



GUIDELINES FOR SIRIM APPROVED MATERIALS RECOVERY FACILITY

CONTENTS

	Page
1. Introduction	2
2. Scope	3
3. Application to become SIRIM Approved MRF	3
4. Requirements to be SIRIM Approved MRF	2
5. Responsibilities as SIRIM Approved MRF	6
6. Schedule of Fee	8
7. Client Charter	8
8. Glossary of Terms	9
9. References	10
 FLOWCHART 1- OVERVIEW OF THE PROCEDURE FOR IMPORTATION AND INSPECTION OF WASTE PAPER INTO MALAYSIA	 11
 FLOWCHART 2: PROCESS FLOW FOR SIRIM APPROVED MRF	 12
 ANNEX A	 13

1. INTRODUCTION

1.1 Under the purview of Ministry of International Trade and Industry (MITI), all metal scraps and waste paper (scrap and waste) intended to be imported into Malaysia are subjected to inspection process and issuance of Certificate of Approval (COA) as per Customs (Prohibition of Imports) Order 2017. The applicable Guidelines that stipulate the requirements are as follows:

- a) SIRIM Guidelines for Importation and Inspection of Metal Scrap
- b) SIRIM Guidelines for Importation and Inspection of Waste Paper

1.2 Under these Guidelines, importer who choose Method Type 2 for importation and inspection of scrap and waste into Malaysia is required to source the scrap and waste from SIRIM Approved Materials Recovery Facility (MRF).

1.3 Importation of scrap and waste via Method Type 2 will undergo inspection and issuance of Certificate of Approval as per **Flow Chart 1.**

1.4 The importers shall fulfill the following requirements for importation of scrap and waste into Malaysia including importation via Method Type 2:

- (i) Manufacturers approved with Manufacturing License from MITI.
- (ii) Manufacturers who are exempted from Manufacturing License from MITI but issued with Exemption from Manufacturing License from Malaysian Investment Development Authority (MIDA) (ICA10).
- (iii) Third parties or subsidiary of the iron and steel manufacturers, aluminium or copper manufactures, or paper-based manufacturers who conduct trading activities (trading arm companies). Trading arm companies must have proof of document importing on behalf of manufactures as follows:
 - approved invoices from ML holders or ICA10 manufacturers; and
 - Memorandum of Agreement (MoA) with ML holders or ICA10 manufacturers.

The following parties are not allowed to import scrap and waste into Malaysia:

- (i) Manufactures that do not fulfill requirements specified under clause **1.4 (i)** and **1.4(ii)**.
- (ii) Traders purely undertaking trading activities or do not fulfil requirements specified in 1.4(iii).

- 1.5 SIRIM will issue Certificate to the SIRIM Approved MRF, and this Certificate shall be submitted to SIRIM during application of COA by importer for each shipment.
- 1.6 Importers will require the SIRIM Approved MRF to issue Inspection Report for them to submit to SIRIM for COA application for each shipment.

2. SCOPE

2.1 This Guideline:

- a) Covers all MRFs that process recovered materials that intend to become SIRIM Approved MRFs in order to supply scrap and waste to importer for importation into Malaysia via Method Type 2 as per Guidelines in clause 1a) and 1b).
- b) Specifies the requirements that must be adhered by the MRF to apply and maintain as SIRIM Approved MRF.

3. APPLICATION TO BECOME SIRIM APPROVED MRF

3.1 Application for any MRF to become SIRIM Approved MRF can only be applied by:

- a) **Foreign MRF** who have license or permit from local authority. SIRIM will not approve and issue Certificate to MRFs that are not in regulatory compliance at the time they request Certification.
- b) **Importers** as per **clause 1.4** who require the MRF to be in the SIRIM Approved MRF List. The applied MRF shall adhere to the requirements under this Guideline.

3.2 Refer **Flow Chart 2** on the Process Flow to be SIRIM Approved MRF

4. REQUIREMENTS TO BE SIRIM APPROVED MRF

4.1 General requirements

The MRF shall comply with regulatory requirements and have license or permit from local authority.

4.2 Equipment

The MRF shall have a list of all major equipment used in the facility and shall ensure the list is made available and updated. Two categories of equipment are as follows:

- a) Test Equipment
- b) Process Equipment

4.2.1 Test Equipment

- a) This includes all relevant test equipment used for inspection, measurement and testing of the scrap and waste such as platform scale, weighing balance, moisture meter, radiation meter etc.
- b) The test equipment shall be:
 - i. calibrated or verified or both at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards; where no such standards exist, the basis used for calibration or verification shall be recorded. Records of the calibration and verification shall be maintained;
 - ii. Adjusted or re-adjusted as necessary;
 - iii. Safeguarded from adjustments that would invalidate the measurement result;
 - iv. Protected from damage and deterioration during handling, maintenance, and storage

4.2.2 Process Equipment

- a) This includes all process equipment used in MRF process such as trucks, loader, conveyor, separation equipment, etc.
- b) The MRF shall establish scheduled maintenance service for all process equipment based on the equipment manufacturer's recommended maintenance schedule. If the maintenance service schedule is not adequate for the operation needs, the schedule shall be adjusted accordingly to reflect the equipment wear and tear rate.

4.3 Relevant Training and instructions

The MRF shall provide appropriate training and instructions to relevant personnel. Records of training and instructions shall be provided upon audit. The minimum requirements for training and instructions shall cover the following items:

- a) Use of equipment and its maintenance
- b) Quality Control process

- c) Sorting process
- d) Malaysia recovered materials guideline requirements.

4.4 **Storage for recovered materials**

The MRF shall ensure:

- a) All recovered materials should be stored in proper storage area. The storage area shall:
 - i. be suitable to prevent any occurrence of contamination.
 - ii. have adequate storage capacity to maintain the quality and quantity of recovered materials.
- b) All recovered materials should be delivered from the storage area as soon as possible within short period of time to avoid degradation and contamination.

4.5 **Housekeeping**

The MRF shall:

- a) Planned and established cleaning schedules for at least the following area (where applicable):and shall be established and followed. It shall cover
 - Reception floor
 - Loading bucket
 - Bag splitter
 - Conveyors and picking area
 - Machineries
 - Overband magnets
 - Storage area
- b) Implemented the cleaning schedules as planned.
- c) Ensure all machineries are kept clean and free from oil leaks.
- d) Ensure trucks/containers used for shipment are inspected and kept clean from any potential contaminants.

4.6 **Input materials**

The MRF shall ensure the source for input materials shall be listed and maintained. Only input materials sourced from the approved list can be accepted for Malaysian market.

4.7 Process

4.7.1 Production process

- a) The MRF shall establish a Process Flow Chart and Quality Control Plan for major processing activities such as below:
 - i. Pre-sorting
 - ii. Segregation/sorting
 - iii. Inspection/measurement and reporting
 - iv. Bailing/packing
- b) The MRF shall also established necessary documents including procedures, specification, work instructions, regulations, etc.
- c) The MRF shall ensure all activities are implemented according to the Process Flow Chart, the Quality Control Plan and the documents as established.

4.7.2 Process record

The MRF shall ensure all records of recovery process parameters, and changes are established and maintained (refer **clause 4.9**)

4.8 Residual waste

Residual waste shall be handled according to local authority regulations.

4.9 Records

The MRF shall ensure records are established and maintained to provide evidence of conformity to requirements and of the effective operation of the quality control system. Records shall be legible, identifiable, stored, protected, and readily retrievable and retained for a minimum of three year.

5. RESPONSIBILITIES AS SIRIM APPROVED MRF

5.1 Issuance of MRF Inspection Report

- 5.1.1 The SIRIM Approved MRF shall conduct inspection and provide inspection report for each delivery of recovered materials to the importers who require to import the scrap and waste into Malaysia via importation Method Type 2.
- 5.1.2 The SIRIM Approved MRF shall ensure the supply of scrap and waste to the importers comply with the respective Guideline requirements as per **clause 1.1.**
- 5.1.3 Any non-compliance scrap and waste according to the Guidelines are not allowed to be sourced to the importers.
- 5.1.4 The MRF Inspection Report shall contain the following items:
- a) Method of Inspection
 - i. Loading process
 - ii. Weighing
 - iii. Sampling (method /standards used)
 - iv. Segregation of sample
 - v. Records of the weight percentage
 - b) List of equipment used and calibration details
 - c) Photos
 - i. Vessel used to transport the recovered materials
 - ii. Loading process
 - iii. Sampling and weighing process
 - iv. Seal (for container) with clear seal number
 - v. Container with clear container number
 - d) Inspection result summary
 - i) For Recovered metals;
 - Solid Non-Ferrous
 - Solid Ferrous
 - Other recoverable material including plastic
 - Scheduled waste including electrical and electronic
 - Radiation level
 - ii) For recovered paper;
 - Non-Paper components
 - Total unwanted material
 - Radiation level

e) SIRIM Approved MRF Certificate Number and location.

f) Supporting documents

- Purchase order
- Invoice
- Packing list

5.1.5 Marking on Bale

- a) The MRF shall provide marking on each bale that only applicable to recovered paper delivered in bale.
- b) The MRF shall ensure the grade identification as per clause 4 of MS EN 643, shall be visibly marked on each individual bale.

6. SCHEDULE OF FEES

a. SIRIM Approved MRF

No.	Description	Fee (RM)
1.	Application & Documents Evaluation	RM 2,500 /day (One-off)
2.	Initial Audit Fee	RM 1,500 /day (One-off)
3.	SIRIM Approved MRF Certificate (Validity: 2 years)	RM 1,200
5.	Annual Surveillance Audit	RM 1,500
6.	Renewal of SIRIM Approved MRF Certificate	RM 1,200
5.	Flight ticket & Accommodation	As per charged
6.	Other incidental charges	As per SIRIM standard rate

7. CLIENT CHARTER

a. The Client Charter to become SIRIM Approved MRF

SIRIM conduct document evaluation	1-2 working days
SIRIM issue Quotation	3-5 working days
SIRIM schedule for audit	1-2 working day
SIRIM conduct process audit for the MRF	1-3 working day/site
Total	6 – 12 working days

8. GLOSSARY OF TERMS

For the purposes of this document, the following terms and definitions apply.

8.1 **Input Material**

Mixed dry recyclable waste received at the facility for sorting and/or separately collected dry recyclable waste received at the facility for sorting (e.g. to remove contamination)

8.2 **Materials Recovery Facility (MRF)**

A facility where dry recyclable waste is treated in order to separate that waste into a dry waste stream or streams.

8.3 **Recovered material**

Material that would have otherwise been disposed of as waste or used for energy recovery but has instead been collected and recovered as material input, in lieu of new primary material, for a recycling or a manufacturing process.

8.4 **Residual waste**

Waste materials with no commercial value that are left out after the segregation process by the MRF. These include broken glass, textile, rubber, ceramics, worn-out plastics, concrete fragments, and soil, among others.

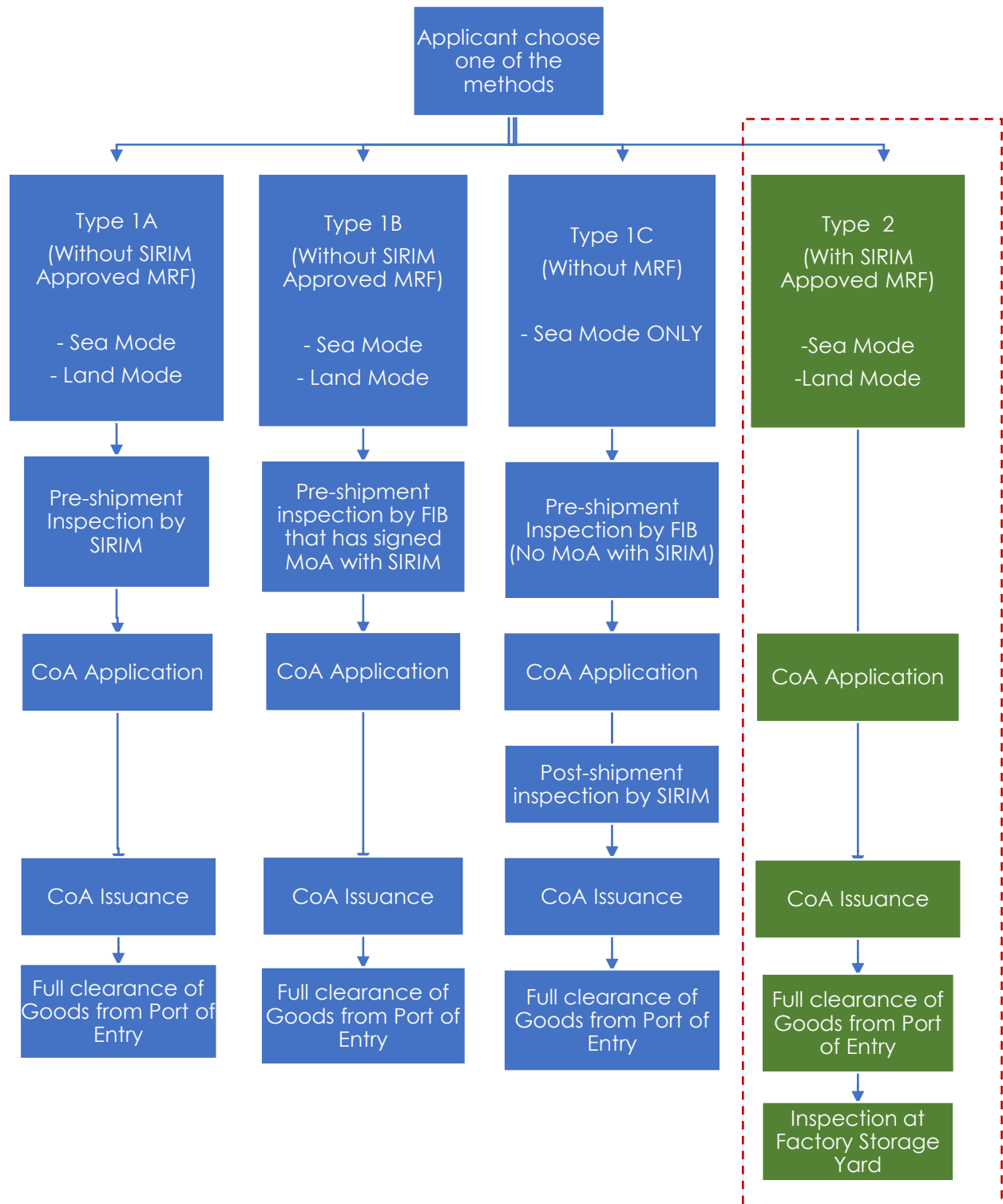
8.5 **Scheduled waste**

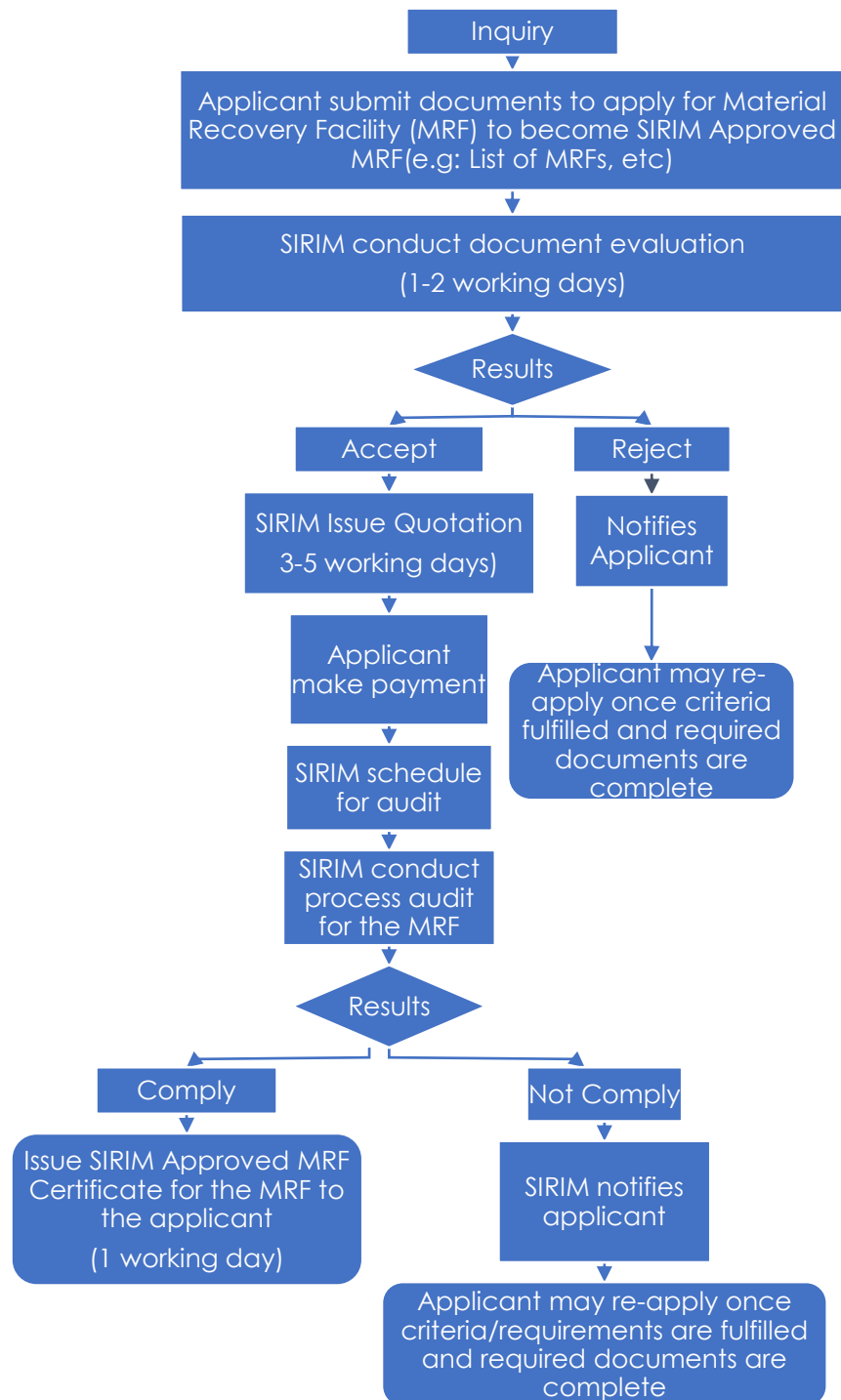
Any waste falling within the categories of waste listed in the First Schedule of Malaysian Environmental Quality (Scheduled Wastes) Regulations 2005. Refer **Annex A**.

9. REFERENCES

1. *Best Operational Practices Manual for Materials Recovery Facilities and Recycling Drop-off Facilities* - Illinois Recycling Association, November 2010
2. *Environmental Quality (Scheduled Wastes) Regulations 2005*.
3. *Guidelines for importation and inspection of metal/paper scrap*, June 2021
4. ISO 14021 : 2016, *Environmental labels and declaration – Self-declared environmental claims (Type II environmental labelling)*
5. ISO 9001 : 2015, *Quality management systems — Requirements*
6. *Materials Recovery Facilities - Testing and reporting guidance* - Scottish Environment Protection Agency, August 2015
7. *Materials Recovery Facility Tool Kit* - Asian Development Bank, 2020
8. NR 544.16, *Materials recovery facilities used as part of an effective recycling program* - Wisconsin State legislature
9. PAS 105:2007, *Recovered paper sourcing and quality for UK end markets*
10. SIRIM Guidelines for Importation and Inspection of Metal Scrap
11. SIRIM Guidelines for Importation and Inspection of Waste Paper

FLOWCHART 1- OVERVIEW OF THE PROCEDURE FOR IMPORTATION AND INSPECTION OF WASTE PAPER INTO MALAYSIA



FLOWCHART 2: PROCESS FLOW FOR SIRIM APPROVED MRF

ANNEX A (Normative)

FIRST SCHEDULE (REGULATION 2)

CODE	DESCRIPTION
SW 1	Metal and metal-bearing wastes
SW 101	Waste containing arsenic or its compound
SW 102	Waste of lead acid batteries in whole or crushed form
SW 103	Waste of batteries containing cadmium and nickel or mercury or lithium
SW 104	Dust, slag, dross or ash containing arsenic, mercury, lead, cadmium, chromium, nickel, copper, vanadium, beryllium, antimony, tellurium, thallium or selenium excluding slag from iron and steel factory
SW 105	Galvanic sludges
SW 106	Residues from recovery of acid pickling liquor
SW 107	Slags from copper processing for further processing or refining containing arsenic, lead or cadmium
SW 108	Leaching residues from zinc processing in dust and sludges form
SW 109	Waste containing mercury or its compound
SW 110	Waste from electrical and electronic assemblies containing components such as accumulators, mercury-switches, glass from cathode-ray tubes and other activated glass polychlorinated biphenyl-capacitors, or contaminated with cadmium, mercury, lead, nickel, chromium, copper, lithium, silver, manganese or polychlorinated biphenyl

SW 2 Wastes containing principally inorganic constituents which may contain metals and organic materials

- SW 201 Asbestos wastes in sludges, dust or fibre forms
- SW 202 Waste catalysts
- SW 203 Immobilized scheduled wastes including chemically fixed, encapsulated, solidified or stabilized sludges
- SW 204 Sludges containing one or several metals including chromium, copper, nickel, zinc, lead, cadmium, aluminium, tin, vanadium and beryllium
- SW 205 Waste gypsum arising from chemical industry or power plant
- SW 206 Spent inorganic acids
- SW 207 Sludges containing fluoride

SW 3 Wastes containing principally organic constituents which may contain metals and inorganic materials

- SW 301 Spent organic acids with pH less or equal to 2 which are corrosive or hazardous
- SW 302 Flux waste containing mixture of organic acids, solvents or compounds of ammonium chloride
- SW 303 Adhesive or glue waste containing organic solvents excluding solid polymeric materials
- SW 304 Press cake from pretreatment of glycerol soap lye
- SW 305 Spent lubricating oil
- SW 306 Spent hydraulic oil

SW 307	Spent mineral oil-water emulsion
SW 308	Oil tanker sludges
SW 309	Oil-water mixture such as ballast water
SW 310	Sludge from mineral oil storage tank
SW 311	Waste oil or oily sludge
SW 312	Oily residue from automotive workshop, service station oil or grease interceptor
SW 313	Oil contaminated earth from re-refining of used lubricating oil
SW 314	Oil or sludge from oil refinery plant maintenance operation
SW 315	Tar or tarry residues from oil refinery or petrochemical plant
SW 316	Acid sludge
SW 317	Spent organometallic compounds including tetraethyl lead, tetramethyl lead and organotin compounds
SW 318	Waste, substances and articles containing or contaminated with polychlorinated biphenyls (PCB) or polychlorinated triphenyls (PCT)
SW 319	Waste of phenols or phenol compounds including chlorophenol in the form of liquids or sludges
SW 320	Waste containing formaldehyde
SW 321	Rubber or latex wastes or sludge containing organic solvents or heavy metals
SW 322	Waste of non-halogenated organic solvents

SW 307	Spent mineral oil-water emulsion
SW 308	Oil tanker sludges
SW 309	Oil-water mixture such as ballast water
SW 310	Sludge from mineral oil storage tank
SW 311	Waste oil or oily sludge
SW 312	Oily residue from automotive workshop, service station oil or grease interceptor
SW 313	Oil contaminated earth from re-refining of used lubricating oil
SW 314	Oil or sludge from oil refinery plant maintenance operation
SW 315	Tar or tarry residues from oil refinery or petrochemical plant
SW 316	Acid sludge
SW 317	Spent organometallic compounds including tetraethyl lead, tetramethyl lead and organotin compounds
SW 318	Waste, substances and articles containing or contaminated with polychlorinated biphenyls (PCB) or polychlorinated triphenyls (PCT)
SW 319	Waste of phenols or phenol compounds including chlorophenol in the form of liquids or sludges
SW 320	Waste containing formaldehyde
SW 321	Rubber or latex wastes or sludge containing organic solvents or heavy metals
SW 322	Waste of non-halogenated organic solvents

SW 410	Rags, plastics, papers or filters contaminated with scheduled wastes
SW 411	Spent activated carbon excluding carbon from the treatment of potable water and processes of the food industry and vitamin production
SW 412	Sludges containing cyanide
SW 413	Spent salt containing cyanide
SW 414	Spent aqueous alkaline solution containing cyanide
SW 415	Spent quenching oils containing cyanides
SW 416	Sludges of inks, paints, pigments, lacquer, dye or varnish
SW 417	Waste of inks, paints, pigments, lacquer, dye or varnish
SW 418	Discarded or off-specification inks, paints, pigments, lacquer, dye or varnish products containing organic solvent
SW 419	Spent di-isocyanates and residues of isocyanate compounds excluding solid polymeric material from foam manufacturing process
SW 420	Leachate from scheduled waste landfill
SW 421	A mixture of scheduled wastes
SW 422	A mixture of scheduled and non-scheduled wastes
SW 423	Spent processing solution, discarded photographic chemicals or discarded photographic wastes
SW 424	Spent oxidizing agent

SW 425	Wastes from the production, formulation, trade or use of pesticides, herbicides or biocides
SW 426	Off-specification products from the production, formulation, trade or use of pesticides, herbicides or biocides
SW 427	Mineral sludges including calcium hydroxide sludges, phosphating sludges, calcium sulphite sludges and carbonates sludges
SW 428	Wastes from wood preserving operation using inorganic salts containing copper, chromium or arsenic or fluoride compounds or using compound containing chlorinated phenol or creosote
SW 429	Chemicals that are discarded or off-specification
SW 430	Obsolete laboratory chemicals
SW 431	Waste from manufacturing or processing or use of explosives
SW 432	Waste containing, consisting of or contaminated with, peroxides
SW 5	Other wastes
SW 501	Any residues from treatment or recovery of scheduled wastes



SIRIM QAS International Sdn.Bhd.

SIRIM Complex No.1, Persiaran Dato' Menteri,
Section 2, P.O Box 7035, 40700,
Shah Alam, Selangor Darul Ehsan,
Malaysia

Tel: 603 5544 6400

Fax: 603 5544 6810

Email: cserviceqas@sirim.my

Website: www.sirim-qas.com.my