Technical Guidance Note

IPPC H8

Integrated Pollution Prevention and Control (IPPC)

Guidance on the Protection of Land Under the PPC Regime: Surrender Site Report Template

(Consultation Draft Version1.0)

ENVIRONMENT AGENCY

Commissioning Organisation
Environment Agency
Rio House
Waterside Drive
Aztec West
Almondsbury
Bristol BS32 4UD

Tel 01454 624400 Fax 01454 624409

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Record of changes

Version	Date	Change
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Note:

This document was prepared by Casella Stanger and Mike Hibbert of the Environment Agency.

Queries about the content of this document should be made to Chris Peters at chris.peters@environment-agency.gov.uk or sent in writing to the address below.

Environment Agency
Kings Meadow House
Kings Meadow Road
Reading
RG1 8DQ

Surrender Site Report

Name of the Installation

Permit Number

Date

Notes to the Applicant

The Surrender Site Report is one of the items required to surrender a PPC permit. The purpose of the SSR is to demonstrate that there has been no deterioration in the ground conditions of the site attributable to permitted activities or, if pollution has occurred, that the site has been returned to a satisfactory state where practicable, and that pollution risks have been removed.

Make appropriate comments in italics in the boxes and tables provided in this template, referencing supporting reports or data presented elsewhere if necessary.

This Report should accompany Part F of the Application Form
This Template follows the same numbering sequence as set out in Section 6 of the Guidance on the Protection of Land Under the PPC Regime: Surrender Site Report IPPC H8

Question	Yes/No	Comment
As the operator, have you had this report prepared on your behalf? If so give details.		*Company details*
Did you prepare an Application Site Report?		*Date and reference*
Are you surrendering the whole or part of your permit?		
Will you still be operating a non-Part A installation on the site?		
Do you have a Site Protection and Monitoring Plan?		
Has there been a deterioration in the condition of the land attributable to the permitted activities?		
Do you still have a Discharge Consent?		
Do you still have an Abstraction License?		
Do you still have a Waste Management License?		
Has all pollution risk been removed?		
Has the land been returned to a satisfactory state?		

In addition to this document, indicate if you have included in your submission to the Agency the appended items in the following table:

Appendix	Item	Included	No. of Pages
1.1	Site Plan(s)		
1.2	Zones		
1.3	Operational Changes since the Application Site Report		
2.1	Operational Activities		

3.1	Potentially Polluting Substances		
4.1	Reference Condition		
5.1	Schedule of Steps Taken to Ensure Satisfactory State and Removal of Pollution Risk		
5.2	Infrastructure Monitoring Records		
5.3	Environmental Monitoring Data		
5.4	Pollution Incidents & Remediation		
5.5	Site Closure Operations		
5.6	Decommissioned Areas		
5.7	Surrender Data		
6.1	Surrender Condition		

STEP 1. DESCRIBE THE INSTALLATION BY REFERENCE TO AN APPROPRIATE PLAN(S) THAT CLEARLY SHOWS ALL RELEVANT FEATURES AND ZONES

1.1 Prepare plan(s) at an appropriate scale to confirm the boundary of the installation with reference to the Application Site Report. Ensure boundary details are clearly marked and that the locations of key features of the installation are shown. Append the plan(s) to this document.

List in the box below, with a brief description, the key features of the installation whose (former) locations are shown on the plan(s).

Key Features

1.2 Zones

Identify on the plan(s), or cross-referenced subordinate plans, the location and extent of any zones established to define particular sub-areas of the installation, and associated land, with reference to the Application Site Report. Clearly mark any changes or variations to zoning arrangements that have occurred over the lifetime of the Permit. Cross-reference them with the appropriate plan(s).

Zones

1.3 Changes since the Application Site Report

List as a key to the plan, or a subordinate plan, with a brief description, any relevant operational changes with potential for pollution that have occurred over the lifetime of the Permit. Identify such changes on the plan (e.g. changes to raw material and waste storage areas, production plant, alterations to site drainage system etc.). List the changes first by zone and then by chronology. Reference the plans and append them.

Relevant Changes

STEP 2. DESCRIBE THE OPERATIONAL ACTIVITIES UNDERTAKEN AT THE INSTALLATION

2.1 Describe the operational activities undertaken at the site, particularly those that may have posed risks to the site of the installation because of the nature of the activities carried out and the substances handled. Describe appropriately the site protection measures taken to prevent pollution. Separate this description into zones where necessary. Cross-reference with the relevant section(s) in the Application Site Report/Site Protection & Monitoring Programme.

STEP 3. DESCRIBE THE SUBSTANCES HANDLED AT THE INSTALLATION

3.1 List the potentially polluting substances handled on the site, including approximate volumes and environmental properties. Highlight any changes made over the lifetime of the Permit. Cross-reference the locations of substances used with plans and zones. Cross-reference with the relevant section(s) in the Application Site Report/Site Protection & Monitoring Programme.

STEP 4. DESCRIBE THE REFERENCE CONDITION

4.1 Provide a summary of the condition of the land at the Permit application stage. This may summarise the Application Site Report, or the first phase Site Protection and Monitoring Programme, but it must be sufficient to properly describe the reference condition of the site before the Permit was issued. Cross-reference information presented in plans, and describe zone by zone. Cross-reference with the relevant section(s) in the Site Protection & Monitoring Programme.

STEP 5. DESCRIBE THE STEPS TAKEN TO ENSURE SATISFACTORY STATE AND REMOVAL OF POLLUTION RISKS

5.1 Schedule of Steps

For the site as a whole, and by reference to specific zones where appropriate, itemise the steps taken to ensure that the site is in a satisfactory state and that pollution risks have been removed. For each step, indicate the date during which the activity was carried out. The information may be taken from a review of the Site Protection and Monitoring Programme, if one available. For ease of reference, tabulate the steps making reference to such measures as site investigation, sampling, remediation, infrastructure monitoring, environmental monitoring etc.

Zone	Step	Date	Comment
e.g. Zone A	*Infrastructure Monitoring*	*2002-2004*	*Complete Record*

5.2 Infrastructure Monitoring Records

Summarise infrastructure monitoring records taken from the Planned Preventative Maintenance Programme or Site Protection and Monitoring Programme. Comment on the implications of such monitoring on pollution potential and whether there are any gaps in the records. Provide details of where the records are kept. Identify any requirement for the collection of Surrender Data arising from the assessment of infrastructure monitoring records and reference the specific parts of section 5.7 below on Surrender Data.

5.3 Environmental Monitoring Data

Present a summary of any environmental monitoring data. Long-term data are best presented graphically. Tables and graphs should be appended, as should inspection and monitoring protocols. Assess the data against Reference Data for the purposes of the statement of satisfactory state in step 6. Identify any requirements for the collection of Surrender Data arising from the assessment of environmental monitoring data and reference the specific parts of section 5.7 below on Surrender Data.

For example:
Figures 1 to 5 in Appendix 5.3 show a decreasing trend in the concentration of toluene in groundwater for the 5 monitoring boreholes within zone 1 over the 10 years period of the operation of the Permit. Down gradient groundwater monitoring within zone 2 does not indicate any increase in toluene concentrations above detection limits suggesting that the toluene is undergoing in-situ biodegradation. Average and total toluene concentrations within the 5 boreholes are an order of magnitude less than the levels detected when Reference Data were collected.

5.4 Pollution Incidents and Remediation

List in date order **any** pollution incidents that had, or had the potential to have, an impact on the condition of the site. Describe the outcome of any investigation and remediation activities carried out either as a result of pollution incidents or in response to environmental or infrastructure monitoring and include details of the rationale for carrying out (or not carrying out) remediation in each case. Reference the specific parts of section 5.7 below with regard to Surrender Data produced as part of remediation activities.

5.5 Site Closure Operations

Describe the steps taken to remove pollution risks during site closure (refer to the Site Closure Plan) and any implications for the condition of the site. Reference the specific parts of section 5.7 below with regard to Surrender Data produced through or as part of site closure operations.

5.6 Decommissioned Areas

Where areas of the site have been decommissioned, particularly where they have hitherto been inaccessible for inspection or sampling, describe what steps have been taken to determine the quality of the site. This particularly relates to process areas formerly under hard-standing, areas formerly under bunds, around underground storage tanks etc. Reference the specific parts of section 5.7 below with regard to Surrender Data produced as part of decommissioning operations.

5.7 Surrender Data

Describe the intrusive investigation, testing and sampling that was carried out to obtain Surrender Data for the site or individual zones. Provide all relevant supporting data as indicated below or cross reference to a separate technical report that contains all the relevant supporting data.

5.7.1 Investigation and Sampling Strategy

Justify the strategy used with reference to the Conceptual Site Model developed from those used in the ASR and SPMP and refined on the basis of the data and assessments described in 5.2 to 5.6 above. Include the revised Conceptual Site Model.

5.7.1.1 General

Give the start and finish dates of the investigation(s) and provide details (including roles and technical competencies) of the individuals and organisations employed to carry out and report on the investigations.

5.7.1.2 Constraints on Investigations

Describe any constraints on the nature, lateral and vertical extent, scope, timings etc. on the design or execution of the investigations.

5.7.1.3 Soil Investigation and Sampling Techniques and Protocols

Provide details on the investigation, testing and sampling techniques used to sample and characterise soils and soil-like materials.

5.7.1.4 Groundwater Investigation and Sampling Techniques and Protocols

Provide details on the investigation, testing and sampling techniques used to characterise groundwaters and any pollutants present in dissolved, emulsified or free product form.

5.7.1.5 Soil-Gas and Vapour Investigation and Sampling Techniques and Protocols

Provide details on the investigation, testing and sampling techniques used to characterise sub-surface soil-gases and vapours if volatile or semi-volatile substances are present beneath the site.

5.7.1.6 Surface Water Investigation and Sampling Techniques and Protocols

Provide details on the investigation, testing and sampling techniques used to characterise surface waters and any pollutants present in dissolved, emulsified or free product form.

5.7.2 Sample Locations

Tabulate and justify the sample locations used for the collection of Surrender Data with reference to those used to collect Reference Data, taking into account the conceptual site model and the outcome of any of the activities described in sections 5.2 to 5.6 above. Provide details on how the locations were physically identified (survey/OS Digital Data/Topographic Survey/GPS) and give their horizontal and vertical uncertainty in metres. Reference the sample locations and the samples collected using the classification system described in the Design SPMP. Identify each sampling location, in each zone, on the plan(s) referred to in Step 1.

5.7.3 Analytical/Field Techniques and Detection Limits, Laboratory Accreditation/Quality Assurance and Quality Control

Describe the laboratory/field analytical techniques and detection limits for each analysis for **each substance** (A, B etc.) examined within each zone. Choice of analytical technique and thus detection limits should be made on a site-specific basis. Careful consideration should be given to detection limits and the operator or its consultants may wish to liaise with and seek the Agency's agreement prior to undertaking site investigations or analysis. It should be noted that use of too high a detection limit could mask environmentally significant pollutant distributions at the site, making it more difficult to assess the impact of any pollution which has resulted from the permitted installation.

Give the UKAS accreditation for the laboratory undertaking the analysis, a brief description of the analysis technique and its procedure number. Describe the Quality Assurance and Quality Control procedures used to obtain the representative samples and append them.

5.7.3.1 Zone 1

5.7.3.2 Zone B

etc.

5.7.4 Findings of the Ground Investigation

5.7.4.1 Summary of Site Physical Conditions and Refinement of Conceptual Site Model

Provide a summary of site investigation findings with respect to the physical condition of the site as a whole.

Provide more detailed information on site investigation findings and observations in relation to physical site conditions within each zone. Refer to specific borehole logs, trial pit logs etc. and the full data set appended. Discuss any changes relative to the reference condition of this part of the site and assess their implications for satisfactory state. Include :

- presence/absence, thickness and physical properties of made ground
- thickness and physical properties of different geological strata
- visual and olfactory evidence for the presence of pollutants
- presence/absence and depth to water table
- groundwater flow direction
- confirmation of, or changes to, the site conceptual model

5.7.4.2 Summary of physical conditions

5.7.4.3 Zone 1

5.7.4.4 Zone 2

etc.

5.7.5 Surrender Data on Pollutant Concentrations

For each zone, describe the concentration of pollutants found in soil/soil-like materials, soil atmospheres, surface and groundwater justifying the demarcation adopted for each zone. Identify the source(s) of the pollutants (e.g. permitted activities, historic activities, migration on to the site from adjacent activities etc.) and justify. Append all relevant original and tabulated data including laboratory analysis certificates.

Operators must describe the uncertainty around the data and describe/justify in full any statistical analysis of the data Useful references to undertake this work include:-

CLR 7 Assessment of Risk to Human Health from Land Contamination: An Overview of the Development of Soil Guideline Values and Related Research. Defra and Environment Agency 2002.

Secondary Model Procedure For the Development of Appropriate Soil Sampling Strategies for Land Contamination. P5-066. Environment Agency 2000.

5.7.5.1 Zone 1

Include data for all substances relevant to each zone and distinguish between different media

5.7.5.2 Zone 2

etc.

5.7.6 Comparison between Surrender Data and Reference Data

Provide a tabulated summary and analysis of the comparison between Surrender Data and Reference Data for each relevant zone, substance and media.

5.8 Schedule of Reports

Provide a schedule of the reports referred to in the steps above. Include title, author, date, reference and location.

Title	Author	Date	Reference	Location
e.g. SMPM 1st Phase Report	*Operator*	*2003*	*SPMP-1-03*	*Public Register*

STEP 6. DESCRIBE THE CONDITION OF THE SITE AT PERMIT SURRENDER

6.1 Condition of the Site

For the site as a whole, and by reference to specific zones where appropriate, describe the condition of the site at Permit surrender by summarising the information contained in reports and records prepared under the SPMP and in relation to other site protection activities. Highlight any areas where the condition of the land has been achieved through remediation activities. Highlight any areas where elevated levels of pollutants have been detected but no remediation under PPC has been carried out and the reasons why. Ascribe a level of confidence to the information sources used to describe site condition. Cross reference the descriptions provided to the relevant supporting documents. Use the table below or insert your own.

Zone	Condition at Surrender	Condition at Application	Comment	Level of Confidence
e.g. Zone A	*60 ± 5.32 mg/kg Pb in superficial soil (0-0.5m below existing ground level)*	*60 ± 7.98 mg/kg Pb in superficial soil (0-0.5m below existing ground level)*	*Pb present as a result of historical operations – no addition through permitted activities – no remediation carried out in this zone*	*High*

6.2 Justify the description of the condition of the site given in Section 6.1 by describing the process by which data relevant to the condition of the site have been collated, reviewed and summarised. Highlight any gaps, discontinuities or uncertainties in the documentary record and explain how they have been allowed for in the description of the condition of the site.

STEP 7 STATEMENT OF SATISFACTORY STATE

7.1 On the basis of the information provided, make a statement (by zone where appropriate) on whether the condition of the site meets the PPC requirements of 'satisfactory state' and 'removal of pollution risks'.