

Wessex Water Services Ltd.

Avonmouth Bioresources Centre

Environmental Management System Summary

August 2022

Revision	Date	Description	Author	Checked by	Reviewed by
01	August 2022	EMS Summary	Josh Parsons	Peter Duncan	Peter Duncan

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1 INTRODUCTION

A summary of the EMS is required by Environment Agency (EA) application form Part C2, Question 3d. Wessex Water Services Ltd (WWSL) intend to operate their own EMS, which meets the requirements outlined in EA Guidance, Develop a Management System: Environmental Permits¹ (EMS Guidance). The WWSL EMS will be kept on the WWSL cloud platform. A hard copy of the Environmental Permit (EP) is kept on site.

WWSL have an Environmental Policy which outlines how the company aims to protect and improve the environment and its commitment to becoming a truly sustainable company. A copy of the Wessex Water Environmental Policy is included as Appendix A.

In addition to the information provided in the following sections, WWSL have a Waste Permit Procedure which includes information on how WWSL meets the conditions of the Environmental Permit, including regular internal reviews, notifying the Environment Agency and procedures for operations and monitoring / inspections. A copy of the Waste Permit Procedure is included as Appendix B.

Wessex Water Enterprises Limited (WWEL) also operate on the site, alongside Wessex Water Services Limited. WWEL carry out operations associated with the Food Waste, Combined Heat and Power (CHP) plant, Gas to Grid and Biomethane Flare under a separate EP. The CHP, Gas to Grid and Biomethane Flare activities will also be included as Directly Associated Activities (DAA's) to the biological treatment activities under the WWSL EP. Communications between the two organisations are maintained to ensure activities carried out on the site are managed effectively.

The following section outlines the main documents which make up the WWSL EMS. The following sections mirror the headings of prevailing EMS Guidance. WWSL have associated procedures and records, which aim to ensure compliance with Condition 1.1.1 of their EP.

Risks identified during operation at the site, either from maintenance, changes, incidents are recorded and rated within WARMS (Wastewater Asset Risk Management System). This system is used operationally to manage risks at sites.

2 EMS DOCUMENTS

2.1 Prepare your site infrastructure plan

The WWSL EMS includes an EP Boundary Plan, Infrastructure, Drainage and Site Layout Plans. All site plans are to scale and highlight where activities are located. The WWSL EMS also includes a Sensitive Receptor Plan, which is referenced in the Environmental Risk Assessment (ERA) and other management plans.

The site infrastructure plan includes:

- Buildings, and other main constructions, like treatment plants, incinerators/boilers, storage facilities and security fences;
- Storage facilities for hazardous materials like oil and fuel tanks, chemical stores, waste materials;
- Location of items for use in accidents and emergencies e.g. spill kits;

¹ <https://www.gov.uk/guidance/develop-a-management-system-environmental-permits>

- Entrances and exits that can be used by emergency services;
- Points designed to control pollution, for example inspection or monitoring points;
- Trade effluent or sewage effluent treatment plants;
- Effluent discharge points;
- Mains water stop tap and isolating valves, switches and cut-offs for gas and electricity;
- Routes for gas, electricity and water supplies on the site; and
- Any land that is considered or known to be contaminated, for example areas that have previously been used for industrial purposes.

2.2 Site Operations

An ERA has been produced as part of this EP application. This ERA has been prepared in accordance with EA H1 Environmental Risk Assessment for Permits Guidance² and assesses the mitigation measures WWSL take to reduce impact to the environment. This ERA forms the basis for procedures outlining the following:

- EMS procedures include waste acceptance, waste classification, waste rejection, waste storage, handling and labelling. These procedures include the following information:
 - The longest amount of time that each type of waste will be stored on site;
 - Controls in place to ensure these time limits are not exceeded;
 - The maximum amount of each type of waste stored in terms of volume;
 - Controls to identify the specific types of waste stored on site; and
 - Waste acceptance criteria and rejection procedures to ensure only permitted waste types are accepted on to the site.

The WWSL EMS includes an overview of site operations, including a process flowchart showing the operations and resulting waste streams.

2.3 Site and equipment maintenance plan

The WWSL EMS includes a system for maintaining plant & infrastructure on the site. This system includes preventative maintenance schedules and routine checks. Machinery is maintained in accordance with manufacturers specifications. Records are kept and made available on request to demonstrate compliance. The site has a maintenance task sheets which details the task and frequency (i.e. daily, weekly). These are completed on site and available both in paper format for reference and electronically. They are available for recording and reporting for maintenance performance assessment.

WWSL also operate a continuous monitoring system which monitors key plant on the site and is remotely viewable by key staff. This system enables the operator to remotely view key metrics with

² <https://www.gov.uk/government/publications/h1-environmental-risk-assessment-for-permits-overview>

regard to the functioning of plant and alerts the operator in the event of malfunction. Any malfunctions are dealt with and recorded.

2.4 Contingency plans

The WWSL EMS includes a series of contingency plans which minimise the impacts to the environment in the event of any unforeseen and foreseen circumstances e.g. breakdowns, enforced shutdowns and any other changes in normal operations (flooding, extreme weather etc.). These are called Consequence Management plans and more site-specific Local Emergency Plans.

2.5 Accident prevention and management plan

The WWSL EMS includes an Environmental Accident Management Plan (EAMP), which contains information on how WWSL deal with any incidents or events that could cause pollution. The EAMP is centred around a risk assessment for potential incidents (likelihood, consequence and mitigation measures to avoid and/or minimise the impact of an incident). The WWSL EAMP includes a list of emergency contacts, contact details for a site sign (for the public), substances stored on site and forms to record accidents or incidents. The EAMP also considers the risks posed by online security.

The WWSL EAMP also includes how accidents and incidents (including near misses) are recorded, investigated and responded to. The review of incident records informs any amendments that may be required to the WWSL EAMP. The WWSL EAMP also includes a document review table, including dates for next review.

2.6 A Changing Climate

The WWSL EAMP and Contingency Plans includes risks posed by climate change and actions to be taken in an event influenced by climate change e.g. flooding or extreme weather (higher temperatures, storms etc.). In addition, WWSL have a climate change adaption plan which sets out how WWSL will adapt to climate related hazards; looks at what level of risk each poses and details what adaptation options are in place or are proposed.

2.7 Complaints Procedure

A site notice board is present on site, which includes contact details and relevant information to allow the public to make a complaint. The WWSL EMS includes details on how WWSL deal with complaints, how each complaint will be investigated, tracked and the recording of any actions taken as a result of complaints. WWSL have a website which allows the public to lodge complaints, with WWSL aiming to respond to all complaints within 10 working days.

2.8 Managing Staff Competence and Training Records

WWSL staff are trained to ensure they are aware of the requirements of the WWSL EMS and their responsibilities under the EMS. Staff are trained in relation to site operations and management, to ensure that the site is run effectively.

The WWSL EMS includes a register of job roles, associated training requirements and dates when training was last received i.e. a 'training matrix'. The training matrix includes all relevant training, including qualifications or informal training. Training records for staff are kept alongside relevant certificates.

The Site EP will require an active Technically Competent Manager (TCM) to be present on the Site. An appropriate TCM will be present and will sign into the Site to provide a record for EA Audit. A number of WWSL staff have Environmental Permitting Operators Certificates (EPOC), which will be used whilst a WWSL staff member, Harriet Edwards, completes a 'Level 4 Medium Risk Operator Competence for Non-Hazardous Sludge and Land Spreading'. Evidence of registration for the EPOC certificates for numerous WWSL staff, and the WAMITAB qualification for Harriet Edwards are provided in Appendix 2.

2.9 Keeping records

Record keeping is essential for demonstrating compliance with Condition 1.1.1. of the EP. The WWSL EMS includes records associated with procedures and management plans that make up the EMS. A list of records to be kept is included below, but is not deemed exhaustive:

- Permits issued to the site;
- Other legal requirements;
- Environmental Risk Assessment;
- Management system plans;
- Management plans required by the application or permit e.g. odour management plan, noise & vibration management plan, fugitive emissions management plan;
- All operating procedures;
- Duty of Care records, including waste details for waste imported to and exported from the site (quantity, LoW code, origin, producer of the waste, dates that waste was produced and received on site and quarantined waste);
- Documents relating to staff competence and training (for example qualifications, courses attended);
- Emissions and any other monitoring undertaken (for example water samples);
- Compliance checks, findings of investigation and actions taken;
- Complaints made, findings of investigation and actions taken;
- Audits of management system, findings (reports) and actions taken; and
- EMS reviews and changes made to the EMS.

Records are kept in a wide variety of locations and systems.

Site Condition Report

The Environmental Management System includes Part 1 of a Site Condition Report, that has been completed as part of this EP application in accordance with EA H5 Site Condition Report Guidance³. The SCR will be updated through the life of the EP, when required. Records will be kept alongside the SCR, including details of pollution incidents e.g. spills and evidence of effectiveness of pollution prevention control measures. A Surrender SCR will be completed at the time of surrender.

2.10 Review your Management System

The WWSL EMS, including management plans and procedures, is reviewed on a regular basis. The WWSL EMS will also be reviewed when:

³ <https://www.gov.uk/government/publications/environmental-permitting-h5-site-condition-report>

- Changes are made to the site, operations or equipment that affect the activities covered by the Permit;
- When the Permit is varied;
- In the event of any accident, complaint or breach of the Permit conditions; and
- If a new environmental issue is encountered and new mitigation or control measures are implemented.

2.11 Site Closure

As mentioned above, a Surrender SCR will be prepared in the event the Permit is surrendered. This Surrender SCR will draw upon the information from Part 1 of the SCR and Part 2 (during the life of the Permit).

2.12 Make Sure People Understand What to do

A copy of the WWSL EMS is available on site and is available for staff to consult during the operational life of the EP. Staff are trained on relevant sections of the EMS as part of their training program. A copy of the WWSL EMS is available and will be provided to the EA or other bodies if required.

WESSEX WATER ENVIRONMENTAL POLICY

Purpose

Wessex Water Services (WWSL) Environmental Policy supports the company's aims to protect and improve the environment and its commitment to becoming a truly sustainable company, whilst meeting the requirements set out in GRP007, WWL Group Environmental Policy. We do this by delivering the highest possible quality of water and wastewater services that safeguards the environment and complies with, or better, regulation/legislation, and in the innovative ways in which we:

- Solve problems
- Build and manage our assets
- Interact with stakeholders
- Carry out our role as a good employer.

Scope

This policy covers Wessex Water Services Limited (WWSL) activities, specifically Environmental Management in the following areas:

- Water Resources Management
- Environmental Protection
- Wastewater Compliance
- Sustainability & Innovation

Regulation & Legislation

The company is an appointed water and sewerage undertaker by the Secretary of State for the Environment under Sections of the Water Industry Act 1991). A copy of the full operating licence describing the conditions of the appointment can be found on the economic regulators (Ofwat) website: <http://www.ofwat.gov.uk/industrystructure/licences/>

The key regulators /stakeholders are:

Organisation	Responsibilities
Ofwat	Sets regulation and policy
DEFRA	Strategic Environmental Regulation & Policy
Consumer Council for Water	Representing customers
Environment Agency (EA)	Environmental monitoring, permitting, legislation & regulation
Natural England (NE)	Environmental monitoring, consenting, legislation & regulation

The main Environmental legislation that the company complies with is:

Water Industry Act 1991: This consolidates previous legislation on water supply and sewerage services (including trade effluent consents). It requires licenses for abstraction, impoundment, established flood defence committees, and provides for works notices and water protection zones.

Water Act 2003: This sets out the framework for water abstraction licensing, regulation of impoundments, and measures for drought management and flood defence.

In addition to these, the company complies with specific environmental legislation and these are listed in the relevant strategies in the Environmental Management Framework.

Policy Objectives

To achieve the company's environmental aims and commitments, objectives have been established, including those set out in the company's Strategic Direction Statement and Business Plan, which are:

- Comply with and, where possible better European, national, and local codes, consents and directives
- Operate in a socially responsible manner
- Consult with environmental regulators and other stakeholders on the development of proposed legislation
- Engage with and involve the public and local groups in our work where it may affect them
- Design assets and implement working practices that are resilient and continue to deliver high quality reliable services, even in the face of unusual events
- Be fully prepared to cope with operational emergencies that might affect the environment and continually improve the environmental management of our activities
- Communicate the impact of changes in environmental legislation to the relevant company departments and management teams enabling us to continuously improve and promote best practice
- Reduce emissions to levels at which adverse impacts on the environment are avoided
- Conserve and enhance the environment, and where appropriate, improve it through the services we provide

In addition to these there are the specific objectives for each of the areas of the environment, and these are listed in the relevant strategic Framework.

Framework

This framework is one element of the overall Structured Management System Framework (refer to [Source Intranet](#)) for the company that operate to meet our objectives. To ensure the successful implementation of this policy an Environmental Management Framework has been developed which is shown in Figure 1.

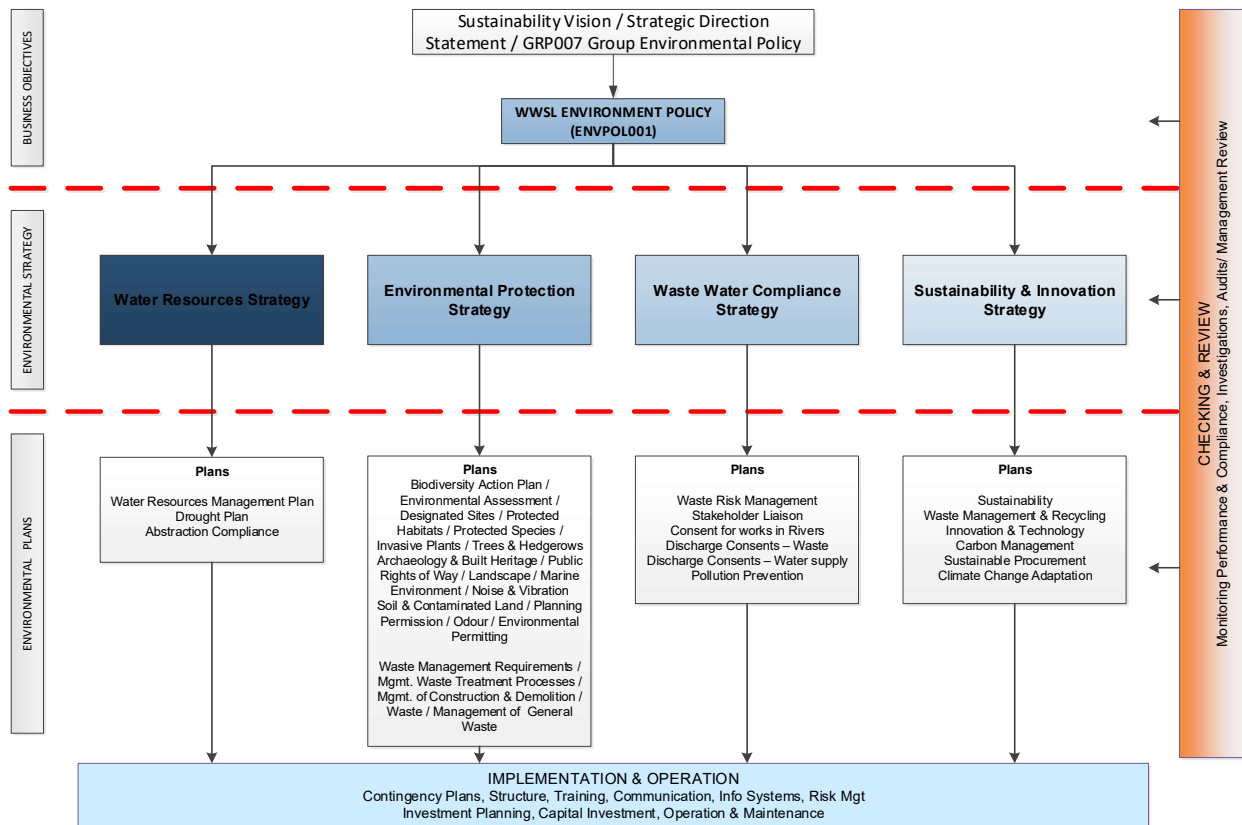


Figure 1: Environmental Management Framework

This Framework includes:

- The company's strategic objectives, legal obligations and wider social and environmental goals
- Environmental service levels and performance indicators
- Integrated policy strategies and plans for the areas of Water Resources; Environmental Protection; Wastewater compliance and Sustainability & Innovation
- Operational quality controls to define requirements for:
 - Organisational roles, communication & information needs
 - Design, operation and maintenance of equipment to meet required standards
 - Installation of plant/works that blends sympathetically with the local landscape
- Monitoring and publicly reporting of environmental performance/compliance
- Investigations of performance issues to identify lessons learned and the need improvement
- Corporate governance to ensure that decisions are made wisely transparently and approved by the relevant business management teams

The strategies for each of the areas of Environmental Management are as follows:

- Water Resources Management Strategy (ENVS001)
- Environmental Protection Strategy (ENVS002)
- Wastewater Compliance Strategy (ENVS004)
- Sustainability & Innovation Strategy (ENVS005)

Responsibility

The Group Chief Innovation Officer has overall responsibility for Environmental Management, with approval for this policy sitting with the Corporate Social Responsibility Committee. The operation of the Environmental Management Framework is the responsibility of the Environment & Technology directorate supported by the Environmental Leaders Group and all Wessex Water employees and external contractors/suppliers.

The company's Operational & Enterprises (Supply, Wastewater, Geneco) and Capital Investment (Engineering & Construction) business units are responsible for ensuring that the environment is protected and improved as part of their management systems. The Assets & Compliance Directorate is responsible for ensuring that our Business Plan and strategic investment is in line with current and future legislative requirements and that we meet required compliance standards. Environmental management activities are supported by business units/teams that provide: Legal; Financial; Training & Development; Information Technology; Procurement; Customer; and Health & Safety services.

Revision History

Issue	Revision Description	Date
1	First issue	
2	Revised Format	May 10
3	Redrafted to include a framework which incorporates all aspects of Environmental & Public health management	Jan 13
4	Revised to remove Public Health element and updated to reflect structure changes	September 2019

Waste Permit Procedure

Wessex Water Services Limited has an agreed management system to achieve the requirements of Environmental Permits on sites that hold Environmental Permitting Regulations (EPR) waste environmental permits.

The approach is designed to satisfy the requirements of many stakeholders of which are detailed in this procedure.

Associated Documents:

EPF001 – Environmental Monthly Internal Review Form

EPF002 – EA Notification Form

OPSP001 – Procedure for working on operational sites

MSMAN001 – Operations Quality Manual

OPSP227 – Procedure for procuring Environmental Monitoring services and receiving their reports

Abbreviations

EMP – Environmental Management Plan

TCM - Technically Competent Manager

EA – Environment Agency

Permits

The requirements of achieving compliance with permitted activities will be managed by standard rules/bespoke permits: EMPs to be produced showing applicable procedures and reporting required.

Clarity of roles and responsibilities

Roles and responsibilities – Environmental permits			
	Completed by	Used by	Action
EMP document	TCM	Key operations staff*	<ul style="list-style-type: none">• EMP added to Site Information File• Environmental folder• Forward to Management Systems team for publishing
TCM monthly review	TCM	Key operations staff*	<ul style="list-style-type: none">• Copy saved to Sharepoint• Copy to key operations staff*• Non-compliance raised at waste risk meeting.
6 Monthly review	TCM	Key operations staff*	<ul style="list-style-type: none">• Copy saved to Sharepoint• Summary of results to be discussed at waste risk meeting (reported annually)
Audit program – 8-year cycle	TCM	N/A	<ul style="list-style-type: none">• Copy saved to Sharepoint• Summary of results to be discussed at waste risk meeting (reported annually)

* Key operations staff: Operator / Scientists / Assistant treatment manager / Treatment manager / Geneco regional manager / Geneco area operations manager.

The agenda and minutes will comprise of:

- a programme of monitoring requirements for all sites, e.g., air quality
- a programme of environmental improvements as required by the permit, e.g., energy efficiency, raw materials and waste minimisation
- confirmation/review that quarterly waste records are adequately generated from the sites
- discussions around regulatory interest in any/all of the Permitted Sites, e.g., EA audits or Improvement Conditions
- changes in legislation
- share best practice, learning points from events and resultant actions
- raised resource and training issues
- review (and action for revision where necessary) the currency of documents (emergency management plans, procedures, Site Environmental Management plans, Risk Assessments etc).

Environmental Management Plan

Each permitted site will have an Environmental Management Plan (EMP) which will be produced and overseen by the Technically Competent Manager (TCM) for the site or permitted activity. The EMP plan will consist of the elements required by the Permit, including those detailed in the document management and control section below. Reference to the EA's environmental permits management system guidance will also be needed.

TCM role

Competent personnel who are WAMITAB trained are deemed to understand the activities operating with an Environmental Permit; can

- identify and assess environmental pollution impacts;
- can work within Wessex Water's management systems;
- can work without prejudice and have the authority to raise any issues identified to the appropriate level of management to enable change.

Competent personnel will produce, and revise where necessary, the Environmental Management Plan (EMP) for the site or permitted activities. The EMP will be used to identify the necessary site-specific management techniques

Competent personnel will attend the Permitted site or activity for the number of hours per week as stipulated out by the EMP. The EMP will detail the calculation for attendance hours. Due to the waste activities undertaken attendance hours are based on sites or permitted activities operating 24/7 365 days a year.

When visiting the site, Competent Staff will sign in and out the visitor book to demonstrate their attendance. During the visits, they will ensure via a monthly internal audit that the necessary inspections, maintenance, reporting, communications etc have taken place and report this via Environmental Monthly Internal Review Form (EPF001). Should deficiencies be found, these will be recorded onto Sharepoint and escalated to the monthly Waste risk meetings.

Key Operational staff will be given a copy of the report (EPF001) as soon as practicable following the visit and a copy saved electronically in the Permit folder (see

'Document Control' for locations). Should a management issue be observed by a TCM during any other site visit, they should be recorded in the site diary and reported immediately to the Treatment Manager.

TCMs, Odour Management Coordinator and Treatment Managers will meet every 6 months to review management plans, procedures, share best practice and learning points from any incidents, identify and organise any actions arising and minute these meetings. An annual meeting will take place to be attended by all TCMs, Odour Management Coordinator and a representative of Treatment Managers, heads of Water Recycling, Geneco Operations/Services and Assets and Compliance.

Environmental incidents/events and malfunctions

Any environmental events and malfunctions should be reported to the TCM/Area Manager/Wastewater Regulation and where appropriate, report these to the EA (immediately by telephone (0800-807060) followed up in writing within 24 hours using the Environment Agency Notification Form EPF002 available on source).

Permitted Sites' Managers

Will discuss matters relating to their Environmental Permits during their monthly team briefs/compliance meetings. A review of recent incidents applicable to the permitted activities will be required to enable this.

Raise relevant Environmental Permit matters for discussion in the 6 monthly Waste Managers Meeting and if necessary, raise with the EA.

TCM/Line Managers

Their line managers will coordinate any leave and any other duties so as to ensure there is always a competent person available to visit sites for the regular programme and as required under exceptional circumstances, e.g., incidents.

Document Management and Control

Each Permitted site will have a white, ring binder Site Environmental File, prepared by the TCMs. This file will contain:

Document	Electronic location
A copy of the Environmental Permit and a plan showing the extent of the Permitted area.	SIF
Any other permits for the site	SIF
An Environmental Permit Management Plan showing the location and management of particular documents. Appended will be the site risk assessments.	Source
Emissions, monitoring and modelling results (Sharepoint)	Sharepoint
Accident prevention Management Plan (if applicable)	Source
Fire prevention plan (if applicable)	Source
Site infrastructure and drainage plan	Source
Site and equipment maintenance plan	Source
Contingency plans	Source
Complaints procedure	Source
Staff competence and training records	Source

Records of any compliance checks, investigations, complaints, audits and management reviews	Sharepoint
Any other documents required by the permit	

Electronic information, such as meeting minutes, correspondence, Permit application documents will be stored on Sharepoint

Control of Contractors

TCMs must ensure all internal or external designers or contractors (including E&C) working in the Permitted area or undertaking work that may affect the Permitted activity are made aware of the Permit and its requirements and given sufficient instruction to ensure that they act in a way that will comply with the Permit. This may include, reporting requirements environmental events, pollution prevention practices, etc. The TCM should assign responsibilities for these actions as relevant.

Information and Reporting to the Environment Agency

Information

All reportable monitoring results shall be correlated by the TCM and given to Wastewater Regulation for checking, collation and final presentation to the EA. This will include quarterly waste returns, stack emissions and other relevant permitted permit requirements.

Notifications

Changes in the business administration will be advised to the EA by the Legal and Estates team.

Environmental incidents/events and malfunctions

Any environmental events and malfunctions should be reported the TCM/Area Manager/Wastewater Regulation and where appropriate, report these to the EA (immediately by telephone (0800-807060) followed up in writing within 24 hours using the Environment Agency Notification Form EPF002 available on source).

The Environment Agency shall be notified as soon as reasonably practicable following detection, within the site of the regulated facility of:

- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution; and
- (b) any breach of a limit specified in schedule 3 table S3.1 (including individual exceedances of limits which are covered by condition 3.1.2).

Any other significant adverse environmental effects, which may have been caused by the activity, shall also be notified to the Environment Agency as soon as reasonably practicable following detection.

Wastewater Regulation must be advised of any such communication as soon as appropriate.

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EPP001
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Revision History

Issue	Date	Description	Prepared By
1	22 nd July 2010	First Issue	Alex Urie
2	30 th June 2011	Major changes	Alex Urie
3	17 December 2020	Major rewrite and change of owner to Jack Crassweller	Ed Taylor / Carolyn Dewhirst / Dave Jones / Jim Humphries / Jack Crassweller