceptance records for a minimum of 2 years after you have treated the waste or removed it off site. You may have to keep some records for longer if they are required for other purposes, for example, hazardous waste consignment notes.	Records are already held for the required duration on site which will continue with the proposed variation.	Yes

Table 3 - Appropriate Measures for Waste Storage, Segregation and Handling Appropriate Measures

Appropriate Measures	Current / Proposed Arrangements	Compliant?
1. You must store waste in locations that minimise the handling of waste. Waste handling must be carried out by competent staff using appropriate equipment.	The unloading bay associated with the new APCr washing process is located next to the receiving APCr storage silos. Adequately trained and experienced staff will be	Yes
2. Where possible, you should locate storage areas away from watercourses and sensitive perimeters (for example, those close to public rights of way, housing or schools). You must store all waste within the secure area of your facility to prevent unauthorised access and vandalism.	The changes to be introduced as part of this permit variation will utilise storage areas that are within the existing permitted boundary of the site. These areas are not located near to watercourses and sensitive receptors.	Yes

<p>3. Where relevant, you must conform to HSE standards and in particular to:</p> <ul style="list-style-type: none"> ▪ HSG51 Storage of flammable liquids in containers ▪ HSG71 Chemical warehousing: storage of packaged dangerous substances ▪ HSG76 Warehousing and storage: a guide to health and safety ▪ HSG140 Safe use and handling of flammable liquids ▪ HSG176 Storage of flammable liquids in tanks ▪ CS21 Storage and handling of organic peroxides 	<p>APCr is not a flammable liquid or an organic peroxide and warehouses are not involved in the changes outlined in this permit variation application.</p>	<p>N/A</p>
<p>4. You must clearly document the maximum storage capacity of your site and the designated storage areas. You must not exceed these maximum capacities. You should define capacity in terms of, for example, maximum tank or vessel capacities, tonnage and numbers of skips, pallets or containers. You must regularly monitor the quantity of stored waste on site and designated areas and check against the allowed maximum capacities.</p>	<p>The installations software will record volumes against the consented storage limits which will be confirmed by regular site walkovers and inspections. Storage limits will be outlined within the sites EMS and operational procedures with staff members receiving adequate training to manage the storage or wastes and changed over of storage containers.</p>	<p>Yes</p>
<p>5. You must clearly mark hazardous waste storage areas and provide signs showing the maximum quantity and hazardous properties of wastes that can be stored there.</p>	<p>The installation currently clearly defines hazardous waste storage areas and has a number of procedures and processes in place to manage their storage. These will be modified to incorporate the new activities.</p>	<p>Yes</p>
<p>6. Storage area drainage infrastructure must:</p> <ul style="list-style-type: none"> ▪ contain all possible contaminated run-off 	<p>The storage areas will have adequate capacity to capture all surface waters as this will be a key</p>	<p>Yes</p>

<ul style="list-style-type: none"> ▪ prevent incompatible wastes coming into contact with each other ▪ make sure that fire cannot spread 	<p>requirement to recirculate water into the process to reduce dependency on mains supply. APCr is already kept separate from other wastes and this will be maintained with the variation. Run-off from 'clean' and 'dirty' yard areas will be collected separately and reused in the APCr washing process, with 'dirty' run-off being subject to a screening stage, oil / water separation to remove oil and solids settlement.</p>	
<p>7. Secondary and tertiary containment systems must conform to CIRIA guidance C736 Containment systems for the prevention of pollution.</p>	<p>The standards listed will be reviewed and conformed with where appropriate for the containment measures of the additional activities.</p>	
<p>8. You must store containerised wastes that are sensitive to air, light, heat, moisture or extreme ambient temperatures under cover protected from such ambient conditions. Covered areas must have good ventilation. This applies to any such container:</p> <ul style="list-style-type: none"> ▪ held in general storage, reception storage (pending acceptance) or quarantine ▪ being emptied, repackaged or otherwise managed <p>For example, waste held in fibre or cardboard primary or secondary packaging should be stored under cover in a dry area and not exposed to rain or moisture. It must be kept off floors to prevent damage by damp.</p>	<p>No containerised wastes will be stored from the proposed activities.</p>	<p>N/A</p>
<p>9. You must store wastes in sealed metal containers under cover if they have the potential for self-heating or self-reactivity. You must monitor the containers for heat build-up. Such wastes include rags and filter materials</p>	<p>Not applicable.</p>	<p>N/A</p>

contaminated with metal swarf, low boiling point oils or low flash point solvents.		
<p>10. Wherever practicable you should store all other wastes under cover. Covered areas must have good ventilation. This applies to any such container:</p> <ul style="list-style-type: none"> ▪ held in general storage, reception storage (pending acceptance) or quarantine ▪ being emptied, repackaged or otherwise managed ▪ Under cover storage provides better protection for containers than open air storage and minimises the generation of contaminated water. Covered storage also: ▪ lowers temperature fluctuations that can cause pressure build up in containers ▪ reduces the degradation of containers through weathering 	Once APCr has been accepted onto the installation and undergone the initial treatment process, the material will be stored in specific covered bays. The covered bays allow for the material to be easily inspected whilst providing cover for aspects such as high winds which all aids the maturation for the EoW process.	Yes
11. You must not store hazardous waste in open-topped containers. Empty open-topped containers should be kept in a building or undercover to prevent rainwater ingress.	Not applicable, no hazardous waste will be stored in open topped containers.	N/A
12. You must not store or hold wastes on site in vehicles or vehicle trailers unless you are receiving them or preparing them for imminent transfer (meaning that you will remove them from site within 24 hours, or 72 hours if over a weekend).	Wastes will not be stored in vehicles or trailers.	N/A

<p>13. You should pay particular attention to avoid the build-up of static electricity when you are storing or handling flammable wastes and materials. You should use leak detection systems and alarms (for example VOC alarms) and automatic fire suppression equipment based on a recorded risk assessment.</p>	<p>Not applicable, no flammable wastes will be stored with the proposed variation.</p>	<p>N/A</p>
<p>14. You must provide adequate bunding of all storage areas, and containment and treatment of any water run-off.</p>	<p>Adequate bunding will be installed to contain all surface water runoff.</p>	<p>Yes</p>
<p>15. You must not accumulate waste. You must treat wastes, or remove them from the site, as soon as possible. Generally you should do this within one month of receipt but all wastes must be removed within 6 months of receipt. This applies even when the waste might be used as a reactant. Where a shorter time period is given in a permit condition you must comply with the permit for that waste. Where a waste is stored for longer than allowed you must inform the Environment Agency.</p>	<p>The proposed activities will involve waste being derived into an EoW product and waste will not be stored for any longer than the required time to comply with the EoW decision notice.</p>	<p>Yes</p>
<p>16. All stored containers must keep the labelling they had at acceptance. If the label is damaged or no longer legible you should replace the label with that same information.</p>	<p>No containers will be stored, though the incoming batches of APCr will be recorded throughout the treatment process so that the EoW product can be traced back to the original APCr delivery onto site.</p>	<p>Yes</p>
<p>17. You must handle and store containers so that the label is easily visible and continues to be legible.</p>	<p>No containers will be stored containing waste. Where appropriate, any chemical storage will ensure that labels are clearly visible in their designated storage area.</p>	<p>Yes</p>

<p>18. You should keep solid waste dry and avoid the dilution of hazardous waste.</p>	<p>Not applicable with proposed variation.</p>	<p>N/A</p>
<p>19. You must keep clean rainwater and clean cooling water separate from wastes and waste waters.</p>	<p>Clean and process water will be kept separate, but will both be circulated back into the APCr washing process, once treated, for process water to reduce mains water dependency.</p>	<p>Yes</p>
<p>20. You must keep incompatible wastes segregated so that they cannot come into contact with one another. You must store flammable wastes apart from other wastes to prevent fire spreading between them and other materials. You must use sealed drainage systems to prevent leaks and spillages contaminating other wastes.</p>	<p>No new waste types will be brought onto the installation. APCr will continue to be kept separate from any other waste types and all activities will be undertaken on an impermeable surface with a sealed drainage system.</p>	<p>Yes</p>
<p>21. There must be pedestrian and vehicular access (for example, forklift) at all times to the whole storage area so that you can retrieve containers without removing others that may be blocking access – other than removing those in the same row.</p>	<p>The existing installation has safe pedestrian and vehicular access which will be maintained for the proposed variation.</p>	<p>Yes</p>
<p>22. You must store all waste containers in a way that allows easy inspection. You must maintain safe access, with a gap of at least 0.7m between rows of bulk containers or palletised wastes.</p>	<p>Not applicable, there will be no waste containers.</p>	<p>Yes</p>
<p>23. You must move drums and other mobile containers between different locations (or loaded for removal off site) following written procedures. You must then</p>	<p>There will be no drums or mobile containers involved in the changes outlined in this permit variation.</p>	<p>Yes</p>

amend your waste tracking system to record these changes.		
24. You must stack bags and boxes of waste no more than 1m high on a pallet. You must not stack pallets more than 2 high.	This is not deemed to be applicable to the proposed activities, but disposal arrangements will be reviewed.	N/A
25. You must stack containers specifically designed for stacking, and no more than 2.2m high on a pallet.	Not applicable for the proposed activities.	N/A
26. You must store all other containers on pallets. You must not stack these pallets more than 2 high, except for empty containers which can be stacked 3 high.	Not applicable for the proposed activities.	N/A
27. Stacked bags, boxes and containers must be stable. They must be secured with, for example, banding or shrink-wrap, if required. The packages must not extend beyond (over-hang) the sides of the pallet. Any shrink-wrap used must be clear or transparent so that you can identify waste types, damaged containers, leaks or spillages and incorrectly stacked containers. You must be careful not to damage any packages during stacking.	This is not deemed to be applicable to the proposed activities, but arrangements will be reviewed.	N/A
28. All waste containers must remain fit for purpose. You must check any containers (and pallets they may be stored on) daily and record non-conformances. Non-compliant containers and pallets must be made safe. You must immediately and appropriately manage any unsound, poorly labelled or unlabelled containers (for example, by relabelling, over drumming and transferring	This is not deemed to be applicable to the proposed activities, but all storage areas and the installation will be subject to regular site inspections with any non-conformance recorded so that corrective action can be taken.	N/A

<p>the container's contents). You must risk assess, approve and record the use of containers, tanks and vessels:</p> <ul style="list-style-type: none"> ▪ beyond their specified design life ▪ where you use them for a purpose, or substances, other than the ones they were designed for 		
<p>29. You must not handle waste or its packaging in a way that might damage its integrity, unless it is appropriate to destroy a waste or its packaging, for example by shredding. You must not, for example, walk on or throw waste or waste packages.</p>	<p>This is not deemed to be applicable to the proposed activities, but disposal arrangements will be reviewed.</p>	<p>N/A</p>
<p>30. You should, where applicable and based on a recorded risk assessment, make inert the atmosphere of tanks containing organic liquid waste with a flashpoint less than 21°C. This can be done, for example, by using nitrogen gas.</p>	<p>Organic liquid waste does not form part of the changes introduced in this permit variation.</p>	<p>N/A</p>
<p>31. You must store asbestos waste double bagged or wrapped, in sealed, closed and locked containers. You must not store asbestos waste loose. You must not put asbestos wastes into bays or transfer it between different skips or containers. You must not use mechanical equipment, for example loading shovels, chutes and conveyors to move asbestos waste.</p>	<p>Asbestos waste does not form part of the changes introduced in this permit variation.</p>	<p>N/A</p>
<p>32. You must not stack wheeled containers on top of one another. Do not stack empty wheeled containers into one another more than 2.2m high.</p>	<p>Wheeled containers do not form part of the changes introduced in this permit variation.</p>	<p>N/A</p>

<p>33. All containers that need them should have a lid or bung, and the lid or bung must be closed except when the container is being sampled, having waste added into it or having waste removed from it.</p>	<p>Not applicable for the proposed activities.</p>	<p>N/A</p>
<p>34. You must not stack skips containing waste. Skips containing hazardous waste must be enclosed when not being loaded or unloaded. You should store loose bulk hazardous wastes under cover.</p>	<p>Not applicable for the proposed activities.</p>	<p>N/A</p>
<p>35. You can use racking systems to store waste but you must consider segregation, ability to inspect, separation and fire suppression measures. Racking systems must be designed and constructed in accordance with HSG76 Warehousing and storage.</p>	<p>Not applicable for the proposed activities.</p>	<p>N/A</p>
<p>36. You must:</p> <ul style="list-style-type: none"> ▪ contain wash waters within an impermeable area and either discharge them to foul sewer or dispose of them appropriately off site. ▪ prevent run-off into external areas or to surface water drains 	<p>All wash waters and surface run-off will be contained from the installations impermeable surface area and contained within a sealed drainage system. Waters will be recirculated (once cleaned, in regard to dirty process water) back into the APCr washing process to reduce mains water consumption.</p>	<p>Yes</p>
<p>37. You must manage waste in a way that prevents pests or vermin. You must have specific measures and procedures in place to deal with wastes that are identified as causing pests or vermin.</p>	<p>The wastes involved in the new process to be introduced on site are not inherently likely to attract pests or vermin. However, existing arrangements on site in relation to pest control will be reviewed and updated (where necessary) to reflect the changes introduced. However, it is not likely that any amendments will be required.</p>	<p>Yes</p>

<p>38. You must inspect storage areas, containers and infrastructure daily. You must deal with any issues immediately. You must keep written records of the inspections. You must rectify and log any spillages of waste.</p>	<p>The installation is currently subject to daily site walkovers and inspections, and this will be maintained for the proposed activities.</p>	<p>Yes</p>
<p>39. You must train forklift drivers in the handling of palletised goods, to minimise forklift truck damage to the integrity of containers and infrastructure.</p>	<p>As the site is operational, mobile plant and machinery is already operated by suitable trained and experienced Augean staff. Therefore, the new APCr washing plant will be supported by suitable staff too.</p>	<p>Yes</p>
<p>40. You must not carry out activities that represent a clear fire risk within any storage area. Examples include:</p> <ul style="list-style-type: none"> ▪ grinding ▪ welding or brazing of metalwork ▪ smoking ▪ parking normal road vehicles, except while unloading or loading ▪ recharging batteries 	<p>Within the new APCr washing process there are no activities that present a clear fire risk.</p>	<p>N/A</p>
<p>Bulk Storage</p>		
<p>41. Where relevant, bulk storage systems must conform to CIRIA guidance, and in particular to:</p> <ul style="list-style-type: none"> ▪ C535 Above ground proprietary prefabricated oil storage tank systems ▪ C598 Chemical storage tank systems - good practice 	<p>APCr will be unloaded and stored in repurposed silos, which will be modified to conform to the correct design parameters for the new process.</p> <p>This means that they will be modified to conform with relevant guidance as part of the design.</p>	<p>Yes</p>

<ul style="list-style-type: none"> ▪ C736 Containment systems for the prevention of pollution 		
<p>42. You must use tanks and associated equipment that are suitably designed, constructed and maintained. You must do a risk assessment to validate the design and operation of bulk storage systems. Before you use new tanks and equipment you must check they are working correctly. You must periodically examine and test that your tanks meet the standards set out in EEMUA Publication 231: The mechanical integrity of plant containing hazardous substances.</p>	<p>Silos that will be used for the storage of raw APCr will be suitable for their purpose within the changes outlined in this permit variation. As outlined in Storage of Waste procedures on site, routine programmed inspection of tanks, mixing and reaction vessels will be carried out.</p>	<p>Yes</p>
<p>43. You should vent bulk storage tanks and silos through suitable abatement</p>	<p>Raw APCr intake silos will be fitted with pressure release vents (PRVs), with an associated high-pressure alarm system. Release via the PRVs will be under abnormal operating conditions and there will be no release via these points during normal operations. The PRVs will be fitted with a suitable abatement system, in the form of a reverse jet bag filter, to prevent dust emissions in the event of release via these emission points.</p>	<p>Yes</p>
<p>44. You must locate bulk storage vessels on an impermeable surface which is resistant to the material being stored. The surface must have self-contained drainage to prevent any spillage entering the storage systems or escaping off site. Impermeable surfaces must have sealed construction joints.</p>	<p>The APCr washing plant will be located on an impermeable hardstanding surface, supported by necessary bunding and a sealed drainage system.</p>	<p>Yes</p>
<p>45. You must provide bunds for all tanks containing liquids (whether waste or otherwise) which could be</p>	<p>Tanks containing liquids will be compliant with the standards listed where appropriate. Suitable bunding</p>	<p>Yes</p>

<p>harmful to the environment if spilled. Bunds must meet the CIRIA C535 or C736 standard and:</p> <ul style="list-style-type: none"> ▪ be impermeable, stable and resistant to the stored materials ▪ have no outlet (that is, no drains or taps), and drain to a blind collection point ▪ have pipework routed within bunded areas with no penetration of contained surfaces ▪ be designed to catch leaks from tanks or fittings ▪ have a capacity calculated following the relevant CIRIA guidance ▪ have regular visual inspections – you must pump out or remove any contents under manual control after you have checked for contamination ▪ be fitted with a high level probe and an alarm (as appropriate) if not frequently inspected ▪ have tanker connection points within the bund where possible – if not possible you must provide adequate containment for spillages or leakage ▪ have programmed engineering inspections (extending to water testing if structural integrity is in doubt) ▪ be emptied of rainwater regularly to maintain the containment capacity 	<p>will be incorporated into the design of the APCr washing plant and associated infrastructure.</p>	
<p>46. You must control sludge build up and foam in tanks, for example by regularly sucking out the sludge and using anti foaming agents.</p>	<p>Sludge generated in certain parts of the treatment process will be regularly sucked out from the relevant tanks and fed into the next stage. For example, sludge generated as part of the wastewater treatment process,</p>	<p>Yes</p>

	<p>arising from the lead precipitation stage is fed along to a secondary filter press for dewatering.</p>	
<p>47. You should equip storage and treatment tanks with an automatic level monitoring system and an associated alarm or trip system. These systems must be sufficiently robust (for example, be able to work if sludge and foam are present) and regularly maintained. You must fit tanks with suitable overflow protection.</p>	<p>Automatic level monitoring systems will be built into the infrastructure required for the APCr washing process. For example, storage silos, into which APCr will be unloaded, will be fitted with a high-level alarm to alert the tanker driver when to stop the filling process. These silos will also be fitted with a high-pressure alarm system, connected to the PRVs to be triggered in the event of internal high-pressure build-up.</p>	<p>Yes</p>
<p>48. You must be able to close all connections to vessels, tanks and secondary containment via suitable valves. You must fit a valve close to the tank if you have bottom outlets, and have at least 2 isolation points in case of valve failure.</p>	<p>The APCr washing plant will be served by a sealed drainage system, as all run-off captured will be treated via the integrated wastewater treatment system and reused in the process where possible.</p>	<p>Yes</p>
<p>49. You must direct overflow pipes to a contained drainage system (for example the relevant secondary containment) or to another vessel where suitable control measures are in place.</p>	<p>The APCr washing plant will be served by a sealed drainage system, as all run-off captured will be treated via the integrated wastewater treatment system and reused in the process where possible.</p>	<p>Yes</p>
<p>50. Tanks, pipework and fittings must be examined by a competent person, following a written scheme. The scope and frequency of examination must also be determined by a competent person. You must work out how often to carry out these internal examinations using a risk assessment approach. This should be based on:</p> <ul style="list-style-type: none"> ▪ tank service ▪ maintenance history 	<p>All tanks, pipework and fittings will be inspected as part of the sites regular site walkovers and as part of the preventative maintenance programme.</p>	<p>Yes</p>

<ul style="list-style-type: none"> known and potential damage mechanisms and their rates of attack <p>You should also do intermediate external examinations. You must act on the results of the examinations and do any necessary repairs to ensure the tanks remain fit for service. You must keep the results of examinations and repairs.</p>		
<p>51. You must have systems in place to make sure that loading, unloading and storage are safe, considering any associated risks. This can include:</p> <ul style="list-style-type: none"> having piping and instrumentation diagrams using ticketing systems using key locked coupling systems having colour coded points, fittings and hoses using specific coupling or hose sizes for certain waste transfers 	<p>The loading and unloading of APCr will be undertaken through approved procedures that consider the appropriate risks for each activity.</p>	<p>Yes</p>
<p>52. As a general rule, you must not use open topped tanks, containers, vessels or pits to store or treat hazardous or liquid wastes.</p>	<p>APCr will be stored in suitable storage silos, fitted with PRVs. Hazardous metal filter cake will be collected from the process and transferred to the hazardous landfill.</p>	<p>Yes</p>
<p>Transfer of Waste Into and From Tankers</p>		
<p>53. All pipes, hoses, connections, couplings and transfer lines must be fit for purpose and resistant to the wastes being stored. You must use a suitable pipework coding system (for example, RAL European standard colour coding).</p>	<p>The unloading of APCr into the storage silos will be undertaken with fit for purpose equipment.</p>	<p>Yes</p>

<p>54. Site staff must supervise loading and unloading activities, either directly or via CCTV.</p>	<p>All loading and unloading of material will be supervised by appropriate staff.</p>	<p>Yes</p>
<p>55. You must make sure that transfers into and from tankers only take place after you have completed any relevant verification and compatibility testing, and then only with the approval of an appropriate chemist or manager. The approver must specify:</p> <ul style="list-style-type: none"> ▪ which batch or load of material is to be transferred ▪ the receiving storage vessel ▪ the equipment required, including spillage control and recovery equipment ▪ any special provisions relevant to that batch or load including minimising odour and other fugitive emissions 	<p>APCr will be subject to acceptance checks before being accepted onto site.</p>	<p>Yes</p>
<p>56. You must have in place systems to prevent ‘tanker drive off’ (a vehicle pulling away whilst still coupled).</p>	<p>This will be managed by site procedures with drivers being given clear instructions for when they are able to drive off. Deliveries of APCr will be supervised by suitably trained and experienced Augean staff.</p>	<p>Yes</p>
<p>57. You must make sure that the transfer of waste from tankers is only carried out by competent staff. You must give them enough time, so they are not under pressure to work more quickly than is deemed acceptable.</p>	<p>All loading and unloading of material will be supervised by appropriate staff.</p>	<p>Yes</p>
<p>58. You must have measures in place to make sure that couplings are a correct fit. This will prevent couplings</p>	<p>The loading and unloading of APCr will be undertaken through approved procedures that consider the</p>	<p>Yes</p>

<p>from loosening or becoming detached. You should provide, maintain and clean your own couplings and hoses to guarantee their integrity and fitness. You should also:</p> <ul style="list-style-type: none"> ▪ make sure you take special care so that a coupling is able to withstand the maximum shut valve pressure of the transfer pump ▪ maintain a sound coupling at each end of the transfer hose, even when a gravity feed system is in place, and protect the transfer hose ▪ control potential leaks from coupling devices by using simple systems such as drip trays 	<p>appropriate risks for each activity and that the correct infrastructure and procedures are undertaken.</p>	
<p>59. You must make sure that transfers into and from tankers only take place in bunded areas designed to contain a worst case spillage. You must have emergency storage for leaking vehicles to minimise any acute incidents caused by a seal on a tanker failing.</p>	<p>All areas of waste transfer will be undertaken on an impermeable surface with a sealed drainage system.</p>	<p>Yes</p>
<p>60. You should have systems and procedures in place to make sure that wastes due to be transferred comply with the carriage of dangerous goods when they are packaged and transported</p>	<p>Not applicable for the proposed activities.</p>	<p>N/A</p>
<p>61. You must make sure that the transfer of waste from a tanker to a drum or vice versa is done in a dedicated area. A minimum of 2 trained and competent staff, working to formal written instructions, must perform the transfer. They must check any pipes and valves before and during the transfer. You must fit dip pipes with a</p>	<p>Not applicable for the proposed activities.</p>	<p>N/A</p>

shut-off valve to control the dispensing into containers and prevent overfilling.		
62. You must make a record of any spillages. You must retain spillages within the bunded areas and collect them promptly using, for example, pumps or absorbents.	Any spillages of material will be dealt with accordingly depending on the material. APCr material will not be in a liquid format.	Yes
63. You must make sure that tankers are not used as blending or reaction vessels as this is not their designed purpose.	Not applicable for the proposed activities.	N/A
64. You must take operational and design precautions when mixing or blending wastes, depending on the composition and consistency of the wastes (for example when vacuuming dusty or powdery wastes).	Not applicable for the proposed activities. APCr will not be mixed with any other waste materials.	N/A
65. Where you use rotary-type pumps, they must be equipped with a pressure control system and safety valve.	Not applicable for the proposed activities.	N/A
66. You must pump sludges. Do not pour them.	Sludges and slurries produced during the overall process (for example, from the wet ball mill or clarifiers) will be transferred to the next stages via pumps.	N/A
67. When loading and offloading odorous, flammable or volatile liquids between bulk storage tanks and tankers, you must use vapour balance lines to transfer the displaced vapours from the receiving vessel to the vessel you are pumping from.	Not applicable for the proposed activities.	N/A

<p>68. You must follow safe operating procedures designed to reduce the risk of explosion and fugitive emissions when you transfer waste from powder tankers into silos. You must use trained and competent personnel.</p>	<p>All safe operating procedures will be followed to minimise any risk.</p>	<p>Yes</p>
<p>69. You must carry out routine maintenance to prevent failure of the plant or equipment. This may include the failure of a pump seal or the blockage of a filter pot commonly used at transfer points.</p>	<p>All installation equipment will be subject to regular site inspection and preventative maintenance programme.</p>	<p>Yes</p>
<p>70. You must continue using the waste tracking system that began at the pre-acceptance stage for the whole time waste is kept at the site.</p>	<p>Waste will be recorded through the treatment process including when the APCr has been turned into an EoW product.</p>	<p>Yes</p>
<p>Aerosol Storage</p>		
<p>71. You must store aerosol canisters under cover in secure, well-ventilated containers, and within caged storage areas. You must also store them in a well-ventilated place that is not subject to extreme temperatures or direct sunlight. You must not store canisters in open containers to prevent the risk of them spreading fires by 'missiling' or 'ejection'.</p>	<p>Aerosol storage does not form part of the proposed changes introduced in this permit variation.</p>	<p>N/A</p>
<p>72. You must segregate aerosol canisters from other flammable wastes and potential sources of ignition. Preferably put them in a separate building, or use a fire resistant enclosure or fire wall. You must not hold any combustible material within the storage area, other than</p>	<p>Aerosol storage does not form part of the proposed changes introduced in this permit variation.</p>	<p>N/A</p>



the canister's packaging, containers and the pallets on which they stand.		
73. You must provide suitable containment measures (for example drip trays) for aerosol canisters held in containers which cannot collect and hold free liquids released from the canisters. Or you should transfer them to secure containers that are able to hold free liquid.	Aerosol storage does not form part of the proposed changes introduced in this permit variation.	N/A
74. During storage, lids on containers holding aerosol canisters must remain securely closed at all times when not being filled, emptied or internally inspected. When not in use, the doors or hatches of cages must remain closed and locked.	Aerosol storage does not form part of the proposed changes introduced in this permit variation.	N/A
75. You must not overfill containers used to store canisters. Overfilling can result in canisters being actuated and discharging their contents, either: <ul style="list-style-type: none">▪ under the weight of the canisters above them▪ when the container lid is closed▪ when containers are stacked	Aerosol storage does not form part of the proposed changes introduced in this permit variation.	N/A
76. Cages used to store aerosol canister containers must be robust, fire resistant and of an appropriate mesh size (based upon the size of the canisters being stored). This is to constrain the canisters and prevent any ejection. Where the cage is not constructed with a mesh roof, the mesh wall panels must extend into the roof space of the storage area to make sure that the structure is completely enclosed.	Aerosol storage does not form part of the proposed changes introduced in this permit variation.	N/A

<p>77. You should store aluminium canisters separately from steel canisters (especially rusting canisters). This will:</p> <ul style="list-style-type: none"> ▪ prevent thermite sparks during storage, handling and treatment ▪ allow the different metals to be more easily recovered 	<p>Aerosol storage does not form part of the proposed changes introduced in this permit variation.</p>	<p>N/A</p>
<p>Sorting, repacking and bulking</p>		
<p>78. Sorting is the placing together of containers with other waste containers of the same type, without emptying the contents from the container. You must have a permit that specifically allows you to carry out storage activities (coded D15 or R13).</p>	<p>Not applicable for the proposed activities.</p>	<p>N/A</p>
<p>79. Repackaging is the removal of waste from a container, or into a container. This may involve bulking it with other wastes of the same type from other containers. You must have a permit that specifically allows you to carry out repackaging activities (coded D14 or R12).</p>	<p>Not applicable for the proposed activities.</p>	<p>N/A</p>
<p>80. Bulking of waste that is not regarded as repackaging includes:</p> <ul style="list-style-type: none"> ▪ discharging from a tanker to bulk storage of wastes of the same type ▪ tank to tank transfer where both tanks contain wastes of the same type <p>These activities are storage (coded D15 or R13).</p>	<p>Discharge of APCr into storage silos will be classed as bulking of waste and is not regarded as repackaging.</p>	<p>Yes</p>

<p>81. You must only bulk or repackage wastes together if they are materially the same. They must not react when they are bulked and they must not change the waste's composition.</p>	<p>Raw APCr will be the only material to be stored in the receiving silos. These storage silos will be segregated based on waste compositions, which will mean that similar raw APCr material is to be stored together. There is no expected reaction when wastes are to be bulked together as it will all be the same waste type, with no incompatible materials.</p>	<p>Yes</p>
<p>82. If a waste is mixed with other similar wastes, where the resulting mixture does not have significantly different characteristics from the mixed wastes (for example blending compatible combustible or flammable wastes as a fuel), this activity is mixing or blending (coded D13 or R12). Any other mixing that changes a waste is treatment.</p>	<p>Not applicable for the proposed activities.</p>	<p>N/A</p>
<p>83. You must have a permit that specifically allows you to mix hazardous waste with any:</p> <ul style="list-style-type: none"> ▪ non-hazardous waste ▪ hazardous waste in a different category ▪ non-waste 	<p>Not applicable for the proposed activities.</p>	<p>N/A</p>
<p>84. You must not mix, bulk or repackage:</p> <ul style="list-style-type: none"> ▪ wastes which could be recovered with other wastes if this means that the waste must now be sent for disposal or a lower form of recovery ▪ liquid wastes or infectious wastes with other wastes for the purpose of landfilling ▪ oils where this could affect their regeneration or recycling 	<p>Not applicable for the proposed activities.</p>	<p>N/A</p>

<ul style="list-style-type: none"> ▪ wastes containing Persistent Organic Pollutants (POPs) with another material solely to generate a mixture below the defined low POPs content ▪ waste to deliberately dilute it 		
<p>85. You must transfer wastes from containers into other storage vessels using a dip pipe, not by pouring.</p>	<p>Not applicable for the proposed activities.</p>	<p>N/A</p>
<p>86. Repackaging or mixing must only take place in a dedicated area or store which has the plant and equipment needed to deal with the specific risks of that process. For example, this could include abatement or local exhaust ventilation.</p>	<p>Not applicable for the proposed activities.</p>	<p>N/A</p>
<p>87. Except for small packages with a volume less than 5 litres, or damaged containers, you must move containers using mechanical means. For example, use a forklift truck with a rotating drum handling fitting, or using pumps for liquids.</p>	<p>Not applicable for the proposed activities.</p>	<p>N/A</p>
<p>88. You must label containers of repackaged or mixed wastes so that you can identify their contents and origin through the tracking system. After repackaging, you must move the bulked materials and emptied containers to an appropriate segregated storage area.</p>	<p>Not applicable for the proposed activities.</p>	<p>N/A</p>
<p>89. You must have a risk assessment and carry out appropriate compatibility testing to make sure that bulked wastes will not react with each other, or with the container into which they are being placed.</p>	<p>Not applicable for the proposed activities.</p>	<p>N/A</p>

Laboratory Smalls		
90. Where possible, you should sort and segregate laboratory smalls at source so that you do not need to reopen or re-sort containers.	Laboratory smalls do not form part of the proposed changes introduced in this permit variation.	N/A
91. If you sort laboratory smalls for compatibility reasons you must carry this out in a dedicated area of a building, with self-contained drainage.	Laboratory smalls do not form part of the proposed changes introduced in this permit variation.	N/A
92. You must write and follow procedures for the segregation, sorting and repackaging of laboratory smalls.	Laboratory smalls do not form part of the proposed changes introduced in this permit variation.	N/A

Table 4 - Appropriate Measures for Emissions Control

Appropriate Measures	Current / Proposed Arrangements	Compliant?
Point Source Emissions to Air		
1. You must contain storage tanks, silos and waste treatment plant (including shredders) to make sure you collect, extract and direct all process emissions to an appropriate abatement system for treatment before release.	There will be four new emission point introduced as part of the APCr washing process, which will be associated with the PRVs fitted to the storage silos. However, there will be no release via these emission points under normal operation. Only under abnormal conditions (high pressure within the silo) will there be emission via such	Yes

	emission points. Emission points will be suitably abated via reverse jet bag filter systems.	
2. You must identify the main chemical constituents of the site's point source emissions as part of the site's inventory of emissions to air.	As outlined above, emission points that will be introduced in the APCr washing plant will be for emergency use only, when there is high pressure within storage silos. There will be no emission during normal operations. Suitable abatement will be provided.	N/A
3. You must assess the fate and impact of the substances emitted to air, following the Environment Agency's risk assessment methodology.	As above, there will be no emissions to air during normal operations.	N/A
4. To reduce point source emissions to air (for example, dust, volatile organic compounds and odour) from the treatment of waste, you must use an appropriate combination of abatement techniques, including one or more of the following systems: <ul style="list-style-type: none"> ▪ adsorption (for example, activated carbon) ▪ biofiltration ▪ wet scrubbing ▪ fabric filters ▪ high efficiency particulate (HEPA) filtration ▪ condensation and cryogenic condensation ▪ cyclonic separation ▪ electrostatic precipitation ▪ thermal oxidation 	As above, there will be no emissions to air during normal operations. Suitable abatement systems will be implemented in the form of reverse jet bag filtration.	N/A
5. You must assess and design vent and stack locations and heights to make sure dispersion capability is adequate. Where monitoring is required, including for odour, you must install suitable monitoring points.	There will be no point source emissions to air from the proposed activities during normal operations. PRVs will be fitted to the storage silos, as outlined above, which	N/A

	will only vent and release under abnormal (high pressure) operating conditions.	
<p>6. Your procedures must make sure you correctly install, operate, monitor and maintain abatement equipment. For example, this includes monitoring and maintaining:</p> <ul style="list-style-type: none"> ▪ appropriate flow and chemical concentration of scrubber liquor ▪ the handling and disposal or regeneration of spent scrubber or filter medium 	Reverse jet bag filtration systems that will be fitted to the PRVs on storage silos will be included in the site's regular inspection and maintenance regimes and will be maintained in accordance with manufacturer recommendations.	Yes
7. You should design and operate abatement systems to minimise water vapour plumes.	Due to the nature of the waste being accepted on site and processed through the new treatment plant (APCr), water vapour plumes are not likely.	N/A
Fugitive Emissions to Air (including odour)		
1. You must use appropriate measures to prevent emissions of dust, mud and litter and odour.	Raw APCr will be unloaded into storage silos under a sealed atmosphere (with tankers connected to silos and APCr material blown into silos via pipework), to prevent fugitive emissions, supported by a high-level alarm, to prevent over-filling. PRVs on the storage silos will be supported by reverse jet bag filtration as abatement in the event of release via this emission point in the event of high-pressure conditions in the silo. APCr will be dampened during conditioning stages to reduce the likelihood of any dust generation and stored in specific storage bays. Sheltering will be implemented across the process, particularly for conditioning bays and the storage of EoW material.	Yes

	<p>The installation will be subject to regular house cleaning procedures to reduce the built up of mud and litter from occurring. Odour is not expected due to the nature of the material being processed at the installation.</p>	
<p>2. You must design, operate and maintain storage and treatment plant in a way that prevents fugitive emissions to air, including dust, organic compounds and odour. Where that is not possible, you must minimise these emissions. Storage and treatment plant includes associated equipment and infrastructure such as:</p> <ul style="list-style-type: none"> ▪ shredders ▪ conveyors ▪ skips or containers ▪ building fabric, including doors and windows ▪ pipework and ducting 	<p>Processing equipment will be covered with suitable sheltering to prevent the release of fugitive emissions. Fully enclosed powder tankers will deliver APCr to the site, unloading into receiving raw APCr intake storage silos under a sealed atmosphere, so as to prevent fugitive emission release. As discussed above, a high-level alarm will be fitted on the silo to alert tanker driver when the silo is nearly full, preventing over-filling and subsequent fugitive emissions. Pressure venting systems on the silos will be filtered by a reverse jet bag filters. Conditioning bays are under cover. Due to the nature of APCr waste that will be processed at the facility, any release will be easily swept up and cleared. End-of-waste of material is to be stored in a covered bay. All infrastructure to be used as part of the new APCr washing plant will be included in the routine maintenance and inspection regimes that are already established on site.</p>	<p>Yes</p>
<p>3. To make sure fugitive emissions are collected and directed to appropriate abatement, your treatment plant must use high integrity components (for example, seals or gaskets). Your treatment plant must be fully enclosed, with air extraction systems located close to emission sources where possible.</p>	<p>As outlined above, unloading into APCr storage silos will be under a completely sealed atmosphere. A sealed drainage system will support the APCr washing plant area. As the treatment process will be a new addition to the site, all components will be new and will therefore be high integrity. This will be maintained via the established maintenance and inspection regimes that will be updated to include the new infrastructure.</p>	<p>Yes</p>

<p>4. You must use your waste pre-acceptance, waste acceptance and site inspection checks and procedures to identify and manage wastes that could cause, or are causing, fugitive emissions to air. When you identify any of these wastes you must:</p> <ul style="list-style-type: none"> ▪ take appropriate, risk assessed measures to prevent and control emissions ▪ prioritise their treatment or transfer 	<p>As the site is operational, procedures for pre-acceptance, acceptance and site inspections are already established. APCr is also already accepted on site, meaning that its properties are already understood and considered. Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route. For the new APCr washing treatment, raw APCr that is being accepted has the potential to release fugitive emissions to air – this will be limited throughout the treatment process as material will be maintained as a slurry or damp, depending on the stage of the process. Various measures that will be implemented to prevent such release are outlined in the rows above and also in the Supporting Report in Section 4.3.2 and Section 6.3 in more detail. APCr will be unloaded directly into receiving APCr storage silos and will be contained within this unit until conveyance into the conditioning unit for treatment. Therefore, APCr treatment and transfer will be the main focus of the new APCr washing plant. A fugitive emissions plan is already established at the facility – this will be reviewed and updated to include the new APCr washing plant.</p>	<p>Yes</p>
<p>5. Where necessary, to prevent fugitive emissions to air from the storage and handling of wastes, you should use a combination of the following measures:</p> <ul style="list-style-type: none"> ▪ store and handle such wastes within a building or enclosed equipment ▪ keep buildings and equipment under adequate negative pressure with an appropriate abated air circulation or extraction system ▪ where possible, locate air extraction points close to potential emissions sources 	<p>Various measures that will be taken to prevent the release of fugitive emissions in relation to the new APCr washing plant are outlined above and in further detail in the main Supporting Report in Section 4.3.2 and Section 6.3. Suitable covering / sheltering is to be included in the design of the area, particularly for the conditioning bay areas and storage areas for the end-of-waste material. APCr storage silos for the received APCr will be fitted with various systems that will be useful for: preventing the over-filling of the units; alerting in the event of high-pressure within the silo; and</p>	<p>Yes</p>

<ul style="list-style-type: none"> ▪ use fully enclosed material transfer and storage systems and equipment, for example, conveyors, hoppers, containers, tanks and skips ▪ use fast-acting or 'airlock' doors that default closed ▪ keep building doors and windows shut to provide containment, other than when access is required ▪ minimising drop height ▪ use misting systems and wind barriers to prevent dust 	<p>enabling venting via a pressure release valve through a suitable filter. The actual treatment process involves mixing the APCr with water, with the opportunity for additional water to be added if required during the conditioning period: this will ensure that the APCr is suitably dampened down and unlikely to release fugitive dust emissions.</p>	
<p>6. You must set up a leak detection and repair programme and use it to promptly identify and mitigate any fugitive emissions from treatment plant and associated infrastructure (for example, pipework, conveyors, tanks).</p>	<p>Regular inspection and maintenance regimes are already established on site. All new infrastructure that is to be required for the new APCr washing plant will be included in such schedules to prevent degradation and subsequent leaks from any part of the process. Regular housekeeping will also be useful in the prompt identification of any leaks from the process.</p>	<p>Yes</p>
<p>7. You must regularly inspect and clean all waste storage and treatment areas, equipment (including conveyor belts) and containers. You must have an appropriate regular maintenance programme covering all buildings, plant and equipment. This must also include protective equipment such as air ventilation and extraction systems, curtains and fast-action doors used to prevent and contain fugitive releases.</p>	<p>Regular housekeeping arrangements are already established at the WRP. These will be reviewed and updated to include the new APCr washing treatment process.</p>	<p>Yes</p>
<p>8. Your inspection, maintenance and cleaning schedules must make sure that tanks and plant are regularly cleaned to avoid large-scale decontamination activities.</p>	<p>Inspection and maintenance schedules and arrangements are already established at the WRP. These will be reviewed and updated to include the</p>	<p>Yes</p>

	infrastructure required for the new APCr washing treatment. Regular cleaning will also be accounted for.	
9. You must take measures to prevent the corrosion of plant and equipment (for example, conveyors or pipes). This includes selecting and using appropriate construction materials, lining or coating equipment with corrosion inhibitors and regularly inspecting and maintaining plant.	Consideration for prevention of corrosion of equipment and infrastructure that is to be used in the new APCr washing plant will be embedded into the design. As the APCr washing plant will be a new addition to the WRP, the equipment that is to be used will be brand new and subject to the latest technology to prevent degradation. As outlined above, regular inspection and maintenance regimes are already in place on site as part of existing arrangements – these regimes will be reviewed and updated to include all new infrastructure that is to be used as part of this new process.	Yes
10. If you wash containers or tanks, you must design and operate the washing process and associated equipment in a way that prevents fugitive emissions to air. For example, you could do this activity in a contained or enclosed system	A sealed drainage system will be implemented to support the APCr washing plant area. This will ensure that all surface water run-off is captured so that it can be treated within the RO plant and reduce the pressure on mains supply use for the process.	Yes
11. You must fully enclose and contain pre- and post-treatment shredder plant to prevent emissions. You must design and operate the shredder plant using appropriate process interlocks. The plant should not operate unless it is enclosed and contained, for example, only working when the loading door on the hopper has been closed or sealed. Dust and microbial emissions from the shredder plant must be contained and extracted to an appropriate abatement system, for example HEPA air filtration.	A shredder plant is not involved in the new APCr washing plant that is to be introduced to the WRP as part of this permit variation.	N/A

<p>12. Where a dust management plan is required, you must develop and implement it following our guidance.</p>	<p>As the site is operational, a dust management plan is already in place and has been approved by the Environment Agency. This will be reviewed and updated (where necessary) to encompass the new APCr washing process and account for mitigating measures that are to be installed. These include the jet bag filters on the pressure relief valves fitted to the APCr storage silo and enclosure of equipment.</p>	<p>Yes</p>
<p>13. You must have procedures to minimise the amount of time odorous wastes spend in your storage and handling systems (for example, pipes, conveyors, hoppers, tanks). In particular, you must have provisions to manage waste during periods of peak volume.</p>	<p>APCr to be processed through the APCr washing plant is not inherently odorous and does not produce odorous materials once processed.</p>	<p>N/A</p>
<p>14. You must have measures to contain, collect and treat odorous emissions, including using contained buildings and plant or equipment with appropriate air extraction and abatement. We do not consider masking agents to be appropriate measures for the treatment of odorous emissions.</p>	<p>APCr to be processed through the APCr washing plant is not inherently odorous and does not produce odorous materials once processed.</p>	<p>N/A</p>
<p>15. You must monitor and maintain odour abatement systems to ensure optimum performance. For example, you should make sure that scrubber liquors are maintained at the correct pH and replenished or replaced at an appropriate frequency.</p>	<p>APCr to be processed through the APCr washing plant is not inherently odorous and does not produce odorous materials once processed.</p>	<p>N/A</p>
<p>16. You must store contaminated waters that have potential for odours in covered or enclosed tanks or containers vented through suitable abatement.</p>	<p>APCr to be processed through the APCr washing plant is not inherently odorous and does not produce odorous materials once processed.</p>	<p>N/A</p>

	Wastewater that is produced as part of the APCr washing process is not expected to be odorous and will be treated for reuse.	
<p>17. Where odour pollution at sensitive receptors is expected, or has been substantiated, you must periodically monitor odour emissions using European (EN) standards, for example either:</p> <ul style="list-style-type: none"> ▪ dynamic olfactometry according to EN 13725 to determine the odour concentration ▪ EN 16841-1 or -2 to determine the odour exposure <p>If you are using alternative methods for which no EN standards are available (for example, estimating odour impact), you should use ISO, national or other international standards to make sure you use data of an equivalent scientific quality. You must set out the monitoring frequency in the odour management plan.</p>	APCr to be processed through the APCr washing plant is not inherently odorous and does not produce odorous materials once processed.	N/A
<p>18. Where odour pollution at sensitive receptors is expected, or has been substantiated, you must also set up, implement and regularly review an odour management plan. It must be part of your management system and include all of the following elements:</p> <ul style="list-style-type: none"> ▪ actions and timelines to address any issues identified ▪ a procedure for odour monitoring ▪ a procedure for responding to odour incidents, for example, complaints ▪ an odour prevention and reduction programme designed to identify the source(s), characterise 	APCr to be processed through the APCr washing plant is not inherently odorous and does not produce odorous materials once processed.	N/A

<p>the contributions of the sources and prevent and reduce them</p>		
<p>19. Where an odour management plan is required, you must develop and implement it following our guidance.</p>	<p>An odour management plan is not required in relation to the new processes as the materials to be used and produced are not inherently odorous.</p>	<p>N/A</p>
<p>Emissions of Noise and Vibration</p>		
<p>1. You should design the facility so that potential sources of noise (including building exits and entrances) are away from sensitive receptors and boundaries. You should locate buildings, walls, and embankments so they act as noise screens.</p>	<p>As outlined in this document, the APCr washing plant will have suitable sheltering of various aspects of the equipment required. This will prevent the impacts of noise arising from the process. The new process will be located within the existing environmental permit boundary and so there will be no greater risks posed to nearby sensitive receptors.</p>	<p>Yes</p>
<p>2. You must employ appropriate measures to control noise, for example, including:</p> <ul style="list-style-type: none"> ▪ adequately maintaining plant or equipment parts which may become more noisy as they deteriorate – for example, bearings, air handling plant, building fabric, and specific noise attenuation kit associated with plant or machinery ▪ closing doors and windows of enclosed areas and buildings ▪ avoiding noisy activities at night or early in the morning ▪ minimising drop heights and the movement of waste and containers 	<p>As detailed above, sheltering will be accounted for within the design of the APCr washing plant, so as to ensure adequate covering, which will help with noise control. Existing maintenance and inspection arrangements and schedules will be reviewed and updated to include all new infrastructure that is to be introduced on site – this will prevent the likelihood of unnecessary noise-related emissions arising from deteriorating equipment. Maintenance and inspections will be carried out by suitable trained and experienced Augean staff, and this will be in line with manufacturer recommendations. A WRP-wide speed limit is in place (5 mph), which will prevent unnecessary noise-levels arising from vehicular movement on site. All equipment and machinery that is to be introduced will be brand</p>	<p>Yes</p>

<ul style="list-style-type: none"> ▪ using broadband (white noise) reversing alarms and enforcing the on-site speed limit ▪ using low-noise equipment, for example, drive motors, fans, compressors and pumps ▪ adequately training and supervising staff ▪ where possible, providing additional noise and vibration control equipment for specific sources of noise – for example, noise reducers or attenuators, insulation, or sound-proof enclosures 	<p>new and so will be subject to the latest technology, so as to ensure that unnecessary noise levels are prevented.</p>	
<p>3. Where noise or vibration pollution at sensitive receptors is expected, or has been substantiated, you must create, use and regularly review a noise and vibration management plan. This must be part of the environmental management system, and must include:</p> <ul style="list-style-type: none"> ▪ actions and timelines to address any issues identified ▪ a procedure for noise and vibration monitoring ▪ a procedure for responding to identified noise and vibration events, for example, complaints 	<p>As outlined in Section 4.5 of the Supporting Report, using the EA’s Noise Advisory Tool (NAT), the need for a Noise Impact Assessment (NIA) and Noise Management Plan (NMP) is screened out. This is predominantly based on the fact that the nearest residential receptors are > 1,000 m away from the APCr washing plant and are also in close proximity to other noise-generating sources. Therefore, it is unlikely that the addition of the new process at the WRP will result in a greater risk of noise-related impacts on receptors. Noise that is expected to be associated with the new activity is not expected to exceed noise levels generated by existing operations at the WRP.</p>	<p>Yes</p>
<p>4. Your noise and vibration management plan should also include a noise and vibration reduction programme designed to:</p> <ul style="list-style-type: none"> ▪ identify the sources of noise and vibration ▪ measure or estimate noise and vibration exposure ▪ characterise the contributions of the sources ▪ implement prevention and reduction measures 	<p>As above, the need for a NMP for the site has been screened out, using the EA’s NAT.</p>	<p>N/A</p>

<p>5. Where a noise and vibration management plan is required, you must develop and implement it following our guidance.</p>	<p>As stated in the Supporting Report in Section 4.5, the need for a noise and vibration management plan has been screened out using the EA's Noise Advisory Tool. This is predominantly on the basis that the nearest residential receptors are > 1,000 m away and these receptors are in close proximity to another noise-source and are therefore unlikely to be impacted by noise generated by the APCr washing plant.</p>	<p>N/A</p>
<p>Point Source Emissions to Water and Sewer</p>		
<p>1. You must identify the main chemical constituents of the site's point source emissions to water and sewer as part of the site's inventory of emissions.</p>	<p>There are no new point source emissions to water or sewer as a result of the changes being introduced on site in this permit variation.</p>	<p>N/A</p>
<p>2. You must assess the fate and impact of the substances emitted to water and sewer, following the Environment Agency's risk assessment guidance.</p>	<p>There are no new point source emissions to water or sewer as a result of the changes being introduced on site in this permit variation.</p>	<p>N/A</p>
<p>3. Discharges to water or sewer must comply with the conditions of an environmental permit or trade effluent consent. Relevant sources of waste water include:</p> <ul style="list-style-type: none"> ▪ water or condensate collected from treatment processes ▪ waste compactor run-off ▪ vehicle washing ▪ vehicle oil and fuel leaks ▪ washing of containers ▪ spills and leaks in waste storage areas ▪ loading and unloading areas 	<p>There are no new point source emissions to water or sewer as a result of the changes being introduced on site in this permit variation.</p>	<p>N/A</p>

<p>4. To reduce emissions to water and sewer, if you need to treat waste water before discharge or disposal, you must use an appropriate combination of treatment techniques, including one or more of the following:</p> <ul style="list-style-type: none"> ▪ preliminary or primary treatment – for example, equalisation, neutralisation or physical separation ▪ physico-chemical treatment – for example, adsorption, distillation or rectification, precipitation, chemical oxidation or reduction, evaporation, ion exchange, or stripping ▪ biological treatment – for example, activated sludge process or membrane bioreactor ▪ nitrogen removal – for example, nitrification and denitrification ▪ solids removal – for example, coagulation and flocculation, sedimentation, filtration or flotation 	<p>There are no new point source emissions to water or sewer as a result of the changes being introduced on site in this permit variation.</p>	<p>N/A</p>
<p>5. You must direct wash waters from cleaning containers to a foul sewer or sealed drainage system for on-site re-use or off-site disposal. You may need to pre-treat the waters to meet any limits on the effluent discharge consent. Discharges of wash waters to surface water or storm drains are not acceptable.</p>	<p>There are no new point source emissions to water or sewer as a result of the changes being introduced on site in this permit variation.</p> <p>All process water from the new APCr washing process and surface water run-off from the process area will be captured and treated via the wastewater treatment plant for reuse within the process.</p>	<p>N/A</p>
<p>Fugitive Emissions to Land and Water</p>		
<p>1. You must use appropriate measures to control potential fugitive emissions and make sure that they do</p>	<p>All process areas required for the APCr washing process will be supported by impermeable surfaces, with appropriate bunding.</p>	<p>Yes</p>

<p>not cause pollution. See the guidance on emissions to water and leaks from containers.</p>	<p>All process water from the new APCr washing process and surface water run-off from the process area will be captured and treated via the wastewater treatment plant for reuse within the process.</p> <p>Any fugitive dust emissions will be swept up and cleared, due to the nature of the APCr.</p>	
<p>2. You must have these in all operational areas of the facility:</p> <ul style="list-style-type: none"> ▪ an impermeable surface ▪ spill containment kerbs ▪ sealed construction joints ▪ a sealed drainage system 	<p>All process areas required for the APCr washing process will be supported by impermeable surfaces, with appropriate bunding and served by a sealed drainage system.</p> <p>All process water from the new APCr washing process and surface water run-off from the process area will be captured and treated via the wastewater treatment plant for reuse within the process.</p>	<p>Yes</p>
<p>3. You must have measures in place to prevent overflows and failures from tanks and vessels, including where relevant:</p> <ul style="list-style-type: none"> ▪ overflow detectors and alarms ▪ directing over-flow pipes to a contained drainage system ▪ locating tanks and packaged liquids in suitable secondary containment (bunds) ▪ providing isolation mechanisms (for example, closing valves) for tanks, vessels and secondary containment 	<p>During unloading of the APCr from enclosed powder tankers into the storage silo, overfilling is will be prevented via the use of a high-level alarm, which will alert the tanker driver to stop the filling process when the silo becomes full. The silo is to also be fitted with a high-pressure alarm system and pressure vent which will be filtered by a reverse jet bag, in order to avoid spillage from the silo.</p> <p>Infrastructure required for the conditioning part of the APCr washing process will be fitted with suitable bunding for the material and capacity that they are able to hold. Vessels to be used throughout the process will be suitably banded and will be subject to regular</p>	<p>Yes</p>

	<p>maintenance and inspections to ensure integrity of structures and bunds.</p>	
<p>4. You must collect and treat separately each water stream generated at the facility, for example, surface run-off water or process water. Separation must be based on pollutant content and treatment required. In particular you must make sure you segregate uncontaminated water streams from those that require treatment.</p>	<p>All process water from the new APCr washing process and surface water run-off from the process area will be captured and treated via the wastewater treatment plant for reuse within the process. As shown in Figure 2-5 and Appendix F in the Supporting Report, run-off 'clean' and 'dirty' areas are designated. 'Clean' run-off and roof water will be captured in a sump and transferred to the wastewater holding tank for use within the process. 'Dirty' run-off will be collected and subject to screening, an oil / water separator for oil removal, and solids settlement, before being combined with other wastewater to be used in the process.</p>	<p>Yes</p>
<p>5. You must use suitable drainage infrastructure to collect surface drainage from areas of the facility where you store, handle and treat waste. You must also collect wash waters and occasional spillages. Depending on the pollutant content, you must either recirculate what you have collected or send it for further treatment.</p>	<p>A sealed drainage system will be implemented to support the APCr washing plant area. All surface water run-off will be collected from 'clean' and 'dirty' yard areas (separately) to be reused within the treatment process (following treatment where necessary) to reduce the demand for mains supply in the APCr washing process.</p>	<p>Yes</p>
<p>6. You must have design and maintenance provisions in place to detect and repair leaks. These must include regularly monitoring, inspecting and repairing equipment and minimising underground equipment and infrastructure.</p>	<p>Regular maintenance and inspection arrangements are already implemented at the WRP. These will be reviewed and updated to include the new infrastructure that is to be introduced as part of this permit variation. Maintenance will be in line with manufacturer recommendations. This will help with early identification of any leaks.</p>	<p>Yes</p>

<p>7. You should provide appropriate buffer storage capacity at your facility to store waste waters, taking into account:</p> <ul style="list-style-type: none"> ▪ potential abnormal operating scenarios and incidents ▪ the nature of any polluting substances and their impact on the downstream waste water treatment plant and receiving environment 	<p>As detailed above, Via the sealed drainage system, surface water run-off will be captured from 'clean' and 'dirty' areas separately. From here it will be fed into the wastewater holding tanks (following any relevant treatment) for reuse within the APCr washing process.</p>	<p>Yes</p>
<p>8. You must have appropriate measures in place to monitor, treat and reuse water held in the buffer storage before discharging.</p>	<p>All yard run-off will drain to an enclosed sump. From here, it will be fed into the process at the point of water treatment, so as to treat to a suitable standard for reuse within the process or will be discharged with the RO concentrate if not to be reused.</p>	<p>Yes</p>
<p>9. You must take measures to prevent emissions from washing and cleaning activities, including:</p> <ul style="list-style-type: none"> ▪ directing liquid effluent and wash waters to foul sewer or collecting them in a sealed system for off-site disposal – you must not discharge them to surface or storm drains ▪ where possible, using biodegradable and non-corrosive washing and cleaning products ▪ storing all detergents, emulsifiers and other cleaning agents in suitable bunded or containment facilities, within a locked storage area, or in a building away from any surface water drains ▪ preparing cleaning solutions in contained areas of the site and never in areas that drain to the surface water system 	<p>Via the sealed drainage system, surface water run-off will be captured in an enclosed sump. From here it will be fed into the process at the point of water treatment and reused within the treatment process</p>	<p>Yes</p>

<p>10. Where relevant, you must have measures to prevent pollution from the on-site storage, handling and use of oils and fuels.</p>	<p>Oils and fuels that are required for the new APCr washing process will already be used and stored on site. Storage of these materials will be in suitable containers, with appropriate bunding.</p> <p>The APCr washing process will be supported by an impermeable hardstanding surface with suitable bunding and served by a sealed drainage system. All surface water run-off from 'dirty' yard areas will be subject to screening, treatment by an oil / water separator to remove oil, followed by solids removal.</p>	<p>Yes</p>
<p>11. You must produce and implement a spillage response plan and train staff to follow and test it.</p>	<p>A suitable spillage response plan is already implemented on site. The arrangements will be reviewed and updated to reflect the changes introduced as part of this permit variation, accounting for the new APCr washing plant. Suitably trained and experienced Augean staff will undertake such arrangements.</p>	<p>Yes</p>
<p>12. Your procedures and associated training must make sure you deal with spillages immediately.</p>	<p>A suitable spillage response plan is already implemented on site. The arrangements will be reviewed and updated to reflect the changes introduced as part of this permit variation, accounting for the new APCr washing plant. Suitably trained and experienced Augean staff will undertake such arrangements.</p>	<p>Yes</p>
<p>13. You must keep spill kits at locations close to areas where a spillage could occur and make sure relevant staff know how to use them. Make sure kits are replenished after use.</p>	<p>Spill kit provisions will be included in the design of the APCr washing plant to support response to spills that may occur. Spillage of APCr will be easily swept up and cleared, due to the nature of the material. Liquids associated with the process, including materials required in the water treatment process (as outlined in</p>	<p>Yes</p>

	Section 6 in the Supporting Report), will be treated with spill kit measures, in the event of a spill.	
14. You must stop spillages from entering drains, channels, gullies, watercourses and unmade ground. You must make proprietary sorbent materials, sand or drain mats available.	A sealed drainage system will be in place to serve the APCr washing plant area. Spill kit and associated provisions will be in place.	Yes
15. You must make sure your spillage response plan includes information about how to recover, handle and correctly dispose of waste produced from a spillage.	A suitable spillage response plan is already implemented on site. The arrangements will be reviewed and updated to reflect the changes introduced as part of this permit variation, accounting for the new APCr washing plant. Suitably trained and experienced Augean staff will undertake such arrangements.	Yes
16. Container washing equipment must be contained and located in a designated area of the facility that has self-contained drainage. The equipment must be designed to collect and contain all wash waters, including any spray. Trained staff must operate, inspect and maintain it regularly.	No container washing undertaken with this permit variation.	N/A
17. For sub-surface structures, you must: <ul style="list-style-type: none"> ▪ establish and record the routing of all site drains and sub-surface pipework ▪ identify all sub-surface sumps and storage vessels ▪ engineer systems to minimise leakages from pipes and make sure they are detected quickly if they do occur, particularly where hazardous substances are involved 	Sumps will be implemented for the capture of 'clean' and 'dirty' run-off separately, along with sumps for the capture of wastewater arising from various stages of the process. Site drainage will be routed accordingly to ensure no unnecessary contamination of 'clean' run-off. All structures will be included in the site's inspection and maintenance programmes.	Yes

<ul style="list-style-type: none"> ▪ provide secondary containment or leakage detection for sub-surface pipework, sumps and storage vessels ▪ establish an inspection and maintenance programme for all sub-surface structures, for example, pressure tests, leak tests, material thickness checks or CCTV 		
<p>18. For surfacing, you must design appropriate surfacing and containment or drainage facilities for all operational areas, taking into account:</p> <ul style="list-style-type: none"> ▪ collection capacities ▪ surface thicknesses ▪ strength and reinforcement ▪ falls ▪ materials of construction ▪ permeability ▪ resistance to chemical attack ▪ inspection and maintenance procedures 	<p>The APCr washing plant will be supported by an impermeable hardstanding surface, as well as a sealed drainage system. Enclosed sumps will be used for the collection of run-off from 'clean' and 'dirty' yard areas, which will be designed to serve the expected capacity based on the size of the area.</p>	<p>Yes</p>
<p>19. You must have an inspection and maintenance programme for impermeable surfaces and containment facilities.</p>	<p>Existing arrangements for regular inspections and maintenance at the WRP will be reviewed and updated to include the new APCr washing plant and associated infrastructure.</p>	<p>Yes</p>

Table 5 - Appropriate Measures for Emissions Monitoring and Limits

Appropriate Measures	Current / Proposed Arrangements	Compliant?
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Emissions to Air		
<p>1. Your facility's emissions inventory must include information about the relevant characteristics of point source emissions to air, such as the:</p> <ul style="list-style-type: none"> ▪ average values and variability of flow and temperature ▪ average concentration and load values of relevant substances and their variability ▪ flammability, lower and higher explosive limits and reactivity ▪ presence of other substances that may affect the waste gas treatment system or plant safety – for example, oxygen, nitrogen, water vapour, dust 	<p>There are no new point source emissions to air during normal operation as a result of the changes being introduced on site in this permit variation.</p>	<p>N/A</p>
Emissions to Water or Sewer		
<p>1. Your facility's emissions inventory must include information about the relevant characteristics of point source emissions to water or sewer, such as:</p> <ul style="list-style-type: none"> ▪ average values and variability of flow, pH, temperature, and conductivity ▪ average concentration and load values of relevant substances and their variability – for example, COD (chemical oxygen demand) and TOC (total organic carbon), nitrogen species, phosphorus, metals, priority substances or micropollutants ▪ data on bio-eliminability – for example, BOD (biochemical oxygen 	<p>There are no new point source emissions to water or sewer as part of this permit variation. RO concentrate arising from wastewater treatment will be tankered off site for further treatment and / or disposal. The expected composition of the RO concentrate is detailed in Section 2.4 of the Supporting Report.</p>	<p>N/A</p>

demand), BOD to COD ratio, Zahn-Wellens test, biological inhibition potential, for example, inhibition of activated sludge		
<p>2. For relevant emissions to water or sewer identified by the emissions inventory, you must monitor key process parameters (for example, waste water flow, pH, temperature, conductivity, or BOD) at key locations. For example, these could either be at the:</p> <ul style="list-style-type: none"> ▪ inlet or outlet (or both) of the pre-treatment ▪ inlet to the final treatment ▪ point where the emission leaves the facility boundary 	There are no new point source emissions to water or sewer as part of this permit variation. RO concentrate arising from wastewater treatment will be tankered off site for further treatment and / or disposal. The expected composition of the RO concentrate is detailed in Section 2.4 of the Supporting Report.	N/A

Table 6 - Appropriate Measures for Process Efficiency

Appropriate Measures	Current / Proposed Arrangements	Compliant?
Energy Efficiency (Installations Only)		
<p>1. You must create and implement an energy efficiency plan at your facility. This must:</p> <ul style="list-style-type: none"> ▪ define and calculate the specific energy consumption of the activity (or activities) you do and waste stream(s) you treat ▪ set annual key performance indicators – for example, specific energy consumption (expressed in kWh/tonne of waste processed) 	An energy efficiency plan is already implemented at the facility for current operations. This will be reviewed and amended, as appropriate, to incorporate the new process and associated infrastructure.	Yes

<ul style="list-style-type: none"> ▪ plan periodic improvement targets and related actions 		
<p>2. You must regularly review and update your energy efficiency plan as part of your facility's management system.</p>	<p>As discussed above, the energy efficiency plan that is currently implemented by Augean will be reviewed and updated to include the new processes discussed within this permit variation application.</p>	<p>Yes</p>
<p>3. You must have and maintain an energy balance record for your facility. This must provide a breakdown of your energy consumption and generation (including any energy or heat exported) by the type of source (electricity, gas, conventional liquid fuels, conventional solid fuels and waste). You should provide Sankey diagrams or energy balances to show how energy is used in your waste treatment processes.</p>	<p>An energy balance record is currently maintained for existing operations at the facility. As part of these changes to be introduced on site, this will be reviewed and amended to incorporate the new processes and the associated energy requirements.</p>	<p>Yes</p>
<p>4. You must regularly review and update your energy balance record as part of your facility's management system, alongside the energy efficiency plan.</p>	<p>As discussed above, the energy balance record and associated protocols will be updated, as necessary, to include the APCr washing process that is to be introduced as a result of this permit variation application.</p>	<p>Yes</p>
<p>5. You must have operating, maintenance and housekeeping measures in place in relevant areas, for example for:</p> <ul style="list-style-type: none"> ▪ air conditioning, process refrigeration and cooling systems (leaks, seals, temperature control, evaporator or condenser maintenance) ▪ the operation of motors and drives ▪ compressed gas systems (leaks, procedures for use) 	<p>The APCr treatment activity will be in an external yard area outside and none of these measures apply.</p> <p>All equipment will be operated and maintained as per the operating manual, which will include preventative maintenance (such as greasing, lubrication and inspection checks). APCr washing is a batch process so equipment can be individually turned off when not in use to prevent idling.</p>	<p>Yes</p>

<ul style="list-style-type: none"> ▪ steam distribution systems (leaks, traps, insulation) ▪ space heating and hot water systems ▪ lubrication to avoid high friction losses ▪ boiler operation and maintenance, for example, optimising excess air ▪ other maintenance relevant to the activities within the facility 	<p>Other measures that will aid in maintaining efficient operation include the use of air conditioning within the electrical room to ensure that a suitable temperature is sustained for the equipment, preventing overheating.</p>	
<p>6. You must have measures in place to avoid gross energy inefficiencies. These should include, for example:</p> <ul style="list-style-type: none"> ▪ insulation ▪ containment methods (such as seals and self-closing doors) ▪ avoiding unnecessary discharge of heated water or air (for example, by fitting timers and sensors) 	<p>The APCr treatment activity will be in an external yard area outside and none of these measures apply.</p> <p>The process is also not to be conducted at elevated temperatures and so gross inefficiencies are not expected to be observed, and these measures are not expected to be necessary.</p>	Yes
<p>7. You should implement additional energy efficiency measures at the facility as appropriate, following our guidance.</p>	<p>If any energy efficiency measures are deemed to be applicable to the APCr treatment activity, then these would be considered for implementation alongside payback criteria.</p>	Yes
<p>Raw Materials (Installations Only)</p>		
<p>1. You must maintain a list of the raw materials used at your facility and their properties. This includes auxiliary materials and other substances that could have an environmental impact.</p>	<p>A raw material inventory will be maintained at the facility.</p> <p>Specific flocculants and coagulants are yet to be finalised (these will be defined when the process is operational) however generic details have been</p>	Yes

	assumed based on Safety Data Sheet (SDS) information.	
2. You must regularly review the availability of alternative raw materials and use any suitable ones that are less hazardous or polluting. This should include, where possible, substituting raw materials with waste or waste-derived products.	As detailed above, the main raw material for the APCr washing process, APCr, is already accepted at the facility, which therefore means that there will be no additional risks in regard to a hazardous material being accepted at the facility.	Yes
3. You must justify the continued use of any substance for which there is a less hazardous alternative.	As discussed above, the main raw material to be used in the new APCr washing process is APCr, which is a hazardous waste itself. Other raw materials that are required for the process are discussed in Table 2-3 of the Supporting Report, which outlines that the most suitable materials will be selected for the process and that there are no better alternatives that could be used.	Yes
4. You must have quality assurance procedures in place to control the content of raw materials.	There will be upper limits to be adhere to in relation to the composition of APCr at various stages of the APCr washing process. This includes the composition of APCr when received at the WRP. These are subject to agreement with the EA EoW agreement. Already in place at the WRP are pre-acceptance and acceptance procedures – these processes are well-established and will be key in the initial stage of the APCr washing process, as these will cover APCr receipt (incoming APCr material will be assessed against different limits / requirements for the specific APCr washing route). Incoming APCr will be assessed against different limits / requirements specific to the new APCr washing route. Pre-acceptance and acceptance procedures are	Yes

	discussed in more detail in Section Error! Reference source not found.	
Water Use (Installation Only)		
<p>1. You must make sure you optimise water consumption to:</p> <ul style="list-style-type: none"> ▪ reduce the volume of waste water you generate ▪ prevent or, where that is not practicable, reduce emissions to soil and water 	<p>Water consumption considerations are well-embedded into the plans for the implementation of the APCr washing process at the facility. 60% of the water used in the process will be treated, via the reverse osmosis process, and reused in the process. Augean are also investigating possible salt recovery options, to reduce the volume of concentrated brine that is required to be tankered off site and would also enable a greater volume of water to be reused.</p>	Yes
<p>2. Measures you must take include:</p> <ul style="list-style-type: none"> ▪ implementing a water saving plan (involving establishing water efficiency objectives, flow diagrams and water mass balances) ▪ optimising the use of wash waters (for example, dry cleaning instead of hosing down and using trigger controls on all washing equipment) ▪ recirculating and reusing water streams within the plant or facility, if necessary after treatment ▪ reducing the use of water for vacuum generation (for example, using liquid ring pumps with high boiling point liquids), where relevant 	<p>The WRP already has a water saving plan, which will be reviewed and updated accordingly to encompass the new process and equipment.</p> <p>Furthermore, as outlined above, water reuse will be a key driver of the APCr washing process. Reverse osmosis technology will be used to remove contaminants from process wastewater, as well as washdown, yard and roof run-off that is captured, to be used within the treatment process.</p>	Yes

<p>3. You must review water use (a water efficiency audit) at least every 4 years.</p>	<p>Augean have existing measures in place for review of water use, which will continue to be followed and will also be extended to consider the new process.</p>	<p>Yes</p>
<p>4. You must also:</p> <ul style="list-style-type: none"> ▪ produce flow diagrams and water mass balances for your activities ▪ establish water efficiency objectives and identify constraints on reducing water use beyond a certain level (usually this will be site specific) ▪ identify the opportunities for maximising reuse and minimising use of water ▪ have a timetabled improvement plan for implementing additional water reduction measures 	<p>Process flow diagrams (included in Appendix B in the Supporting Report) have been developed for the anticipated operation of the APCr washing plant that is to be introduced to the WRP, to highlight the demand for water and the efficiency of the process. Water reuse is a key factor within the overall process and is maximised.</p> <p>Augean intend to develop and improve the wastewater treatment process further to reduce the volume of RO concentrate that is tankered off-site and increase the volume of water that can be reused; however, this will part of a future prospect.</p>	<p>Yes</p>
<p>5. To reduce water use and associated emissions to water, you should apply these general principles in sequence:</p> <ul style="list-style-type: none"> ▪ use water efficient techniques at source where possible ▪ reuse water within the process, by treating it first if necessary – if not practicable, use it in another part of the process or facility that has a lower water quality requirement ▪ if you cannot use uncontaminated roof and surface water in the process, you should keep it separate from other discharge streams – at least until after you have treated the 	<p>Water efficient techniques are in place across the site, and this approach will be extended to include the new APCr recovery process.</p> <p>Water reuse and considerations for reductions in water use are well-embedded in the plans for the new development, as discussed in Section 1.2.1.</p> <p>RO concentrate arising from the wastewater treatment will be tankered off-site for disposal. Augean plan to make improvements to the process in the future to reduce the volume that is required to be dispatched.</p>	<p>Yes</p>

contaminated streams in an effluent treatment system and have carried out final monitoring		
6. You should establish the water quality requirements associated with each activity and identify whether you can substitute water from recycled sources. Where you can, include it in your improvement plan.	As described in Section 1.2.1 of the Supporting Report, recycled water will be utilised in the APCr recovery process, alongside surface water run-off that will undergo treatment so that it is suitable for use in the process.	Yes
7. Where there is scope for reuse (possibly after some form of treatment) you should keep less contaminated water streams, such as cooling waters, separate from more contaminated streams.	As detailed throughout this table, water reuse will be fundamental for the new process that will be introduced at the facility.	Yes
8. You must minimise the volume of water you use for cleaning and washing down by: <ul style="list-style-type: none"> ▪ vacuuming, scraping or mopping in preference to hosing down ▪ reusing wash water (or recycled water) where practicable ▪ using trigger controls on all hoses, hand lances and washing equipment 	As detailed throughout this table, water reuse will be fundamental for the new process that will be introduced at the facility.	Yes
9. You must directly measure fresh water consumption and record it regularly at every significant usage point, ideally on a daily basis.	Fresh water usage will continue to be monitored and recorded regularly, included for the purposes of the new APCr washing process. Mains supply will be used for the start-up water required for the process. As the	Yes
Waste Minimisation, Recovery and Disposal		

<p>1. You must have and implement a residues management plan that:</p> <ul style="list-style-type: none"> ▪ minimises the generation of residues from waste treatment ▪ optimises the reuse, regeneration, recycling or energy recovery of residues, including packaging ▪ makes sure you properly dispose of residues where recovery is technically or economically impractical 	<p>The proposed variation supports waste minimisation activities by taking a waste residue and turning it into an EoW product. The treatment process overall aims to minimise waste generation and will produce a recovered output from waste that will be deemed as EoW material. As APCr is already accepted and handled at the facility, there are no required changes to be made in relation to the APCr. The residues management plan will be reviewed and updated as necessary in line with the new treatment process.</p>	<p>Yes</p>
<p>2. Where you must dispose of waste, you must do a detailed assessment to identify the best environmental options for waste disposal.</p>	<p>Metal filtercake arising from the process to be introduced is deemed hazardous waste. This will be disposed of at an alternative, suitable facility for disposal. However, it can be used for stabilisation processes at other sites operated by Augean, in the event that criteria are not fulfilled. Reverse osmosis concentrate will be classified as non-hazardous and will be tankered off-site to a suitable facility for further treatment / disposal. As discussed above, the anticipated composition of this is broken down Section 2.4 of the Supporting Report.</p>	<p>Yes</p>
<p>3. You must regularly review options for recovering and disposing of waste produced at the facility. You must do this as part of your management system to make sure you are using the best environmental options and promoting the recovery of waste where technically and economically viable.</p>	<p>All waste to be disposed of arising from the APCr treatment activity will be reviewed every four years to determine if there are any alternative options for disposal.</p> <p>Augean are currently exploring salt recovery options, with a view to reduce the volume of concentrate sent for disposal.</p>	<p>Yes</p>



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CONFIDENTIAL

Appendix E – EoW Decision Notice

Our ref: DOW221228/01A

Date: 14 November 2024

Dear Mr Green,

Innovative Ash Solutions (IAS) Ltd

End of Waste submission for Air Pollution Control residues (APCr), sourced from biomass and municipal solid waste (MSW) energy from waste (EfW) plants, for use as a construction additive both as a groat/lightweight filling material and as a binder in bound construction materials (ref. DOW221228/01A).

Thank you for the submission made on 28 December 2022 and further information provided on 19 December 2023, 16 April 2024, 12 September 2024 and 06 October 2024 relating to the use of the final waste derived material ('IAS PFA Alternative') as a construction additive ('Submission').

Based on the information you have provided in your Submission, the Environment Agency's view is that the 'IAS PFA Alternative' has met the end of waste test in article 6 of the Waste Framework Directive 2008 ('the WFD'), as amended to account for EU Exit, and that the material **has therefore achieved end of waste status**, with the constraints set out in this letter.

1. Article (6)(1)(a) of the WFD requires that the substance or object is to be used for a specified purpose. The final material ('IAS PFA Alternative') is specifically used as a construction additive in 2 applications; as a groat/lightweight filling material (where the material is hydraulically pumped or injected into the ground to fill void space) and as a binder ingredient in bound construction materials (e.g. additive to pre-cast concrete). The 'IAS PFA Alternative' has been shown to be suitable for this use and is destined for such use in the construction market in the UK. The 'IAS PFA Alternative' will replace similar additives in this use.
2. Article (6)(1)(b) of the WFD requires that a market or demand exists for such a substance or object. The Submission has outlined the target market for the material (e.g., mine grouting companies), provided details of the size and purchasing ability of this market and provided evidence that the 'IAS PFA Alternative' meets the requirements of this market. In addition, the Submission has included evidence of specific interest from this market, in the form of letters of interest from customers who are established in this market sector. It is therefore considered that a market exists for the final material. If there ceases to be a market for the material, the market for the material significantly reduces and/or the technical requirements of this market change, this opinion that the material has achieved end of waste will no longer apply.

3. Article (6)(1)(c) of the WFD requires the substance or object to fulfil the technical requirements for the specific purposes and meet the existing legislation and standards applicable to products.

For use as a grout/lightweight filling material the Submission has confirmed compliance with the following standard is a requirement and provided evidence that it can be met:

- Report BR 509 Stabilising mine workings with PFA grouts: Environmental code of practice

No specific standards for use as a construction additive have been identified (e.g. as an additive to pre-cast concrete). However, whilst there is no industry standard that the 'IAS PFA Alternative' is required to meet, the following standard is considered relevant to use:

- BS EN 450 - Fly Ash for Concrete

Considering the material and use, BS EN 450 Fly Ash for Concrete is considered the most relevant standard for assessment (as it covers similar additives for these uses). Considering BS EN 450 and the proposed use of the 'IAS PFA Alternative', the Submission has demonstrated the 'IAS PFA alternative' will meet the this outlined standard. The data provided has demonstrated the 'IAS PFA alternative' compares well to a non-waste on the market (which is compliant with BS EN 450) with regard to the relevant characteristics (e.g., compressive strength). As such, based on the information assessed, it is considered that there is no property of the 'IAS PFA alternative' which, when used as a construction additive, would prevent this standard (which is considered relevant to the requirements for use) from being met.

4. Article (6)(1)(d) of the WFD requires that the use of the substance or object will not lead to overall adverse environmental or human health impacts. Considering the sampling data, subsequent comparison with the non-waste comparator (PFA from coal fired electricity generation) and the assessment of risk outlined in the Submission, together with the final specification which is required to be met for end of waste to be achieved, it is not considered that the outlined use of the final material will lead to overall adverse environmental and/or human health impacts.

Should any use, process, market, testing, standard or specification that you have relied upon either directly or indirectly in your Submission change in the future, you may need to consider whether the final material still achieves end of waste in line with the requirements of this letter and review and amend your own standards and specifications to ensure your final material retains its non-waste status.

Our view is strictly limited to the non-waste status of the material. Once waste has been fully recovered and ceases to be waste, waste management controls cease to apply. However other regulatory and control regimes, which we have not assessed, may still apply to your material. They include, but are not limited to:

- REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) (Regulations (EC) No 1907/2006) may apply instead. Producers may need to register substances recovered from waste and placed back on the market. Further

information on REACH is available at the REACH UK Competent Authority website www.hse.gov.uk/reach.

- Other Environmental Permitting Regulation requirements, such as groundwater authorisations.

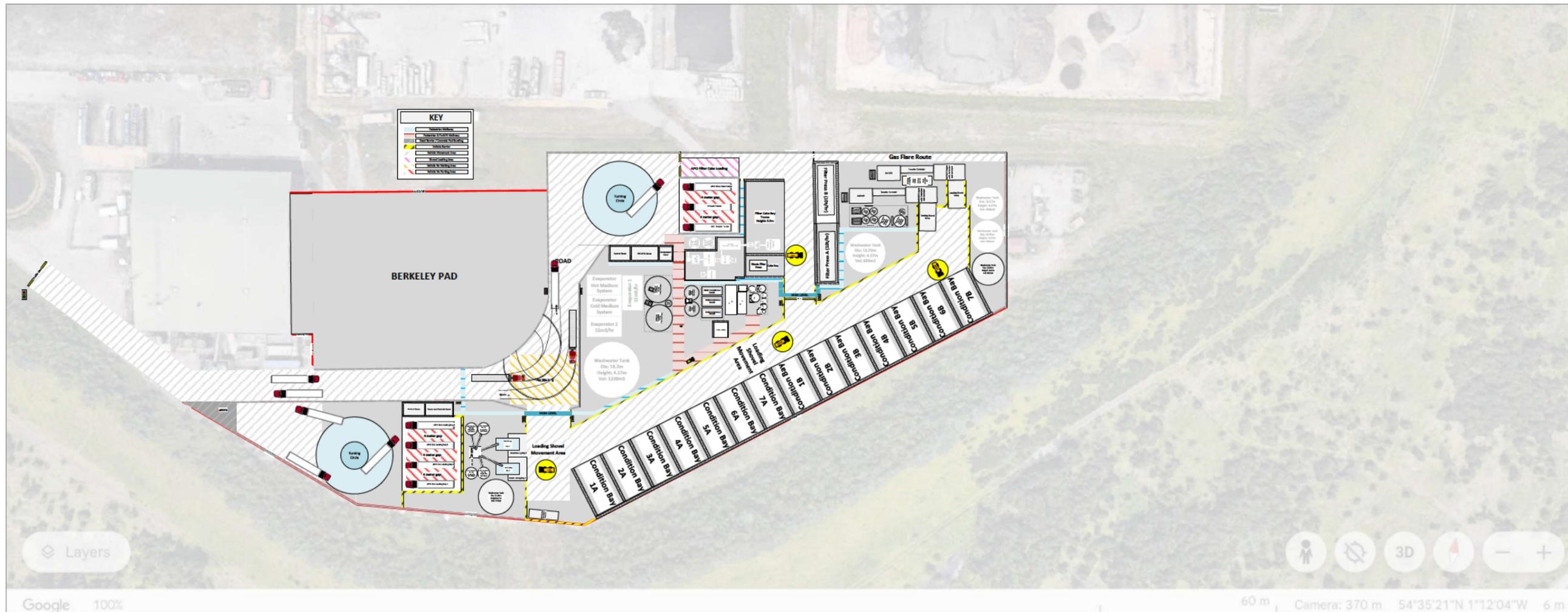
This end of waste opinion relates only to the use of the end of waste material that you have identified and explained in your Submission. Please ensure that you have the necessary permit or exemption in place for any relevant waste treatment and storage activities that you undertake.

Yours sincerely,



Joe Massey
Senior Advisor - Definition of Waste Service

Appendix F – Drawings



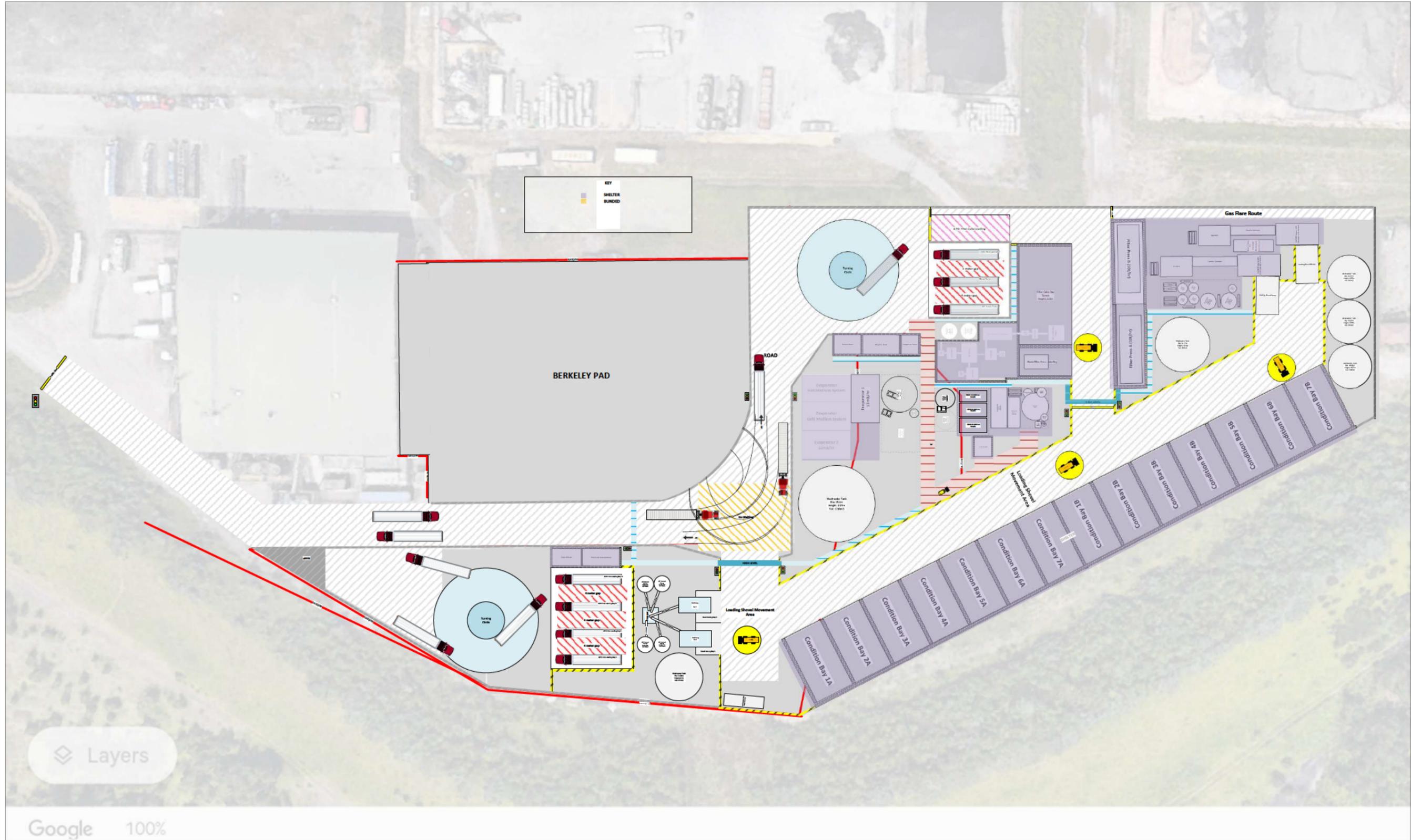
GENERAL NOTES

NO.	REVISION	DATE	BY	CHKD.	APPV'D.

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Document Type
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 Project Name
 PORT CLARENCE FLY ASH WASHING PROJECT

Project Number
 P002-PELLET-LAY-001
 Drawn By
 SOBO
 Date
 NTS @ A1



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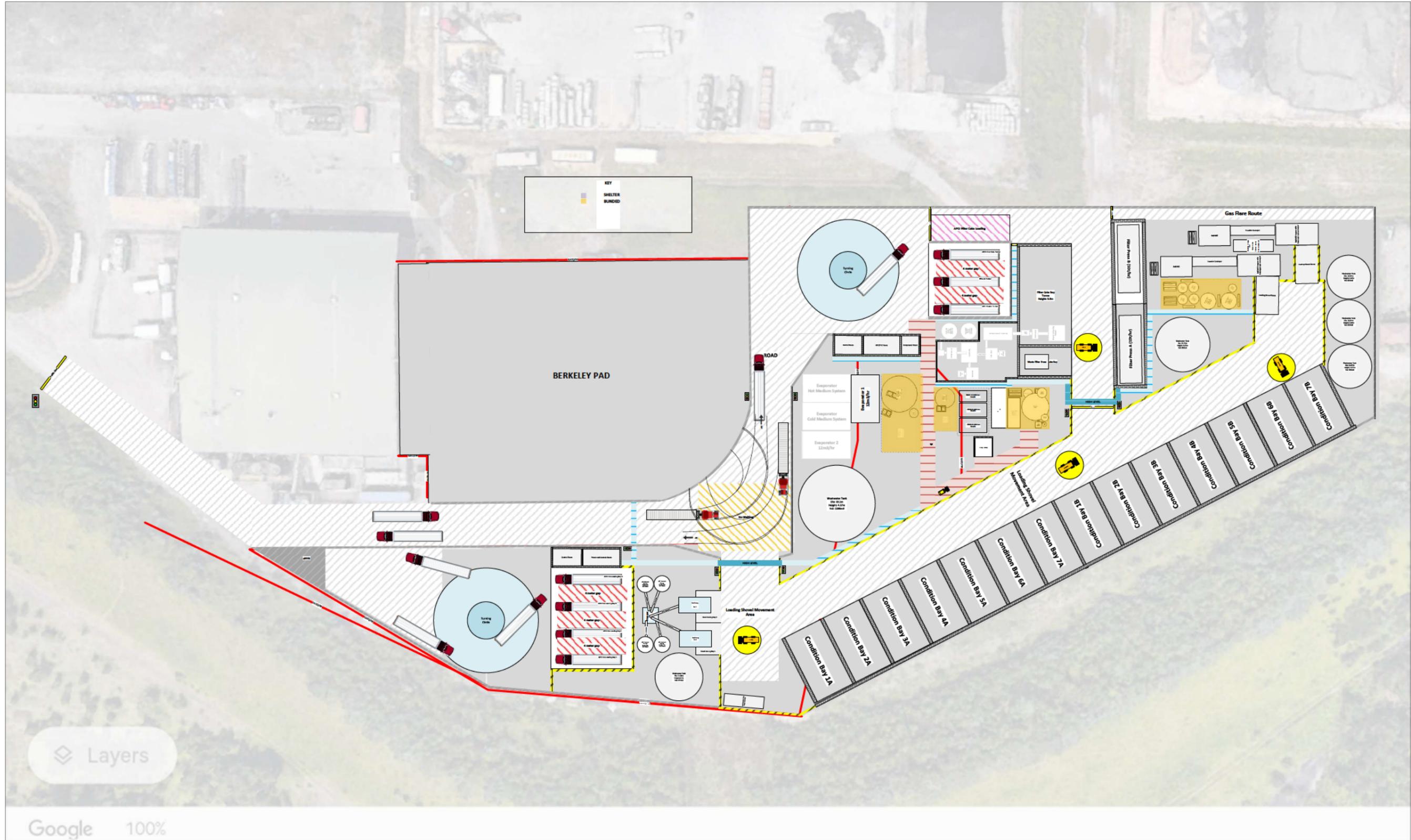
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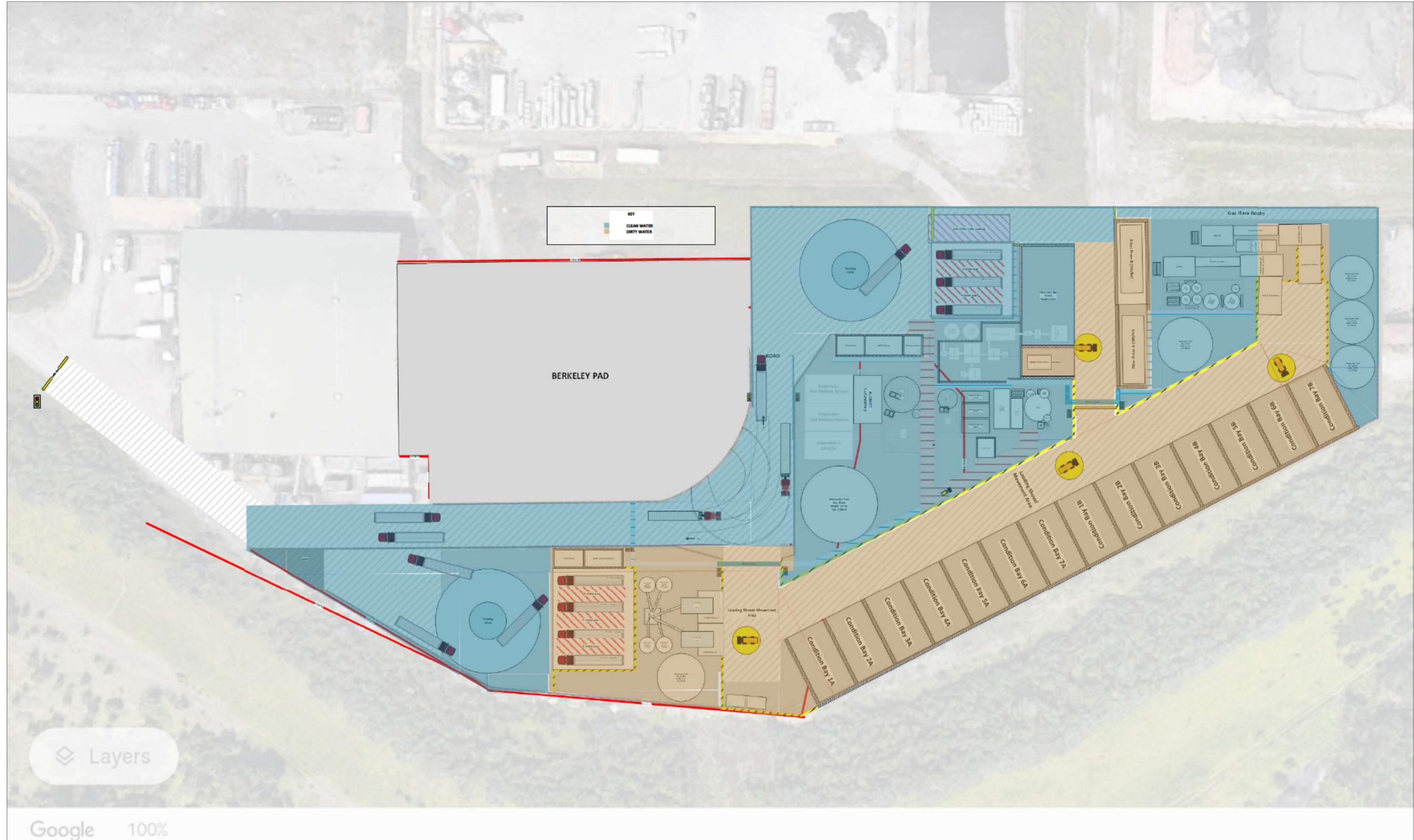
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					<p>Client SOBO</p>		<p>Client Name PORT CLARENCE IAG PROCESS PLANT LAYOUT - 30,000 and 60,000 TPA PLANT SHEET 1</p>	<p>Drawn By SOBO</p>
					<p>Project Name PORT CLARENCE FLY ASH WASHING PROJECT</p>		<p>Scale NTS @ A1</p>	

Appendix G – Technical Competence



WAMITAB

Waste Management Industry
Training and Advisory Board



The Chartered Institution
of Wastes Management

Certificate No. OCC2142

Operator Competence Certificate

Qualification Title:

**Level 4 in Waste Management Operations - Managing Treatment
Hazardous Waste (4TMH)**

This Certificate is awarded to

Steven Thomas James Craggs

Awarded: 23/06/2011

Authorised

WAMITAB Director General

CIWM Chief Executive Officer



This certificate is jointly awarded by WAMITAB and the Chartered Institution of Wastes Management (CIWM) and provides evidence to meet the Operator Competence requirements of the Environmental Permitting (EP) Regulations, which came into force on 6 April 2008.





WAMITAB

Waste Management Industry
Training and Advisory Board

Qualification Title:

Level 4 in Waste Management Operations - Managing Treatment Hazardous Waste (4TMH)

Qualification Accreditation Number:

10026587

Units gained by Steven Thomas James Craggs

U1027789	Create effective working relationships (MCI Unit C4)
R1013863	Provide information to support decision making on a waste management site.
K1013867	Control the reception of hazardous waste
M1013871	Control the movement, sorting and storage of hazardous wastes
U1051769	Monitor procedures to control risks to health and safety (Employment NTO Unit B)
F1013860	Control maintenance and other engineering operations
J1013861	Control improvements to waste management operations
U1026119	Support the efficient use of resources (MCI Unit B1)
U1027792	Contribute to the selection of personnel for activities (MCI Unit C7)
D1013915	Control site operations for the treatment of hazardous waste
K1013920	Control the disposal of outputs and residues from hazardous waste treatment and recovery operations
H1014015	Ensure protection of the environment on hazardous waste treatment or transfer sites

Serial No: 18359/11/1





WAMITAB

Waste Management Industry
Training and Advisory Board

National Vocational Qualification

Qualification Title:

**Level 4 in Waste Management Operations - Managing Treatment
Hazardous Waste (4TMH)**

Qualification Accreditation Number:

10026587

This Certificate is awarded to

Steven Thomas James Craggs

Awarded: 23/06/2011

Serial No:18359/4TMH/1

Authorised

Lawrence Strong
Director General, WAMITAB

Ray Burberry
Qualifications Manager, WAMITAB



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indicate that the qualification is accredited only for
England, Wales and Northern Ireland.



WAMITAB

Waste Management Industry
Training and Advisory Board



The Chartered Institution
of Wastes Management

Certificate No. OCC2143

Operator Competence Certificate

Qualification Title:

**Level 4 in Waste Management Operations - Managing Transfer
Hazardous Waste (4TSH)**

This Certificate is awarded to

Steven Thomas James Craggs

Awarded: 23/06/2011

Authorised

WAMITAB Director General

CIWM Chief Executive Officer



This certificate is jointly awarded by WAMITAB and the Chartered Institution of Wastes Management (CIWM) and provides evidence to meet the Operator Competence requirements of the Environmental Permitting (EP) Regulations, which came into force on 6 April 2008.





WAMITAB

Waste Management Industry
Training and Advisory Board

Qualification Title:

Level 4 in Waste Management Operations - Managing Transfer Hazardous Waste (4TSH)

Qualification Accreditation Number:

10026563

Units gained by Steven Thomas James Craggs

U1027789	Create effective working relationships (MCI Unit C4)
R1013863	Provide information to support decision making on a waste management site.
K1013867	Control the reception of hazardous waste
M1013871	Control the movement, sorting and storage of hazardous wastes
U1051769	Monitor procedures to control risks to health & Safety (Employment NTO Unit B)
F1013860	Control maintenance and other engineering operations
J1013861	Control improvements to waste management operations
U1026119	Support the efficient use of resources (MCI Unit B1)
U1027792	Contribute to the selection of personnel for activities (MCI Unit C7)
A1014022	Control site operations for the transfer of hazardous waste
J1014024	Control the disposal of outputs and residues from hazardous waste transfer and recovery operations
H1014015	Ensure protection of the environment on hazardous waste treatment or transfer sites

Serial No: 18359/11/1





WAMITAB

Waste Management Industry
Training and Advisory Board

National Vocational Qualification

Qualification Title:

**Level 4 in Waste Management Operations - Managing Transfer
Hazardous Waste (4TSH)**

Qualification Accreditation Number:

10026563

This Certificate is awarded to

Steven Thomas James Craggs

Awarded: 23/06/2011

Serial No:18359/4TSH/1

Authorised

Lawrence Strong
Director General, WAMITAB

Ray Burberry
Qualifications Manager, WAMITAB



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CIWM

Continuing Competence Certificate

This certificate confirms that

Steven Craggs

Has met the relevant requirements of the Continuing Competence scheme for the following award(s) which will remain current for two years from 19/02/2024

TSH Transfer - Hazardous Waste
TMH Treatment - Hazardous Waste

Expiry Date:
19/02/2026

Verification date: 09/02/2024

Authorised:

Responsible Officer

Learner ID: 18359

Certificate No.: 5246227

Date of Issue: 19/02/2024

CIWM Chief Executive Officer



The Chartered Institution
of Wastes Management



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