

Permitting decisions

Surrender

We have decided to accept the surrender of the permit for Western Bacton Gas Terminal operated by ENI Hewett Ltd.

The permit number is EPR/VP3637SB.

We are satisfied that the necessary measures have been taken to avoid any pollution risk and to return the site to a satisfactory state. We consider in reaching that decision we have taken into account all relevant considerations and legal requirements.

Purpose of this document

This decision document provides a record of the decision making process. It summarises the decision making process in the decision checklist to show how all relevant factors have been taken in to account.

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 checklist](#) to show how all relevant factors have been taken into account

and

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

Key issues of the decision

The Site was issued with a Pollution Prevention and Control (PPC) permit (Reference VP3637SB) in May 2007 when the Site was owned by Tullow Oil UK Ltd (Tullow). The permit was transferred to ENI Hewett Ltd in November 2008. Following implementation of the Environmental Permitting (England and Wales) Regulations 2007, the permit became an Environmental Permit (Reference EPR/VP3637SB). The gas refining operations ceased at the Site on 17 August 2011 and some of the activities are now leased and operated by Perenco UK Ltd (Perenco) under their permit. The retained areas of the Site have undergone decommissioning and dismantling.

Pollution history prior to permit issue

The following pollution history information has been taken from the original Application Site Report (ASR) (Appendix B Application Site Report for the Integrated Pollution Prevention and Control (IPPC) Application (Permit No. VP3637SB), 933228, August 2006):

- In 1973, a significant release of hydrocarbon occurred in the area of the Hewett Slugcatcher
- In the mid-1980s, a hydrocarbon leak occurred from export pipeline
- A major release of condensate occurred in 1993 when an underground pipe (reference P-4"-1A1a-706-502) ruptured in the area of the condensate storage tanks. The pipe ruptured due to corrosion after breakdown of the pipe wrap. The pipe was repaired by Oilfield Testing Services in 1993
- Minor spills at inlet facilities during the removal of spheres from sphere facilities (Pig receivers and slugcatchers) as there was no containment or sumps until 1988. Since 1988, the drainage sumps have historically overflowed at times of heavy rainfall
- Blowdown of liquid hydrocarbons from the mono ethylene glycol (MEG) separators has caused minor releases of Hydrocarbon
- Blowdown of liquid hydrocarbon from the suction scrubbers during routine maintenance, spillages of oil from overflowing storage tanks and degreasers and solvents washdowns during maintenance have likely resulted in releases to land
- Minor releases from the hot oil pumps and storage tanks
- Discharge of bottom water from the condensate tanks has led to minor releases of hydrocarbons
- Releases of oil have historically generally occurred from the oily water separator due to minor releases from skimming equipment and from overflows

Historical investigations prior to permit issue

A number of environmental investigations have been undertaken at the Site prior to the original IPPC Permit Application in 2006 as follows:

- Baseline Soil Survey, LAPS Gas Compression Facility, 8563, CRA, September 1997;
- Phase IIA Soil Survey, 8588, CRA, October 1998;
- PPCo Gas Terminal, Bacton, Norfolk - Pentane Bund Soil Investigation, 12324.06, CRA, June 1999; and
- Site Conditions Investigation at Phillips Petroleum Company Ltd, 016723, CRA, October 2001.

A summary of the above reports is provided in the original ASR (Appendix B Application Site Report for IPPC Application (Permit No. VP3637SB), 933228, August 2006). The historical investigations show

hydrocarbon contaminants are present in the ground at the Site.

Baseline soil and groundwater reference data

In November 2007, CRA issued the First Phase Report of the Site Protection and Monitoring Programme (SPMP). This document reported findings from the investigation undertaken as set out in the Design SPMP prepared by CRA in July 2007. The document presented the baseline soil and groundwater Reference Data collected for the Site. Adaptations to the design SPMP were fully explained in the report.

Three boreholes were advanced for the purpose of shallow and deep soil sampling and shallow groundwater monitoring (BH-T01, BH-T02 and BH-T04). Eighteen shallow hand auger boreholes were advanced for the purpose of shallow soil sampling. Soil and groundwater samples were analysed for all or a selection of glycols, volatile petroleum hydrocarbons (VPH), BTEX and mineral oil depending on their location.

The soil and groundwater Reference Data is set out in the following document:

- First Phase Report of the Site Protection and Monitoring Programme, 933351.08, CRA, July 2007
- The Reference Data investigations encountered soils and groundwater containing hydrocarbon contaminants, consistent with the known historical operations at the Site.

Summary of condition of the land at permit issue

The information gathered from historical investigations, knowledge of historical incidents and operations, and collection of Reference Data all show that the Site was causing pollution to the land prior to permit issue. The Reference Data were collected to set a baseline of the condition of the land at permit issue, but it should be noted that investigations were limited with regard to access to historical pollution sources as the Site was operational at the time of permit application.

Measures taken to protect land

Routine infrastructure checks and inspections were undertaken weekly, biweekly, monthly and annually at the installation to ensure that potentially polluting substances would be contained in the event of an uncontrolled release. Note that the inspection of the Annexe area ceased on 17 August 2011, as responsibility for maintaining the infrastructure was handed to Perenco. While the installation was still processing gas the checks and inspections comprised the following areas:

- Inlet reception facilities/slucatcher area: PIG receiver bunds, slugcatcher pits, LAPS 3 phase separator and liquid accumulator bund, LAPS Sulzer pump bund, Hewett A sump pump pit, Hewett A access pit, and Condensate pump pits
- LAPS MEG regeneration and storage facilities: MEG tank bund
- Active compression facilities: Turbine oil tank bund
- Hot Oil System: hot oil heaters and bund
- Condensate storage area: tank bunds (north and south)
- Wastewater treatment area: Evidence of leaks and overflow in separator pits
- Boiler house area and utilities: bunds and concrete surface
- Main waste storage area: drip trays under drums and IBCs
- Chemical storage area: drip trays under drums and IBCs, concrete bund
- LAPS compression facility area: drip trays under drums
- Propane compression and recompression area: drip trays and floor inside the compressor house

Examples of weekly and bi-weekly inspections are provided in Appendix A of the Site Surrender Report. Since the Annexe area was leased to Perenco, the bi-weekly infrastructure inspections were documented in the Bacton Pollution Control – Infrastructure Checklist BMS-AF-I-1171. These checklists were submitted to the installation Environmental Advisor on completion, and any equipment or infrastructure requiring maintenance or repair were reported to the Operations & Maintenance Supervisor who ensured appropriate corrective action was taken and records collated. The inspection checks included:

- Tank 51 Bund (condensate storage south of control room): hardstanding condition, bund walls condition, seal condition of wall and hardstanding penetrations, vegetation/animal damage, accumulated liquids, labelling of contents, container/tank condition, general housekeeping
- Chemical storage area: hardstanding condition, wall/kerbing condition, accumulated sludge in bund or sump, vegetation/animal damage, labelling of contents, containers condition, general housekeeping
- Mobile IBC Bunds: condition of mobile bunds, accumulated liquids, condition and labelling of IBCs stored on bunds, general housekeeping
- Bulk Diesel Storage: hardstanding condition, wall/kerbing condition, accumulated sludge in bund or sump, vegetation/animal damage, diesel tank condition

The inspection records were collected by the Control Room and were collated monthly by the installation Environmental Advisor.

Soil gas and water quality monitoring

The annual monitoring reports were submitted by Petrofac to the Environment Agency in January of each year. In summary, the SPMP did not identify any releases of substances at the Site. However, during an SPMP monitoring round, light non aqueous phase liquid (LNAPL) or free-phase hydrocarbon was found in BH-T04 and was investigated further in 2008 and deemed to be from a historical source of contamination.

Where minor spills to ground did occur (Zones 7 and 9) they were dealt with immediately with removal of impacted materials.

A release occurred in August 2011, which consisted of up to 50 litres of MEG released to the Southern North Sea. An incident investigation was undertaken, details of which are on the Petrofac Synergi System, reference number 9501. As part of the incident investigation, ENI Hewett Ltd commissioned RPS Energy to model the dispersion of the MEG in the Southern North Sea using the PROTEUS model (Pollution Risk Offshore Technical Evaluation System). The modelling identified that the concentration of MEG at any point in the observed plumes was not significant enough to cause any measurable negative impacts on the marine environment. This is described in the RPS Energy report: *MEG Discharge Dispersion Modelling*, Revision 01, 31st August 2011.

Decommissioning and removal of pollution risk

On 13th June 2013, ENI submitted a letter to the Environment Agency explaining the intention to cease gas refining and combustion activities and proceed with dismantling and removal of equipment at the Site (letter emailed, reference ECMS 417626). In January 2015, ENI and Petrofac met with the Environment Agency to present the strategy for collection of surrender data.

The following tasks were completed prior to and during dismantling and decommissioning:

- All inventories and gross contamination were removed during preparation for dismantling
- All equipment, vessels, tanks, pipework etc. have been removed (with the exception of the AEG Compressor);
- Drainage systems were cleaned and CCTV checked post dismantling; and
- Bunds/sumps were cleaned.

A Health Safety and Environmental Risk Inventory was produced for the different areas of the Site. The inventory lists the substances within the equipment and the potential environmental impact such as release to ground.

The Site Closure Plan (CRA 933771 (1), May 2009) summarises the methodology and process for completion of the staged decommissioning and dismantling undertaken in 2014, including how relevant IPPC and internal / external procedures were to be satisfied. The Site Decommissioning Plan (CRA

934016-RPT-1, April 2011) provides comprehensive methodologies for the isolation of vessels, tanks and above ground pipe work; relevant pre-work cleaning and removal of pollution risk; and the process for dismantling.

Petrofac managed the draining and emptying of vessels before handing over to the demolition contractor. A handover report was prepared for each area of the Site to document the state of equipment isolation and any residual contaminants remaining.

The main Petrofac CDM file for the project (RVA 323 November 2012, DCWO-BA-12069 Bacton Decommissioning & Dismantling of Site) contains the method statements and risk assessments for the decommissioning and dismantling tasks specific to certain areas of the Site, an example method statement and risk assessment is provided in Appendix I. These documents identified the need for spill kits to be present as a precaution and highlighted if there was a high risk of residual contaminants in the equipment. Pre- and post-demolition CCTV surveys were undertaken in June 2013 (Document PJ132976, Lanes for Drains) and October 2014 (Document PJ170608, WinCan Europe Ltd). These illustrated several blockages with debris or furring up to 50% of pipe diameter but did not show any evidence of damage that could have presented harm to ground. The oily water separators and sumps are now located on an area of the site leased to adjacent operator Perenco and fall under their environmental permit.

A site inspection was carried out on 20th July 2017 by local Environment Agency officers who confirmed that all other above ground process infrastructure and associated infrastructure has been dismantled and completely removed from site and there is no gas processing, or associated activities occurring on site.

Reference data

Soil and groundwater Reference Data was collected as set out in the following document:

- First Phase Report of the Site Protection and Monitoring Programme (SPMP), 933351.08, CRA, July 2007

The collection of Surrender Data at the Site was considered to be necessary, as Reference Data collection and SPMP were requested by the Environment Agency at permit application. The requirement was also agreed at a meeting in March 2013, where Petrofac, ENI Hewett Ltd and the Environment Agency discussed the closure of the Site.

CRA produced a strategy for environmental permit surrender using Environment Agency guidance documents with the aim to determine whether the Site is in a satisfactory state. The strategy report was submitted to the Environment Agency for review and comment with the final report issued 2015. The strategy report reference is as follows:

- Environmental Permit Surrender – Strategy for Demonstrating Satisfactory State, 934328-RPT-1, CRA, March 2014

The investigation to collect surrender data was completed by CRA in July and August 2015. The methodology and findings of the investigation are described in a report, detailed below, which is included as Appendix J of the Surrender Report.

- Environmental Permit Surrender Assessment for Demonstrating Satisfactory State, 934328-RPT-4, CRA, September 2016.

Conclusion

The permitted activities have ceased at the Site, and all dismantling and decommissioning works are complete, thus all pollution risk is considered to have been removed.

The Environment Agency agrees with the assessment that there has been no significant increase in levels of contaminants associated with the ground or groundwater underlying the site during the period of permitted activities.

From the evidence supplied in the Site Surrender Condition Report, the Environment Agency has concluded that the pollution risk has been removed and that the site is in a satisfactory state. The application to surrender the permit is accepted.

Decision checklist

Aspect considered	Decision
The site	
Pollution risk	We are satisfied that the necessary measures have been taken to avoid a pollution risk resulting from the operation of the regulated facility.
Satisfactory state	<p>We are satisfied that the necessary measures have been taken to return the site of the regulated facility to a satisfactory state.</p> <p>In coming to this decision we have had regard to the state of the site before the facility was put into operation.</p>
Growth Duty	
Section 108 Deregulation Act 2015 – Growth duty	<p>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 surrender.</p> <p>Paragraph 1.3 of the guidance says:</p> <p>“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.”</p> <p>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.</p>