

Application SCR evaluation template

Name of activity, address and NGR	<i>Teesside Power Station Greystone Road Grangetown Middlesbrough TS6 8JF</i>
-----------------------------------	---

Document reference for Site Condition Reports	<i>Permit Application: EPR/TP3935XX/A001 Permit Surrender: EPR/TP3935XX/S005</i>
---	--

Supporting Information	<ul style="list-style-type: none"> • <i>Site Protection Monitoring Programme</i> • <i>Site Surrender Condition Report for Teesside Power Station, October 2015, produced by Environ, UK22-21295</i>
------------------------	---

1.0 Site details

Has the applicant provided the following information as required by the application SCR template?

Site plans showing site layout, drainage, surfacing, receptors, sources of emissions/releases and monitoring points

Supplied, reviewed and accepted on permit determination.

2.0 Condition of the land at permit issue

To be completed by GWCL officers
(Receptor)

Has the applicant provided the following information as required by the application SCR template?

- Environmental setting including geology, hydrogeology and surface waters
- Pollution history including:
 - pollution incidents that may have affected land
 - historical land-uses and associated contaminants
 - visual/olfactory evidence of existing contamination
 - evidence of damage to existing pollution prevention measures
- Evidence of historic contamination (i.e. historical site investigation, assessment, remediation and verification reports (where available))
- Has the applicant chosen to collect baseline reference data?

Baseline reference data has been collected and submitted. The above information has been supplied reviewed and accepted at permit determination.

3.0 Permitted activities

(Source)

Has the applicant provided the following information as required by the application SCR template?

**Response
(Specify what information is needed from the applicant, if any)**

- Permitted activities
- Non-permitted activities undertaken at the site

A summary has been provided by the applicant and confirms all permitted activities, drawn from other parts of the application and is cross-referenced to site plans. This has been reviewed and accepted at permit determination.

3.0(a) Environmental Risk Assessment

(Source)

The H1 environmental risk assessment should identify elements that could impact on land and waters, cross-referenced back to documents and plans provided as part of the wider permit application.

*A H1 has been provided and is appropriate for the environmental risk assessment of the site. **We have reviewed and accepted at permit determination.***

3.0(b) Will the pollution prevention measures protect land and groundwater?

(Conceptual model)

Are the activities likely to result in pollution of land?

No. However, a design site protection monitoring programme was designed and set at permit determination for the operator to implement at the site.

For dangerous and/or hazardous substances only, are the pollution prevention measures for the relevant activities to a standard that is likely to prevent pollution of land?

Yes. All measures have been reviewed at permit determination.

Application SCR decision summary	Cross relevant decision
Sufficient information has been supplied to describe the condition of the site at permit issue	X
Pollution of land and water is unlikely	X

Operational phase SCR evaluation template

4.0 Changes to the activities (Source)	
Have there been any changes to the following during the operation of the site?	Response (Specify what information is needed from the applicant, if any)
a) Activity boundaries b) Permitted activities c) "Dangerous substances" used or produced	
<p><i>Teesside Power Station operated under an Integrated Pollution Prevention and Control Permit, the latest version of which is dated 7th April 2014 and referenced EPR/TP3935XX/V003.</i></p> <p><i>The Power Station has been demolished; there are no permitted activities undertaken or remaining on site.</i></p>	

5.0 Measures taken to protect land (Pathway)
<p>Has the applicant provided evidence from records collated during the lifetime of the permit, to show that the pollution prevention measures have worked?</p>
<p><i>Yes. The applicant has collated records of their compliance work, historical spill evidence, changes to infrastructure etc.</i></p> <p><i>A Site Protection and Monitoring Plan was prepared by PX Ltd (former site owners) in February 2007 to satisfy the conditions of the permit. An update to the SPMP (dated 4th November 2011, reference TPS/ENV/012) and a Site Closure Plan (dated 1st June 2007 and updated version issued 30th September, reference 2013TPS-ENV-013), both prepared by GDF Suez. According to the above documentation, biannual groundwater monitoring of the seven existing groundwater monitoring wells on-site (BH01 to BH07) was undertaken between 1997 and 2013 as a requirement of the Environmental Permit. The seven existing monitoring wells are distributed at the site periphery, the locations of which are shown in Figure 2 of Annex A.</i></p> <p><i>Groundwater concentration 'limits' were provided within Annex E of the Site Protection and Monitoring Programme for Teesside Power Station dated February 2007; the context or derivation of the 'limits' is not provided within the report. According to correspondence with the EA during a site meeting held on 25th February 2015, the limits are applicable to the groundwater analytical results from monitoring of the seven existing boreholes on site and were required to satisfy the Environmental Permit.</i></p> <p><i>We have reviewed all these documents as part of our compliance and permitting processes. We have considered these documents as part of the submission for surrender also.</i></p>

6.0 Pollution incidents that may have impacted on land and their remediation (Sources)
<p>Has the applicant provided evidence to show that any pollution incidents which have taken place during the life of the permit and which may have impacted on land or water have been investigated and remediated (where necessary)?</p>
<p><i>Section 5 of the surrender site condition report list the records and summaries of all environmental incidents recorded by the site as part of their safety, health and environmental management system between 2001 and 2012.</i></p> <p><i>All pollution sources associated with the past incidents been investigated and remediated as appropriate such that they will not lead to pollution after permit surrender.</i></p>

7.0 Soil gas and water quality monitoring (where relevant)

Where soil gas and/or water quality monitoring has been undertaken, does this demonstrate that there has been no change in the condition of the land? Has any change that has occurred been investigated and remediated?

A Site Protection and Monitoring Plan was prepared by PX Ltd (former site owners) in February 2007 to satisfy the relevant condition of the permit. An update to the SPMP (dated 4th November 2011, reference TPS/ENV/012), a Site Closure Plan (dated 1st June 2007 and updated version issued 30th September, reference 2013TPS-ENV-013), both prepared by GDF Suez.

According to the above documentation, biannual groundwater monitoring of the seven existing groundwater monitoring wells on-site (BH01 to BH07) was undertaken between 1997 and 2013 as a requirement of the Environmental Permit. The seven existing monitoring are distributed at the site periphery.

ENVIRON has been provided with reference data obtained during the operational phase of the power station. This comprised summary data (i.e. maximum, average and minimum concentrations) from up to 16 sampling visits dating from 16th October 1997 to 19th October 2005, and laboratory certificates from samples tested on up to ten sampling visits dating from 2006 to 2013; dated 23/05/2006, 22/11/2006, 16/07/2007, 20/12/2007, 10/04/2008, 10/12/2008, 23/04/2009, 23/11/2009, 17/05/2010 and 15/04/2013. Not all boreholes were tested on all occasions.

Analytical testing comprised metals (arsenic, cadmium, chromium, copper, lead, nickel, mercury, and zinc), sulphide, chloride, sulphate, total cyanide, monohydric phenols, cyclohexane extractable matter, toluene extractable matter, Diesel Range Organics (DROs) and ammonia. Volatile organic compounds and semi-volatile organic compounds were not included as part of the suite.

The 2015 groundwater results were compared with groundwater reference data obtained during the operational phase of the power station between 1997 and 2013, and the 'limits' presented in the Application Site Protection and Monitoring Plan (SPMP) Report (dated February 2007). Concentrations detected in 2015 did not exceed the concentrations obtained during the operational phase. The SPMP 'limits' were exceeded during the operational phase for some metals (mercury, nickel and zinc), sulphide and diesel range organics (i.e. aliphatic and aromatic hydrocarbons in the range C10-C28), no exceedances of the limits were detected post-decommissioning in 2015.

Surrender SCR Evaluation Template

8.0 Decommissioning and removal of pollution risk

Has the applicant demonstrated that decommissioning works have been undertaken and that all pollution risks associated with the site have been removed? Has any contamination of land that has occurred during these activities been investigated and remediated?

A decommissioning contractor, Brown and Mason (BAM), were appointed by GDF Suez to decommission buildings, plant and infrastructure associated with the power station. Decommissioning was commenced in 2013 and completed in 2015, during which time all above ground structures were removed to ground level.

All permitted activities have ceased and all sources of pollution risk should be removed.

9.0 Reference data and remediation (where relevant)

Has the applicant provided details of any surrender reference data that they have collected and any remediation that they have undertaken?

Review of Site Surrender Condition Report for Teesside Power Station, October 2015, produced by Environ, UK22-21295

The original application states a purpose built site with management procedures in place and a testing regime to confirm the ongoing integrity of the pollution prevention measures.

However, moderate concentrations of hydrocarbons and metals in groundwater monitoring were attributed to 'current activities' and reference made 'to the potential for uncontrolled releases (which) may have occurred, including from drainage or spill events'. Information was provided to explain how the mechanisms in place failed to prevent an escape of substances into the ground and what remedial actions were taken.

We agree with the conclusion reached by Environ that the testing undertaken does not show there has been any deterioration in the state of the site.

In terms of the groundwater monitoring details of the assessment of groundwater was initially set out in table 6.2 of the report entitled 'Phase II Environmental Site Assessment, Teesside Power Station, April 2015, Environ, UK22-21295'. However, further information was required to provide evidence that there has not been any deterioration, this was provided by the applicant in a letter report dated the 30 June 2016 (Ref: UKI22-21295_01) prepared by Ramboll Environ and was reviewed by us and we conclude that there has been no deterioration in the state of the site as a result of the activities undertaken.

10.0 Statement of site condition

Has the applicant provided a statement, backed up with evidence, confirming that the permitted activities have ceased, decommissioning works are complete and that pollution risk has been removed and that the land and waters at the site are in a satisfactory state?

Yes. Decommissioning of buildings, plant and infrastructure associated with the power station commenced in 2013 and was completed in 2015. All above ground structures have been removed to ground level. Sub-surface voids were cleaned and infilled with clean imported crushed material.

Soil samples recovered as part of ENVIRONs ground investigation (March 2015) did not identify concentrations that exceed those detected previously in 1990 study or that exceeded the current industrial Generic Assessment Criteria.

The conceptual site model and risk assessment identified a low risk to human health from concentrations detected in soil on-site; no deterioration in soil conditions was identified as a result of the operational activities of Teesside Power Station. The conceptual site model and risk assessment identified a low risk to controlled waters receptors. Concentrations detected in 2015 did not exceed the concentrations obtained during the operational phase of the power station; no deterioration in the condition of controlled waters conditions was identified as a result of the operational activities of Teesside Power Station.

Having reviewed all submissions and taking into account the information previously submitted as part of the permitting and compliance history of the site, we the Environment Agency, consider that the applicant has provided sufficient evidence to demonstrate there has not been any deterioration in the condition of the land as a result of the permitted activities.

Surrender SCR decision summary	Cross relevant decision
Sufficient information has been supplied to show that pollution risk has been removed and that the site is in a satisfactory state – accept the application to surrender the permit; or	X
Date and name of reviewer	M J Derbyshire & M Merrix 11/07/2016