

Permitting Decisions- Bespoke Permit

We have decided to grant the permit for Plumley PSD operated by The Oil & Pipelines Agency.

The permit number is EPR/CP3643QY/A001.

The permit was granted on 27/01/2025

The application is for Plumley PSD (Petroleum Storage Depot) which consists of 35 solution-mined caverns approximately 200-250 m below ground level. The site was developed by the UK Government to be a fuel and oil storage depot between 1955 - 1963.

The approximate site inventory of hydrocarbons is 210,000 m³. Plumley PSD is currently under asset management by The Oil & Pipelines Agency (OPA) which mainly consists of maintenance.

The Schedule 1 activities undertaken at the Installation are:

- 1.2A (1) e (i) storage and handling of crude oil and
- 1.2A (1) e (ii) storage and handling of stabilised crude petroleum.

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:

- summarises the decision making process in the [decision considerations](#) section to show how the main relevant factors have been taken into account
- highlights [key issues](#) in the determination
- 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.

Key issues of the decision

Four improvement conditions have been added as follows:

IC1: Following the review of the operator’s best available technique (BAT) document, which was received on 29/02/2024 via schedule 5 response, this indicated that in relation to “Specific measures and confirmation of methods and frequencies for monitoring in relation to ‘Best Available Techniques Reference Document - Emissions from Storage’ section 5.1.6 ‘**assessment of cavern stability by seismic monitoring**’” that they fell slightly short of this guidance as for this they answered: “OPA have a safety management system described in Section 8 of the COMAH Report. **OPA do not perform seismic surveys** on the non-operational constructed caverns (they are located in a low-risk earthquake area), OPA monitor periodically for ground subsidence.” As a result of this we have decided to include an improvement condition IC1 in table S1.3 to ensure this aspect of BAT is sufficiently covered.

IC2: Following review of the operator’s Site Condition Report (SCR) this improvement condition has been added. The operator’s risk assessments indicate that site drainage flows to the interceptor which mitigates the risk of a leakage and pollution to the environment, although no formal drainage survey of the site has been conducted and provided, therefore this condition has been added to ensure a reduced risk of pollution to the environment.

IC3: This improvement condition has been added following review of the operator’s SCR and supporting documents. These indicate from the condition of the bunds that there is a risk of pollutants leaking through defects in the bunds, which if it were to escape the cavern/wellhead could lead to pollution. As a result this condition has been added to ensure the bunds are appropriately repaired in a timely manner to ensure the secondary containment reduces the risk of pollution to the environment.

IC4: Following review of the operator’s SCR and supporting documents this condition has been added due to the fact the operator has indicated a plan to ensure the wellhead component integrity (within SCR and Appendix K), although the operator has not provided the results of that plan or confirmation this took place. This condition will ensure the operator will provide results confirming the integrity of all wellhead components, or whether any improvements are needed in order to maintain a reduced risk to the environment, by ensuring sufficient primary containment.

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	<u>Best Available Technique</u> The operator shall submit a written report to the Environment Agency for confirmation.	2 years from date of issue of permit

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	<p>The report must:</p> <ul style="list-style-type: none"> - Contain evidence that the installation's environmental management system includes a plan to periodically assess the cavern stability by seismic monitoring, in fulfilment of the requirements of section 5.1.6 of the "Best Available Techniques Reference Document - Emissions from Storage". - Provide evidence that the seismic monitoring plan has been developed by competent specialists; - Confirm that the results and data gathered by the seismic monitoring will be reviewed and interpreted by competent specialists; <p>Make the details of the seismic monitoring plan, such as specific methods and frequencies for the proposed seismic monitoring and data gathered as part of the monitoring, available to the Environment Agency on request.</p> <p>The operator must implement the proposals in the report as confirmed with the Environment Agency.</p>	
IC2	<p><u>Site Drainage</u></p> <p>The operator shall submit to the Environment Agency for assessment and written approval, a written report detailing the results of a survey of existing drainage systems on site including confirmation that site drainage discharges into the Plumley interceptor. Where appropriate the report shall contain a plan with dates for the implementation of any remedial measures and any other recommendations made in the report.</p> <p>The operator must implement the proposals in the report as agreed with the Environment Agency's written approval, subject to such amendments or additions as notified by the Environment Agency.</p>	2 years from date of issue of permit
IC3	<p><u>Wellhead Bunds</u></p> <p>The operator shall submit to the Environment Agency for assessment and written approval, a written report detailing the remedial measures for Category A, B and C bund defects to comply with CIRIA C736 Containment systems for the prevention of pollution detailed in Appendix A (Defect Location & Remediation Drawings) and Appendix B (Inspection Sheets) in the report titled Appendix N (Concrete Repair and Waterproofing Investigation Study – Ref 17862-REP-001) dated September 2020.</p> <p>The report shall include but not be limited to the following:</p> <p>A review of the limitations detailed in section 1.3 in Appendix N and completion of any further works deemed necessary to inform remedial repairs.</p> <p>Inclusion of proposed sequencing works as proposed in section 4.5 in Appendix N including the completion of further investigation works as detailed in point 1 in section 4.5.</p>	2 years from date of issue of permit

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	<p>Inclusion of plan with dates for the implementation of remedial measures for Category A and B bund defects and any additional remedial works identified in a) and above.</p> <p>The operator must implement the proposals in the report as agreed with the Environment Agency's written approval, subject to such amendments or additions as notified by the Environment Agency.</p>	
IC4	<p><u>Wellhead Components</u></p> <p>The operator shall submit a written report to the Environment Agency for confirmation.</p> <p>The report must contain: A written report detailing the results of the previous annual inspection, 5-yearly inspection and one-off inspection of the wellhead components for the 35 storage caverns, for the prevention of pollution detailed in Appendix K (2018 Wellhead Risk-Based Inspection Report) dated March 2020.</p> <p>Where appropriate the report shall contain a plan with dates for the implementation of any remedial measures and any other recommendations made in the report.</p> <p>The operator must implement the proposals in the report as confirmed with the Environment Agency, subject to such amendments or additions as notified by the Environment Agency.</p>	2 years from date of issue of permit

During the process we determined that a Hydrogeological Risk Assessment (HRA) wasn't required after discussing this with the GWCL team who advised a HRA does not appear to be required for this activity as the static storage of hydrocarbons is occurring in unproductive strata with no discharges to the environment. The bedrock is not a groundwater receptor, and the drift geology is predominantly clay with thin lenses of sand and gravel which are likely to be discontinuous. The more extensive sand and gravel deposits of the Weaver and Dane Quaternary Sand and Gravel Aquifers Water Body are located 750m east of the site at a higher topographical elevation, indicating that these deposits are unlikely to be at risk of migration of contamination from the site. No groundwater activity is being carried out and no risk to wider groundwater quality has been identified in this site setting.

Decision considerations

Confidential information

A claim for commercial or industrial confidentiality has not been made.

Identifying confidential information

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

The decision was taken in accordance with our guidance on confidentiality.

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
- Fisheries and Aquaculture Sciences
- Onshore Fisheries and Conservation

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

Operator

We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with our guidance on legal operator for environmental permits.

The regulated facility

We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility',

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.

During duly making it was confirmed that the storage activity falls under both 1.2A (1) e (i) storage and handling of crude oil and 1.2A (1) e (ii) storage and handling of stabilised crude petroleum, due to the fact both are stored at site.

The site

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

The site plan shows the extent of the site of the facility by the green boundary line on the site plan. The plan also shows the CLH Compound Boundary in red which the Plumley site mostly surrounds, other than the access road which is on the Westward side of the CLH Compound Boundary, CLH-PS is now called Exolum, although the site plan names have not been changed.

The plan is included in the permit.

Site condition report

The operator has provided a description of the condition of the site, which we consider is not satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under the Industrial Emissions Directive.

We have advised the operator what measures they need to take to improve the site condition report via improvement conditions IC2-IC4.

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 within our screening distances for these designations.

We have assessed the application and its potential to affect sites of nature conservation, landscape, heritage and protected species and habitat designations identified in the nature conservation screening report as part of the permitting process.

We consider that the application will not affect any site of nature conservation, landscape and heritage, and/or protected species or habitats identified.

We have not consulted Natural England.

The decision was taken in accordance with our guidance.

Environmental risk

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

The operator's risk assessment is satisfactory.

In addition to being regulated under the Environmental Permitting Regulations, the Installation is regulated by the Health and Safety Executive and the Environment Agency as a joint Competent Authority, under the Control of Major Accident Hazards Regulations 2015 (COMAH), as the installation is an upper tier COMAH site. The COMAH regulations places a general obligation on the duty holder (the Applicant in this case) to ensure all measures necessary are taken to prevent major accidents and to limit their consequences for human health and the environment. For major accident hazards, we refer to the regulation of the proposed activities under the COMAH regulatory regime and the Safety Report for the installation.

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. See key issues section.

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

The following BAT has been assessed by the operator:

BAT established within Reference Document on Best Available Techniques on Emissions from Storage July 2006.

BAT established within Reference Document on Best Available Techniques for the Refining of Mineral Oil and Gas, 2015.

The measures in the Environment Agency Sector Guidance Note "How to comply with your environmental permit Additional guidance for: Gasification, Liquefaction and Refining Installations" (EPR 1.02) are considered.

We are satisfied with the operator's compliance with these (subject to discharging improvement conditions).

Raw materials

We have not specified limits and controls on the use of raw materials and fuels although we have kept table S2.1.

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 the applicant is able to undertake improvements on site to reduce their environmental impact and risk to the environment, due to the fact the site has existed for a long time (since 1955) but is entering regulation for the first time, therefore needs to improve to the required standards.

The improvement conditions IC1- IC4 are listed and explained in the key issues section, and we believe the operator can achieve the desired improvement.

Emission Limits

We have decided that emission limits are not required in the permit. This is due to the fact this activity/site should emit no emissions that have emission limits.

There shall be no emissions to groundwater, land or sewer, the only emission point is via the interceptor to River Peover Eye and shall be site surface water run-off, therefore no limits are required.

In terms of emissions to air we have not included a point source emission to air. The reason for this is that the activity is just for the storage of hydrocarbons, no hydrocarbons are transferred into or out of the caverns. Further to this the type of storage being underground salt caverns is considered BAT. Maintenance activities at the PSD can sometimes result in very small volumes of oil needing to be removed by a specialist vacuum tanker for disposal. It is normal to have to relieve pressures on caverns every few years (or to top them up with brine). Due to the fact they are extracted via specialist vacuum tanker, this means the wellheads should give rise to little to no Volatile organic compounds (VOC).

From the Control and monitor emissions for your environmental permit guidance it indicates that VOCs fall under Emissions that do not have set limits.

We have imposed descriptive limits on visual appearance (visible oil and grease) in table S3.2 of the permit.

Monitoring

We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.

These monitoring requirements have been included in order to ensure there is no pollution to the environment.

We made these decisions in accordance with Best Available Techniques Reference Document - Emissions from Storage, Best Available Techniques Reference Document - Refining of Mineral Oil and Gas and Sector Guidance Note, "How to comply with your environmental permit Additional guidance for: Gasification, Liquefaction and Refining Installations" (EPR 1.02).

Reporting

We have specified reporting in the permit.

Reporting frequencies specified as per the standard reporting period in the bespoke installation permit template.

We made these decisions in accordance with Best Available Techniques Reference Document - Emissions from Storage, Best Available Techniques Reference Document - Refining of Mineral Oil and Gas and Sector Guidance Note, "How to comply with your environmental permit Additional guidance for: Gasification, Liquefaction and Refining Installations" (EPR 1.02).

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.

Previous performance

We have assessed operator competence. There is no known reason to consider the applicant will not comply with the permit conditions.

We have checked our systems to ensure that all relevant convictions have been declared.

No relevant convictions were found. The operator satisfies the criteria in our guidance on operator competence.

Financial competence

There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.

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.

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 Director of PH/UKSHA.

Brief summary of issues raised: No concerns raised.

Summary of actions taken: None required.

Response received from Local Authority – Environmental Health.

Brief summary of issues raised: No objection or comment.

Summary of actions taken: N/A.

Response received from Health and Safety Executive.

Brief summary of issues raised: No objection or comment.

Summary of actions taken: N/A.

Response received from Fisheries and Aquaculture Sciences.

Brief summary of issues raised: No objection or comment.

Summary of actions taken: N/A.

Response received from Onshore Fisheries and Conservation.

Brief summary of issues raised: No objection or comment.

Summary of actions taken: N/A.