



# **SITE PROTECTION AND MONITORING PLAN FOR SPTS Technologies Ltd**

**September 2021**

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## 1. INTRODUCTION

This document represents an updated version of the Site Protection and Monitoring Plan (SPMP) for SPTS which was originally submitted to the Environment Agency (now Natural Resources Wales) in pursuance of Condition 4.1.7 of the Permit No. EPR/HP3131KU (the "Permit") authorising the operation of SPTS Technologies Ltd (SPTS) (the "installation").

## 2. SITE LOCATION

The installation remains located at Ringland Way, Newport, South Wales, NP18 2TA. The centre of the site is at National Grid Reference ST362895. The site covers an area of 0.927 Ha and can be seen in Figure 1 of Appendix A.

## 3. MONITORING PROGRAMME

### 3.1 Objectives of the Monitoring Programme

- To ensure (as far as is practicable) that pollution prevention measures are sufficient to prevent the emission of pollutants to land, air or water. Additionally, to ensure the safety of all individuals at the site or surrounding areas.
- To demonstrate and maintain the effectiveness of the pollution prevention measures at the site throughout the life of the installation.
- To ensure adequate maintenance, inspection and testing of infrastructure to demonstrate its effectiveness throughout the life of the installation.
- To monitor and record the results of the above to demonstrate the land at the installation is in a satisfactory state for the purposes of surrendering a permit.

### 3.2 Supporting Information

It should be noted that small amounts of inert, flammable and toxic gases are used on site - as well as some corrosive liquid substances - for R&D purposes and for the demonstration of SPTS tools. The manufacturing areas use only inert gases in their assembly and build operations. The quantities of substances used throughout the site are considered small thereby presenting minimal risk to the environment and giving rise to a low impact permit.

Some fluorinated gases are used during demonstration processes. However, thermal conditioning units and gas reactor columns (GRCs) are used to break down process gases and by-products in order to mitigate any possible risk of pollution. These systems are interlocked with the tools ensuring that should there be any issues with the thermal conditioning systems or GRCs, the machine tool will automatically shut down, preventing any escape of gas.

Robust operational and maintenance procedures are in place as well as effective monitoring and recording activities, and these will continue throughout the life span of the installation.

Procedures are subject to internal audit as well as external audit programmes by BSI in relation to the site's certification to ISO 14001, ISO 45001 and ISO 9001.

### 3.3 Employee Competence & Training

Employees who are responsible for the inspection, testing and maintenance of the pollution prevention infrastructure are trained to ensure effective compliance with the programme.

Competent persons with responsibility for managing the Environmental Management System are also appointed by the company.

Training requirements are reviewed on an annual basis, or whenever there is a change in roles and responsibilities, a change in process or technology, or following an incident.

Training records are held with the HR department and competence matrices are held with the Department Manager.

#### **4. PREVENTION, PROTECTION AND MONITORING**

The framework for the Environmental Management System is based on ISO 14001 (2015) and is regularly monitored and reviewed to encourage and allow for continual improvement of the system.

The company's Environmental Policy commits the SPTS management team and all SPTS employees to the prevention of pollution, the minimisation of waste, and the effective use of energy and raw materials.

An Environmental Aspects Register, Environmental Manual, Emergency Response and Spillage Procedure, COSHH management system, Legal Register, as well as other operational and maintenance procedures, all support our pollution prevention policy.

##### **4.1 Maintenance and Monitoring Procedure**

Procedures are in place to ensure the effective maintenance and test requirements of the toxic and inert gas ring main system with both internal and external inspections.

All in-use main gas lines are pressure- and leak-checked regularly to confirm integrity of the lines.

All gas panels have their cylinder pressures read and recorded twice daily in order to detect any abnormalities in usage and to assist in detection and response.

A comprehensive electronic maintenance recording system is in place which allows data to be recorded and instantly linked to the SPTS master database and Building Management System (BMS). Again, this assists in the highlighting and investigating of anomalies, thus ensuring corrective actions are implemented in a timely manner.

##### **4.2 Gas System Maintenance**

A weekly visual inspection of the main gas systems take place in order to ensure there are no obvious signs of corrosion, leaks or mechanical damage. A visual inspection of the gas panels and enclosures also takes place in order to check for physical degradation and other indicators of issues.

In addition:

- Pigtails are checked for signs of corrosion or cracking.
- Regulators are checked for suitability, signs of corrosion or damage as well as pressure checks.
- The in-use gas hut is checked to ensure it is free from debris, oil or combustible material. Work in the gas hut is always carried out with suitable ventilation and gas

bottle changes and certain maintenance works are defined as a two-person activity with breathing apparatus or respirators worn where required.

- Modifications to gas lines are carried out in accordance with BCGA Codes of Practice.

#### **4.3 Drager Gas Detection**

A Drager gas detection system is in place in order to alert SPTS of any unintended gas releases. Detection levels are set at 'safe' levels below the corresponding Workplace Exposure Limit so that immediate investigatory work can be undertaken before any serious situation occurs.

The Drager gas detection system monitors the extract systems, R&D/development clean rooms (including under the floor of these areas) as well as the service chase areas. The system is maintained annually by Drager Gas Systems Ltd. Additionally, the Drager detection heads are continuously self-monitored by the system display screen.

It should be reiterated that the relatively small quantities of materials used at the site, combined with the early detection systems and intrinsic interlinking of these, should all combine to negate any chances of serious environmental incident.

#### **4.4 Extract Systems**

The 'Toxic' extract systems remove all waste process gases after they have been processed by the thermal conditioning units and GRCs. Duct pressures of the systems are checked and recorded on a daily basis and constantly monitored via the Building Management System (BMS). The extracts systems also have regular physical checks for condition and effectiveness.

The 'General' extract systems are used on the main module gas boxes of SPTS' machines. They have flow sensors built into them which are configured to shut down the gases to the machine should the flow drop below a certain level. The systems are also monitored for the duct pressure using the Building Management System. Again, these pressures are checked and recorded on a daily basis and the extracts physically checked to ensure correct operation.

#### **4.5 Gas Line Intervention**

A group email system forms part of our gas line intervention log and notifies users of the gas system status. This provides for a safer working environment and an effective mode of communication among parties that could be involved or affected by a gas line intervention.

A gas line intervention procedure and checklist is in place in order to provide for employee safety as well as leak prevention.

#### **4.6 Chemicals**

Chemicals that are used at the installation are registered and assessed prior to use. COSHH assessments and Safety Data Sheets are stored on an intranet-based COSHH Management System.

The COSHH Management System is accessible to all employees. This facilitates ready access to relevant safety and environmental data with respect to chemicals that they may handle or store and also enables better central management of the data so as to ensure that all information remains current.

All new substances to be used on site have a formal approval process. Often specific internal actions/checks are also required before introduction is approved.

A Hazardous Waste Disposal Procedure is in place and covers the removal and disposal of any waste or redundant chemicals on site. A Waste Disposal Form must be completed before substances are placed in the chemical waste compound, with the compound itself being bundled and locked.

As and when required, a full list of waste substances is sent to a licensed and SPTS-approved hazardous waste management company. The latter will then arrange collection and dispose of the waste in line with safety and environmental regulations. SPTS also employs a waste operative who organises the handling of all forms of hazardous and non-hazardous waste. The operative also ensures wastes are properly segregated and securely and safely stored.

It should be noted that all staff carrying out gas system maintenance or working with any hazardous substances are appropriately trained. The engineers are also made aware of any specific dangers that may occur to the environment or to themselves or others. Emergency spill kits are provided in the service chase areas, the clean rooms and the plant room. and Personal protective equipment (PPE) is also readily available to all employees.

The only significant quantities of oil stored on site are used for the emergency back-up generator. Oil supplies are retained in their supplied 25-litre plastic containers and stored within a bunded area. A maximum of 100 litres is stored at any one time.

The canteen staff use cooking oil for catering purposes and have a system in place for waste oil to be removed each time a new 25-litre can is delivered.

The site also currently holds 20-litre drums of petrol for use within a snow blower during inclement weather. The maximum stored quantity at any time does not exceed 40 litres. This is stored in a locked flammable cupboard and kept separate from all other materials.

## **5. RECORDING AND REPORTING PROCEDURE**

Any data collected within the above procedures is stored within the local document management system or the SPTS networked drive and used for summary or reporting activities as appropriate. Any anomalies are acted on as soon as reasonably practicable by authorised and competent staff.

Site evacuations are managed by suitably-trained Incident Controllers and feedback is provided to employees and managers as appropriate. All such incidents are investigated and recorded with preventative and corrective measures put in place as required.

Hazards/risks associated with site substances are recorded, controlled and monitored.

Environmental issues are controlled via the Environmental Management System and associated procedures.

Annual Compliance Reports are sent to Natural Resources Wales each year in accordance with the requirements of the Permit.

SPTS fully understands its obligations to inform NRW of any changes to processes undertaken at the installation and to report any spillage or release that has caused or may cause harm to the environment.

**NOTE:** Under the current Permit it has been assessed that there is only “Low” risk of any environmental contamination, as the quantities of all substances kept on site are small. Accordingly, should a requirement to surrender the Permit arise, there should be no conditions which would give rise to an environmental contamination condition.

A site closure plan is in place and held with NRW as well as SPTS Management.

## 6. APPENDIX A

Figure 1: location map



**Figure 2: site plan**

