

SP4-401

# Environmental Management

Guidance for effective environmental management

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**Table of Contents**

1. Purpose .....	3
2. Scope.....	3
3. Definitions .....	3
4. Responsibilities & Governance.....	3
5. Introduction.....	3
10. Site Drainage Systems.....	6
11. Trade Effluent.....	7
12. Managing Wastes Produced on Site .....	8
13. Additional Guidance for WEEE Waste .....	9
14. Additional Guidance for Paper / Cardboard .....	10
15. Additional Guidance for Chemical Containers .....	10
16. Overview of Management of Systems Using Coolant Gases.....	10
17. F-gas and ODS Maintenance and Testing Requirements .....	12
18. Energy Performance of Cooling Systems .....	13
19. Training .....	13
20. Accountability.....	13
21. Related Policies and Procedures .....	14
22. Requests for Additional Information, Interpretation and Document Ownership.....	14
23. Revision History .....	14
24. Procedure Retention .....	14

## 1. Purpose

- 1.1. To define the processes for achieving and maintaining compliance with environmental requirements, and for delivering environmental improvement at operational and office facilities.

## 2. Scope

- 2.1. This procedure applies to all Stericycle activities, facilities and team members in the Great Britain business.

## 3. Definitions

- 3.1. **Environmental Management** – the processes for achieving and maintaining compliance with environmental regulatory requirements (other than those controlled by permits), and for making environmental improvements in line with Company objectives.
- 3.2. **Permit Compliance** – the processes for achieving and maintaining compliance with permits.
- 3.3. **SEMS** – Safety & Environmental Management System. The Company's software platform used for EHS management activities including the reporting and investigation of incidents.

## 4. Responsibilities & Governance

- 4.1. **Vice President Operational EHS, International / Director Permit Compliance, EMEA** – are responsible for ensuring that the processes defined in this procedure are implemented throughout the international business.
- 4.2. **Permit Compliance Managers** – are responsible for supporting the Operational EHS team to provide permit compliance support where environmental management activities overlap with permit compliance requirements.
- 4.3. **Operational EHS Managers** – are responsible for providing support to line managers to ensure that environmental management activities are controlled in accordance with this procedure.
- 4.4. **Operational / Facility managers** – are responsible for ensuring that environmental management activities are controlled in accordance with this procedure.

## 5. Introduction

- 5.1. Stericycle is committed to complying with all legal requirements related to environmental management, and to reducing the environmental impact of its activities.
- 5.2. This procedure sets out the responsibilities of Operational / Facility Managers for achieving and maintaining compliance with environmental requirements, and for making environmental improvements at the facilities under their control. The following subjects are included:
  - Environmental objectives and targets;
  - Environmental data reporting;
  - Energy and resource Efficiency;
  - Storage of oils and chemicals;
  - Drainage and trade effluent;
  - Managing wastes produced on site;
  - Management of systems using coolant gases

- 5.3. Environmental requirements controlled by permits are covered by the separate procedure **4-400 Permit Compliance**. Operational processes followed for permit or other environmental compliance reasons are covered by the operational procedures for each facility type.

## 6. Environmental Objectives and Targets

6.1. Stericycle's environmental and quality objectives are as follows:

- To meet our customer's expectations by protecting what matters to them;
- To have zero recorded permit violations and non-compliances;
- To minimise our carbon footprint and climate change impact;
- To minimise our use of natural resources

6.2. All environmental management activities must be undertaken with these objectives in mind. The guidance in this procedure is written to ensure compliance with legal requirements is achieved and maintained.

6.3. With regard to environmental improvement consideration should be given to the following items:

- Energy efficiency & carbon footprint – consider energy efficiency and carbon emissions when upgrading or installing new equipment (for example LED lighting), refer to section 8 for further guidance;
- Resource efficiency – consider minimising use and lower environmental impact alternatives when reviewing or changing raw materials, refer to section 8 for further guidance;
- Resource impact – consider environmental impact, quantities used and risk of spill when selecting oils and chemicals, refer to section 9 for further guidance;
- Waste and resource efficiency – consider recovery and recycling options and always apply the waste hierarchy when making waste management decisions, refer to section 11 for further guidance;
- F-gas resource efficiency – consider lower climate change (GWP) impact options when reviewing or upgrading cooling systems, refer to section 12 for further guidance

## 7. Environmental Data Reporting

7.1. All facilities are required to collate and report information on the following:

- Electricity usage;
- Gas usage;
- Water usage;
- Use of any other on-site fuels (e.g. back-up diesel generator);
- Waste production (recycling and disposal)

7.2. The information must be collated and reported on a monthly basis for each calendar month.

7.3. The information must be reported using the online Environmental Data Reporting system on the Regulatory Compliance page of the Company's intranet.

7.4. Detailed guidance on collating the information, including meter readings and units of entry, is provided in **WI4-401-01 – Utilities Data Reporting**.

7.5. Detailed guidance on waste management including determination of recycling and disposal rates is provided in Sections 12 to 16 of this procedure.

7.6. Information on vehicle fuel usage and mileage is also collated centrally in the Masternaut system

## 8. Energy and Resource Efficiency

- 8.1. Energy and resource efficiency must be considered during normal operations and in planning for change. Use of energy and raw materials is a significant environmental aspect for the business as well as a significant financial cost.
- 8.2. All facilities should review their energy and raw material usage not less than annually to ensure that they are operating as efficiently as possible. The information collated as described in Section 7 of this procedure can be used to inform decisions about energy and resource usage.
- 8.3. Where required by a condition of an environmental permit the energy and raw material review / audit must be reported to the environmental regulator using the form specified for the purpose (refer to **4-400 Permit Compliance**).
- 8.4. Further energy improvements will be identified through Energy Savings Opportunity Scheme (ESOS) audits completed every four years. Actions arising from these audits and internal energy/resource audits should be managed in accordance with **4-104 Corrective and Preventive Action**.

## 9. Storage of Oils and Chemicals

- 9.1. The storage of oils and chemicals must be controlled because:
  - Certain substances have the potential to cause harm to the environment when spillages or leaks occur and the substance escapes to air, land, water or drainage systems;
  - Certain substances have the potential to cause harm to human health when people come into contact with them
- 9.2. All sites must compile an inventory of oils and chemicals routinely stored on site. This information is recorded on the site emergency response plan. Refer to **4-112 Emergency Preparedness and Response** for further details.
- 9.3. All sites must complete COSHH assessments for chemicals or oils stored that are known to or have the potential to cause harm to human health. Refer to **4-206 Control of Harmful Substances** for further details.
- 9.4. All oils and chemicals must be stored on site in accordance with the following principles:

<b>Oil / Chemical</b>	<b>Storage Requirements</b>	<b>Secondary Containment</b>
All chemicals or oils in containers less than 10ltrs volume and/or total quantity stored less than 50ltrs	Store in a secure location inside a building or covered storage unit (e.g. cleaning cupboard or site store)	None required.
All chemicals or oils stored in containers over 10ltrs volume and/or total quantity stored over 50ltrs	Store on a drip tray or pallet bund in a secure location inside a building or covered storage unit.	Drip tray or fixed or mobile/pallet bund must have minimum 110% capacity of the largest container stored on it

Oils stored in containers over 200ltrs volume (Storage Drums)	In a tank that is either integrally bunded or positioned in a fixed bund.	Drip tray/bund must be able to contain one quarter of the combined capacity of all the containers
Oils stored in containers over 200ltrs volume (Fixed tanks and IBC)	In a tank that is either integrally bunded or positioned in a fixed bund.	Bund must have minimum one quarter of the combined capacity of all the containers or 110% capacity of the largest container, whichever is greater

- 9.5. Where any oils or chemicals are stored on bunds of any type the bund must be subject to periodic inspection by the relevant Manager in accordance with the maintenance schedule. Refer to **BMS/7.01 Engineering and Maintenance** for further details.
- 9.6. Bund inspections must include checks of the following:
- That the bund is not visibly cracked, damaged or leaking;
  - That the bund is not full, or partially full of leaked material or rainwater
- 9.7. Where oil is stored in tanks with a capacity exceeding 200ltrs the tank must be subject to an inspection by a competent technician at a frequency of not less than once per annum. Such inspections must include inspection of the tank, bund and ancillary equipment such as pipe-work.
- 9.8. A written report of all such inspections will be supplied by the technician and retained on file by the relevant Manager.
- 9.9. Selection and assessment of competency of technicians is undertaken in accordance with **BMS/4.01 Procurement and Supply Chain Management**.

## 10. Site Drainage Systems

- 10.1. All sites have some form of drainage system usually comprising of both foul and surface water systems as follows:
- Foul sewer systems generally comprise domestic effluent drainage (i.e. from toilets, showers and sinks) and/or trade effluent (such as waste water from plant activities and surface drainage from controlled storage or vehicle washing areas);
  - Surface water systems generally comprise drainage of clean, uncontaminated rainwater (i.e. from building roofs and external site surfaces not used for any trade effluent producing activities
- 10.2. Foul sewers normally discharge to the off-site public sewer system and ultimately to a wastewater treatment works. Surface water systems normally discharge to the off-site public surface and stormwater system and ultimately into surface water courses (i.e. rivers, lakes, sea).
- 10.3. All sites must take measures to identify all drain covers, grids, channels, gullies and manholes within the boundary of the site as either foul or surface. This information must be determined to enable appropriate action to be taken in the event of a spillage or loss of material to any sewer.
- 10.4. Drainage plans can usually be obtained from facility landlords as part of lease arrangements and agreements. In the event that no plans are available an external contractor can be engaged to

conduct a drain survey. Contractors must be selected in accordance with the requirements of **BMS/4.01 Procurement and Supply Chain Management**.

10.5. Drainage plans should be incorporated into the emergency response plan for the site as detailed in **4-112 Emergency Preparedness and Response**.

10.6. After identification all drain covers, grids and manhole covers should be physically marked as follows:

- Foul sewer system – RED;
- Surface water system – BLUE.

## 11. Trade Effluent

11.1. Trade effluent is wastewater produced from business activities. It includes all wastewaters produced from the use of water on operational facilities with the exception of that used by domestic type sources (site toilets, showers, wash basins and kitchen / canteen facilities). The main sources of trade effluent produced on Company sites are:

- Waste water from vehicle washing;
- Waste water from container / bin washing;
- Water drained from permitted / regulated waste storage areas (cleaning & rainwaters);
- Waste water from plant process activities (i.e. condensates from alternative treatment plants, wash waters from wet ash systems etc.)

11.2. Trade effluent may only be discharged to foul sewer under the terms of a trade effluent discharge consent or agreement issued by the local sewerage undertaker (a private company responsible for the management and maintenance of the sewerage network, with regulatory powers to control flows into the sewers by issuing consents with limits on volume, pollutant concentrations etc).

11.3. In the event that a site wishes to commence discharge of trade effluent (i.e. a new vehicle washing operation is planned) the site must contact the Permit Compliance Manager to arrange for the application for a trade effluent discharge consent to be made (refer to **4-400 Permit Compliance**).

11.4. Alternative solutions are available for the management of small quantities of trade effluent that may be simpler and more cost effective than maintaining a discharge consent. For example mobile vehicle washing services are available that will capture and remove the wastewater generated as part of the service.

11.5. Records must be maintained and routine monitoring must be undertaken to demonstrate compliance with the terms of the trade effluent discharge consent.

11.6. Specific record-keeping and monitoring requirements are dependent on the terms of the individual consent but are likely to include the following as a minimum:

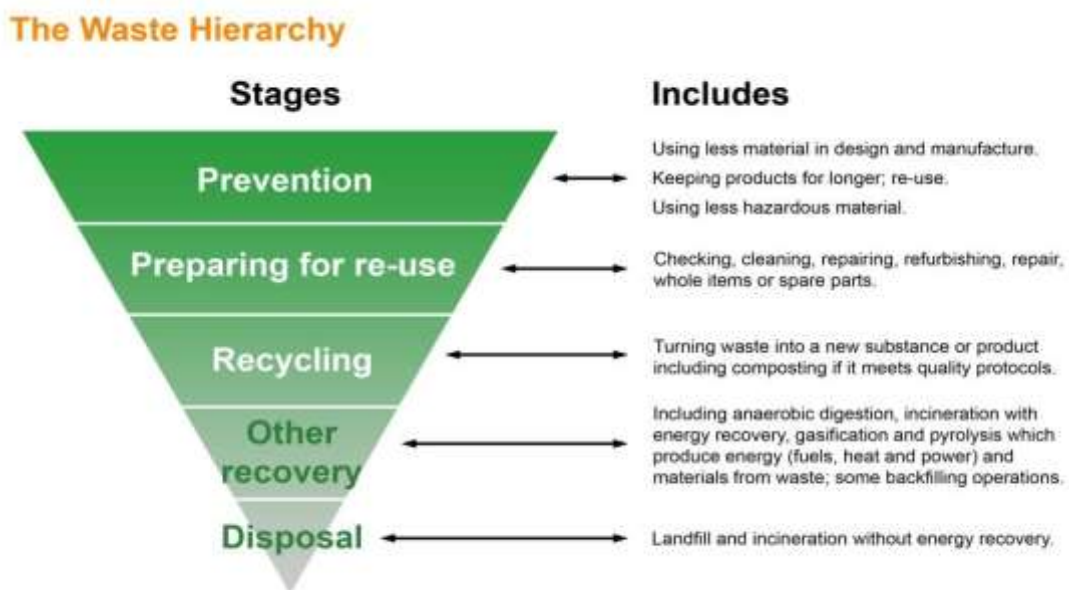
Consent Condition	Monitoring	Record-keeping
Limit on total volume and rate of discharge permitted	Volume – manual record of incoming water meter usage minus domestic use.	Retain manual record using utilities data.
	Rate – calculation of maximum possible from activity	Retain manual record of calculation.
Limits on various chemical concentrations	Sample taken and sent to external lab for analysis not less than once per annum.	Analysis results checked and retained on file.
	Samples may be taken by sewerage undertaker with results provided to the consent holder	Analysis results checked and retained on file.

11.7. Samples taken must be dispatched to the external laboratory within 24 hours of the completed sample being produced. The sample must be accompanied by the completed chain of custody form **F6.01.13**. If you are unsure on suite type contact the Environmental Manager.

## 12. Managing Wastes Produced on Site

12.1. Waste is produced by the activities undertaken at all Company sites. The Operational Manager at each site shall maintain a **site waste management plan (F4-401-01)**.

12.2. In developing the site waste management plan, the waste hierarchy must be considered when reviewing the recovery or disposal routes for all wastes produced. The waste hierarchy is a classification system for waste management options with prevention at the top (least environmental impact) and disposal via landfill at the bottom (greatest environmental impact). It is a legal duty to consider the waste hierarchy when making decisions regarding waste management, and wherever possible to select the option furthest up the hierarchy.



12.3. The following information shall be recorded on the site waste management plan for all categories of waste:



- Waste description, source and EWC code (European Waste Catalogue code, a six digit code used to classify a waste based on its source and properties);
- Current management option, carrier name and disposal site name

12.4. The Operational Manager shall conduct an annual review of the management arrangements for each waste type, to determine whether there is scope for changes to transfer the management of the waste further up the waste hierarchy.

12.5. Prior to implementation of any proposed changes the processes defined in **BMS/4.01 Procurement and Supply Chain Management** (supplier selection and duty of care) and **BMS/7.02 Process Change Control** must be followed. After implementation of any changes the site waste management plan shall be updated.

12.6. When required by a condition of an environmental permit the Operational Manager shall, in conjunction with the Permit Compliance Manager, compile the results of the annual review of waste management arrangements into a formal review of avoidance, recovery and disposal of waste. The completed review shall be submitted to the environmental regulator as required by the permit condition, and as defined in **4-400 Permit Compliance**.

12.7. All waste shall be consigned from site using a compliant hazardous waste consignment note, special waste consignment note or controlled waste transfer note as appropriate (excluding samples sent to laboratories for analysis).

12.8. Consignment note records should be maintained on site for all wastes removed from site. Where the waste removed is hazardous the quarterly producer returns obtained from the consignee should be retained on file with the consignment notes to form the site register.

12.9. There are additional requirements for the management of wastes produced by treatment or incineration activities. Please refer to **WI/6.02.08 Management of AT Plant Waste** or **WI/6.04.08 Management of Incinerator Plant Waste**.

### 13. Additional Guidance for WEEE Waste

13.1. From time to time it may be necessary to dispose of WEEE (waste electrical and electronic equipment) waste from the facility, from one of the following categories:

- Large household appliances;
- Small household appliances;
- IT and telecommunications equipment;
- Consumer equipment;
- Lighting equipment;
- Electrical and electronic tools;
- Monitoring and control equipment

13.2. The WEEE waste should be neatly stored, in an appropriate storage area prior to removal from facility.

13.3. As with other wastes being removed from the facility, ensure that the waste is sent to a suitable disposal facility to be treated and recycled. That the waste should be moved to the disposal facility via an approved carrier accompanied by a WCN.

13.4. To comply with our information security policy, all devices that contain a hard drive or flash memory must be returned to the IS department at head office. This includes:

- Laptops;
- Desktop computers;
- Portable hard drives;
- Memory / pen / flash drives

#### 14. Additional Guidance for Paper / Cardboard

- 14.1. From time to time the site will need to dispose of cardboard generated from site activities.
- 14.2. Pending disposal the waste should be neatly stored, in an appropriate storage area prior to removal from facility.
- 14.3. Ensure that the waste is sent to a suitable disposal facility to be recycled or recovered. That the waste should be moved to the disposal facility via an approved carrier accompanied by a WCN.
- 14.4. This does not include paper waste generated in offices which must be deposited in a Shred-it console for secure destruction.

#### 15. Additional Guidance for Chemical Containers

- 15.1. As with the other waste streams, once emptied these containers should be neatly stored in an appropriate storage/bunded area.
- 15.2. On disposal care should be taken to ensure that any residual quantity of the container contents is identified so that the waste can be appropriately labelled, consigned and handled.
- 15.3. For example Ad-blu. On changing the container, any pumps/pipework should be disconnects and the container should be transferred to a secure/bunded area. This is to prevent any potential water ingress, and therefore minimises the risks associated with a potential spillage.
- 15.4. Chemical containers holding residual quantities of the chemical shall be consigned using the EWC code and description of the chemical content, and not as empty packaging.
- 15.5. As with other wastes being removed from the facility, ensure that the waste is sent to a suitable disposal facility to be recycled / recovered or disposed of. The waste should be moved to the disposal facility via an approved carrier accompanied by a WCN.

#### 16. Overview of Management of Systems Using Coolant Gases

- 16.1. Definitions applicable to this process include the following:
  - **Coolant gas** – F-gases and ODS.
  - **Relevant system** - any system in operation that is designed to cool any media (i.e. air conditioning systems or refrigerators), and provides cooling capability through the use of coolant gases. Does not include fans or forced air based systems. Also any fire protection system that uses F-gases.
  - **F-gases** – fluorinated greenhouse gases. F-gases are routinely used as coolants in air conditioning and refrigeration systems and as suppressants in fire protection systems.
  - **Ozone depleting substances (ODS)** – gases that are known to deplete the ozone layer in the upper atmosphere. ODS were routinely used as coolants in air conditioning and refrigeration systems but are being phased out. May still be present in older systems.

- **Cooling system energy performance** – assessment of the energy efficiency of certain types of cooling system above a certain power output rating. Such assessment is a requirement of the Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations 2007.
- **Global Warming Potential (GWP)** – is a relative measure of how much heat a greenhouse gas traps in the atmosphere. It compares the amount of heat trapped by a certain mass of the gas in question to the amount of heat trapped by a similar mass of carbon dioxide

16.2. All sites shall compile a register (**F4-401-02**) of systems in use that contain F-gases or ODS. The register shall include the following information:

- The type and location of each piece of equipment;
- The name or ID of the coolant gas present in the equipment;
- The quantity, in kilograms, of coolant gas in each piece of equipment;
- The GWP of the F-gas;
- Whether the coolant gas present is an F-gas, or an ODS, or both;
- Whether a leak test is required;
- The date of the most recent leak test;
- The effective rated cooling output, in kilowatts, of the equipment;
- Whether an energy performance certificate is required;
- Any other comments or relevant information

16.3. On most pieces of equipment the relevant information will be printed on a label displayed on the rear or side of the equipment, or in some cases (i.e. fridges) inside the equipment.

16.4. In the event that the information is not displayed (label removed or very old systems) any other information about the equipment should be recorded (for example manufacturer and model name) and advice sought from the Environmental Manager.

16.5. To assist in the compilation of the register the following table is provided listing common coolant gases and their status as an F-gas or ODS.

Substance Class / Name	F-gas	ODS
All HCFC's	NO	YES
All HFC's	YES	NO
All PFC's	YES	NO
Blended gases (R401, R402, R403, R408, R411)	YES	YES
Blended gases (R406, R409)	NO	YES
Blended gases (R404, R407, R410, R413, R416, R417, R422, R423, R424, R427, R428, R434, R507, R508)	YES	NO
HC290 (Propane); HC600a (Iso-butane); R717 (Ammonia)	NO	NO

16.6. Once the F-Gas or ODS has been identified you can then calculate the CO<sub>2</sub> equivalent from the GWP of that gas. The following table provides the common coolant gases, but other F-gases can be found at: <https://www.gov.uk/calculate-the-carbon-dioxide-equivalent-quantity-of-an-f-gas>

Substance Name	GWP
HFC 404A	3,922
HFC 410a	2,088
HFC 23	14,800
HFC 227ea	3,200
HFC 134a	1,430

The amount of CO<sub>2</sub> equivalent is calculated by the coolant gas in tonnes multiplied by the GWP of the gas. For example, if a unit contains 10kg of HFC404A the calculation is:

$$\begin{aligned}
 &(10/1000) \text{ This converts the value from kg to tonnes} \\
 &\text{We then multiply this value by the GWP value of 3,922} \\
 &= (10/1000) * 3,922 \\
 &= 39.2 \text{ tonnes}
 \end{aligned}$$

- 16.7. After compilation of the register the information recorded shall be used to determine the maintenance and testing regime for the equipment in accordance with the following requirements.

## 17. F-gas and ODS Maintenance and Testing Requirements

- 17.1. All systems containing F-gases and/or ODS must be subject to periodic servicing and maintenance. Servicing and maintenance schedules should be defined and recorded as specified in **BMS/7.01 Engineering and Maintenance**.
- 17.2. Systems containing certain quantities of F-gases and ODS must also be subject to periodic leak testing at the frequencies defined in the following table:

GWP of F-gas / ODS on site (CO <sub>2</sub> in tonnes)	Leak Test Frequency
5 or more	Annual
50 or more	Six-monthly
500 or more	Three-monthly

- 17.3. Where leak detection systems are installed, the maximum interval between leak checks can be doubled. For example a system that contains F-gas equivalent to 5 tonnes CO<sub>2</sub> can be tested once every 2 years. Please contact your Environmental Manager for advice before implementing this change.
- 17.4. Quantities of F-gas and ODS present (CO<sub>2</sub> equivalent) relate to the quantity present in each individual discrete system or piece of equipment. If a piece of equipment has less f-gas and ODS present than lowest threshold, then leak testing is not required.
- 17.5. Where leak tests undertaken indicate the presence of a leak, the repairs necessary to stop the leak must be completed, and a repeat test undertaken within one month to check the repair worked.
- 17.6. All systems containing F-gases and/or ODS must be installed and decommissioned in a manner designed to prevent leakage.
- 17.7. A leak detection system must be fitted if the equipment on site contains 500 tonnes or more of CO<sub>2</sub>, determined by the GWP.

- 17.8. Servicing, maintenance, leak testing, installation, and decommissioning of all systems containing F-gases and/or ODS must be undertaken by a company certified under an approved F-gas certification scheme.

It is illegal to undertake maintenance of any equipment containing ODS that requires the replacement or recharging of ODS into the system. Systems requiring such maintenance should therefore be decommissioned and replaced with systems that contain F-gases but not ODS

- 17.9. Suppliers should be sourced and credentials verified in accordance with the requirements of **BMS/4.01 Procurement and Supply Chain Management**. Supplier's certification should be available on site

## 18. Energy Performance of Cooling Systems

- 18.1. Air-conditioning systems with an effective rated cooling output exceeding 12kw must be subject to periodic assessment by an energy assessor. The assessment must be undertaken not more than every 5 years after the system was first installed.
- 18.2. The 12kw threshold is based on the total effective rated cooling output (cumulative) and not the output of individual discrete units. For example, if three separate units on site each have an effective rated cooling output of 5kw, the total of 15kw means that an assessment is required.
- 18.3. After completion of each assessment the energy assessor must provide a written report and an energy performance certificate, both of which must be retained on file by the Company.
- 18.4. Energy assessors must be certified under an approved energy assessor certification scheme.
- 18.5. Suppliers should be sourced and credentials verified in accordance with the requirements of **BMS/4.01 Procurement and Supply Chain Management**. Supplier's certification should be available on site.

## 19. Training

- 19.1. All operational managers are required to complete a training session provided by Permit Compliance Managers on the requirements of this procedure, and the corresponding competency test in the SEMS LMS.
- 19.2. Training requirements for Permit Compliance Managers are defined in **WI4-108-02 Permit Compliance Manager Activities**.

## 20. Accountability

- 20.1. Stericycle regards compliance with this procedure to be a significant duty of all Stericycle team members.
- 20.2. Disciplinary action may be implemented following the guidance set out in Policy 4-109 EHS Accountability if any team member intentionally disregards and/or neglects to comply with this procedure's requirements.

### 21. Related Policies and Procedures

- 21.1. Policy 4-401 Permit Compliance Procedure
- 21.2. Document 4-100 Business Management System Manual
- 21.3. Stericycle Global Environmental, Health and Safety Policy
- 21.4. Stericycle Europe Quality Policy

### 22. Requests for Additional Information, Interpretation and Document Ownership

22.1. The following is responsible for developing and maintaining this procedure.

<b>Document Owner:</b>	Stuart Budd	Vice President EHS International
<b>Document Author:</b>	David Williams	Director, Permit Compliance, EMEA

22.2. For all enquiries related to this document or change requests contact [EHS-ProgramsTeam@stericycle.com](mailto:ProgramsTeam@stericycle.com)

### 23. Revision History

23.1. Revision History

Version	Issued	Overview of Changes
1.0	01/08/2020	New Procedure
2.0	01/01/2023	Accountability Section amended to reference EHS Accountability Policy.  Review period and document retention requirements amended from specific periodic review to review if changes occur to applicable legislation and/or company operations that prompt revision of this procedure.

23.2. This procedure must be reviewed when changes occur to applicable legislation and/or company operations that prompt revision of this procedure.

### 24. Procedure Retention

- 24.1. This procedure shall be retained electronically until reviewed and updated.
- 24.2. Hard copies of this procedure must be disposed of after use using appropriate secure document destruction methods.