

Permitting Decisions- Variation

We have decided to grant the variation for SRCL Knowsley Treatment and Transfer Station operated by SRCL Limited.

The variation number is EPR/KP3436NL/V006.

The variation is for the following:

- To add two new thermal auger treatment lines.
- To add two new medium combustion plant (MCP) to generate steam for the new lines.
- To vary the way the existing thermal auger operates.
- To increase storage capacity for both hazardous and non-hazardous wastes.
- To add two new waste codes for contaminated sharps waste both infectious and medicinally contaminated.
- To add an effluent treatment plant.

The variation application requested to increase the treatment capacity of the plant by adding two new clinical waste lines. These two lines will be capable of operating in 3 distinct operating modes controlled by a Supervisory Control and Data Acquisition (SCADA) system. The existing line will be modified to run in a second operating mode. Each thermal auger line comprises a shredder in which waste is shredded under negative pressure, a single chamber steam auger and an emissions control abatement plant. Each line also has a dedicated boiler to raise steam.

All three lines will be capable of working in Mode 1; treatment of infectious waste (co-treated with blood bags) continuous thermal treatment in a single chamber steam auger (including pre-shredding of waste and compaction of treated floc). The original process line is permitted to treat these waste types and we have accepted the proposal and risk assessment carried out for the two new lines is adequate and the lines will be capable of safely treating this waste. This is subject to successful completion of validation tests.

Lines one and two are also designed to operate in Mode 2. Mode 2 will treat the infectious wastes permitted for mode one with the addition of waste dual-coded under European Waste Catalogue (EWC) codes 18 01 03* and 18 01 09. For waste contaminated with or containing non-hazardous waste medicines classified under EWC code 18 01 09 the Healthcare waste: appropriate measures for permitted facilities guidance requires these wastes to go for incineration in order

to ensure that they are destroyed. SRCL Limited propose a method of treating these wastes in their thermal augers. The application seeks to add an effluent treatment plant to treat the effluent generated from the process lines. SRCL Limited intend to discharge the treated effluent to foul sewer.

All three lines will be capable of operating in Mode 3. Mode 3 is a waste activity comprising of mechanical shredding of non-hazardous healthcare offensive waste in a thermal auger, which is run without heat.

All three lines will need to complete validation testing before they commence treating waste.

This variation adds new air emission points and plant. The two new lines each have an air emissions abatement system which includes a high-efficiency particulate absorbing (HEPA) filter, a vent condenser and carbon filter beds. This variation adds two new medium combustion plant (MCP) steam boilers which each have a net rated thermal input of 1.25 MW. The boilers are fired on natural gas. The emissions limits are detailed below.

The application also adds hazardous and non-hazardous waste storage capacity. The risks associated with increased storage of clinical waste have been evaluated by the operator and the Environment Agency accepts the risk assessment and operating techniques associated with the increased waste storage. All waste will be stored in accordance with the Healthcare waste: appropriate measures for permitted facilities guidance.

Pre-operational conditions PO1 & PO2 were superseded by this variation so they have been removed from the permit.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document provides a record of the decision-making process. It

- highlights key issues in the determination
- summarises the decision making process in the decision considerations section to show how the main relevant factors have been taken into account
- shows how we have considered the consultation responses

Unless the decision document specifies otherwise, we have accepted the applicant's proposals.

Read the permitting decisions in conjunction with the environmental permit and the variation notice.

Key issues of the decision

The key issues identified while determining this application were:

- Mode 2

Operating Mode 2 adds a new waste which is infectious and medicinally contaminated. Wastes of this type require stringent handling protocols and validation before they can be safely treated. The commencement of Mode 2 is subject to a series of pre-operational conditions and improvement conditions. Pre-operational conditions PO3 to PO6 must be completed before treatment of waste contaminated with non-hazardous medicines (18 01 03* with 18 01 09) can be processed. Improvement condition IC6 is required to be completed within 6 months of the commencement of treatment of waste contaminated with non-hazardous medicines (18 01 03* with 18 01 09).

Based upon the monitoring reported for IC6, the operator shall also propose emission limits (or 'benchmarks') for ongoing emissions monitoring of the treatment process in accordance with the Emissions monitoring and limits appropriate measures of technical guidance Healthcare waste: appropriate measures for permitted facilities, dated 13 July 2020.

- Treating medicinally contaminated effluent.

The application included a request to add an effluent treatment plant to treat process waste water resulting from the thermal treatment of infectious and medicinally contaminated waste.

The Healthcare Waste Appropriate Measures recommends that this type of hazardous effluent is captured and sent off-site for high temperature incineration. The active pharmaceutical ingredients (APIs) potentially present in the effluent have the potential to pollute watercourses even when discharged indirectly to surface waters via a waste water treatment works operated by a sewerage undertaker.

SRCL Limited have proposed an alternative method of treating infectious and medicinally contaminated effluent generated during operating Mode 2, with the intention of discharging it to sewer. The effluent treatment plant has therefore been added as a directly associated activity (AR8) to be permitted upon successful completion of pre-operational conditions (PO7 & PO8).

The pre-operational conditions (PO7 & PO8) described in Table S1.4, where the treated effluent must be tested and characterised to confirm the veracity of the proposed treatment and to confirm the toxicity of the treated effluent before it can be discharged to sewer. Under no circumstances will any effluent

resulting from operating Mode 2 be discharged to sewer, unless otherwise agreed in writing by the Environment Agency.

Pre-operational condition PO7 is the submission of a written proposal to the Environment Agency for approval and the commencement of AR8 after the written proposal has been accepted. The proposal shall describe the trial, including descriptions of any relevant plant, containment, and capacity. The proposal should characterise all associated raw materials, emissions and wastes. The proposal should also specify the duration of the trial. The trials shall not commence until the Environment Agency has given prior written approval under this condition.

Pre-operational condition PO8 requires the submission of a report detailing the outcome of the trials. The permanent waste water treatment plant shall not be made operational and the validation testing shall not be undertaken until a permit variation to allow this has been granted.

Decision considerations

Confidential information

Identifying confidential information

We have not identified information provided as part of the application that we consider to be confidential.

Consultation

The consultation requirements were identified in accordance with the Environmental Permitting (England and Wales) Regulations (2016) and our public participation statement.

The application was publicised on the GOV.UK website.

We consulted the following organisations:

- Local Authority – Environmental Health
- Director of PH/UKHSA
- Health and Safety Executive
- Sewerage Authorities

The comments and our responses are summarised in the [consultation responses](#) section.

The regulated facility

We considered the extent and nature of the facilities at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of RGN2 'Defining the scope of the installation', Appendix 1 of RGN 2 'Interpretation of Schedule 1', guidance on waste recovery plans and permits.

The operator has provided the grid reference for the emission points from the medium combustion plants.

The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.

The site

The operator has provided a plan which we consider to be satisfactory.

This shows the extent of the site of the facility including the discharge points.

The plan shows the location of the part of the installation to which this permit applies on that site.

The plan is included in the permit.

Nature conservation, landscape, heritage and protected species and habitat designations

We have checked the location of the application to assess if it is within the screening distances, we consider relevant for impacts on nature conservation, landscape, heritage and protected species and habitat designations. The application is not within our screening distances for these designations.

Environmental risk

We have reviewed the operator's assessment of the environmental risk from the facility.

The operator's risk assessment is satisfactory.

Operating techniques

The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.

General operating techniques

We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.

The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.

Operating techniques for emissions that screen out as insignificant

Emissions of the following pollutants have been screened out as insignificant:

- Sulphate
- Arsenic
- Cadmium and its compounds
- Chromium iii
- Copper
- Mercury and its compounds
- Nickel and its compounds
- Lead and its compounds
- Zinc
- Oxides of Nitrogen
- Particulate matter (PM₁₀ and PM_{2.5})
- Benzene

and so, we agree that the applicant's proposed techniques are Best Available Techniques (BAT) for the installation. Emissions resulting from activities added as a result of pre-operational conditions will be assessed separately.

Initially the H1 risk assessment submitted by SRCL Limited showed that the levels of Cadmium present in the effluent discharged to sewer could not be screened out. A schedule 5 notice requested additional testing of Cadmium in the wastewater discharged to sewer. The results of the testing showed that cadmium in the sample was 0.02 µg, which is the limit of detection in an IPCMS testing standard. A background concentration was not available so an assumed background concentration of 50% of the environmental quality standards (EQS) for Cadmium and its compounds (dissolved) (water hardness less than 40 milligrams) was used in the H1 risk assessment tool. At this level, Cadmium was screened out as insignificant.

We consider that the emission limits included in the installation permit reflect the BAT for the sector.

National Air Pollution Control Programme

We have considered the National Air Pollution Control Programme as required by the National Emissions Ceilings Regulations 2018. By setting emission limit values in line with technical guidance we are minimising emissions to air. This will aid the delivery of national air quality targets. We do not consider that we need to include any additional conditions in this permit.

Fire prevention plan

We haven't requested a Fire Prevention Plan at this time, but we will request one in the future if we consider the site poses a risk of fire.

Waste types

We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility.

We are satisfied that the operator can accept these wastes for the following reasons:

- they are suitable for the proposed activities;
- the proposed infrastructure is appropriate; and
- the environmental risk assessment is acceptable.

Pre-operational conditions

Based on the information in the application, we consider that we need to include pre-operational conditions.

Additional information is provided in the key issues section on page 2.

Improvement programme

Based on the information on the application, we consider that we need to include an improvement programme.

We have included an improvement programme to ensure that all new treatment lines pass validation testing before they are put into use.

Emission limits

Emission Limit Values (ELVs) and equivalent parameters or technical measures based on Best Available Techniques (BAT) have been added for the following substances:

- Oxides of Nitrogen (NO and NO₂, expressed as NO_x)
A limit of 100 mg/Nm³ has been added as per the emission limit values set by the medium combustion plant directive (MCPD). This limit applies to emission points A4 & A5.
- The air emission points associated with the air abatement systems, A1 & A2 must adhere to the same emission limit values for Bacillus spores, TVOC and particulate matter as the existing treatment line's air abatement plant (A3);
 - Bacillus spores – 1000 cfu/m³
 - TVOC – 30 mg/m³
 - Particulate matter – 5 mg/m³

Monitoring

We have decided that monitoring should be added for the following parameters, using the methods detailed and to the frequencies specified:

- Speciated volatile organic compounds (VOCS) shall be monitored from emission points A1, A2 & A3.
- The variation adds a requirement to monitor Carbon Monoxide from emission points A4 and A5.

The requirement to monitor VOCs during the treatment of medicinally contaminated waste shall apply once the treatment of this waste has been approved under pre-operational conditions PO5 & PO6. The ongoing frequency of this monitoring may be reduced subject to completion of improvement condition IC6 and the agreement of the Environment Agency.

We made these decisions in accordance with the [Healthcare waste: appropriate measures for permitted facilities guidance](#) and the [Medium Combustion Plant Directive](#).

Management system

We are not aware of any reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.

The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.

Technical competence

Technical competence is required for activities permitted.

The operator is a member of the WAMITAB scheme.

We are satisfied that the operator is technically competent.

Growth duty

We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit variation.

Paragraph 1.3 of the guidance says:

“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”

We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.

We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.

Consultation Responses

The following summarises the responses to consultation with other organisations, our notice on GOV.UK for the public and the way in which we have considered these in the determination process.

Responses from organisations listed in the consultation section

Response received from UKHSA.

Brief summary of issues raised:

The response from UKHSA raised potential concerns regarding bioaerosols, dusts and odours arising from the proposed redevelopment. UKHSA is however satisfied that the control measures proposed by the applicant should ensure that there are no significant impacts on public health.

Summary of actions taken:

We accept that the proposals made by SRCL Limited will mitigate and control potential fugitive emissions and odour sources.

Representations from local MPs, councillors and parish/town community councils

Response received from Knowsley Metropolitan Borough Council.

Brief summary of issues raised:

The comment from Knowsley Council Environmental Health stated that they have no concerns in relation to the processes of SRCL Limited. They note that the risks involved are low or very low and they acknowledge that monitoring will be carried out in accordance with the permit conditions.

Summary of actions taken:

No actions were necessary.