AS/NZS 5377 E-WASTE
Certified System

COMPASS
-ASSURANCE SERVICES-

AS/NZS 5377:2013
COLLECTION, STORAGE, TRANSPORT AND TREATMENT OF END-OF-LIFE ELECTRICAL AND ELECTRONIC EQUIPMENT
SELF ASSESSMENT CHECKLIST

COMPASS ASSURANCE SERVICES PTY LTD

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AS/NZS 5377:2013 - COLLECTION, STORAGE, TRANSPORT AND TREATMENT OF END-OF-LIFE ELECTRICAL AND ELECTRONIC EQUIPMENT - SELF ASSESSMENT CHECKLIST

NOT ALL SECTIONS WILL APPLY TO EVERY ORGANISATION

MANDATORY DOCUMENTS

1. Risk Assessment Process and schedule to review risk assessments (as per 1.6.3)

2. List of products and waste materials that you are capable of handling in a safe and environmentally compliant (as per 1.6.3)

3. An emergency response plan Including clean-up/remediation methodologies and validation (as per 4.1)

4. Training materials and information for, but not limited to, risks of substances in Appendix B (as per 1.6.6)

Section 5: Treatment Only

5. Documentation of the point of final disposal including Waste Storage Licenses and Waste Transport Licenses from all jurisdictions where required, such as permitting/licensing of transport vehicles (as per 5.3)

6. Documented evidence of import and/or export permits (if applicable) (as per 5.3)

KEY RECORDS

1. Documentation of competency for performing tasks with environmental and safety impact(s) (as per Training 1.6.5)

2. Records to allow the traceability of electrical and electronic equipment, assemblies, parts, commodities and waste, including but are not limited to manifests, bills of loading, chain of custody documents, transport records and any other record keeping requirement (as per 1.7)

Section 3: Recovery for Re-Use Only

3. Records of the asset type and total weight of end-of-life assemblies, components for prepared for re-use (if applicable) (as per 3.3)

Section 3: Transportation Only

4. Documentation shall be maintained if the material is classified as traceable waste, controlled waste, hazardous waste or prescribed industrial waste (if applicable) (as per 4.4).

Section 5: Treatment Only

5. If providing a mass balance, processing facilities shall maintain records, demonstrating that mass (inputs) equals mass (outputs) + losses in process in accordance with Appendix D. (if applicable) (as per 5.3)

SECTION 1 - SCOPE, OBJECTIVE, APPLICATION AND GENERAL REQUIREMENTS FOR HEAD OFFICE ACTIVITIES

1.5 GENERAL REQUIREMENTS

Have we:

☐ (a) Considered integrating the management of the collection, storage, transport and treatment of end-of-life electrical and electronic equipment into existing environmental management systems or similar systems?

(b) Identified Legal and Other requirements including

☐ *Environmental and Health and Safety Legislation*

☐ *Site Licensing and licenses for the handling, storage, transport and treatment of end-of-life electrical and electronic equipment*

☐ *Export Licenses and regulations*

☐ *International treaty obligations*

☐ (c) Do we have processes to keep these legal and other obligations up to date and communicated to relevant stakeholders including employees and contractors

1.6 ORGANISATIONAL REQUIREMENTS

1.6.2 Licensing

☐ Are our facilities and operators authorized in accordance with the relevant legal and other requirements pertaining to the location in which the facility is situated

1.6.3 Risk assessment and management

☐ Do we have documented risk assessment processes to identify and control potential environmental and safety hazards associated with the operator?

Have we

☐ (a) Defined the responsibilities for conducting the risk assessment.

☐ (b) Identified, monitored and recorded potential environmental and safety risks during both normal operating and potential emergency situations.

☐ (c) Evaluated any potential environmental and safety risks and developed a risk mitigation plan including controls to be implemented to eliminated and minimized these risks

☐ (d) Monitored the effectiveness of controls and adjusted as required based on the acceptable residual risks.

1.6.3 Risk assessment and management continued

- ☐ (e) Reviewed risk assessments annually basis, or as a result of any significant operational, environmental or regulatory changes? Do we have a schedule to achieve this?
- ☐ (f) Maintained a list of products and waste materials that we are capable of collecting, processing, storing or handling in a safe and environmentally sound manner.

1.6.4 Emergency Response

Have we maintained an emergency response plan for our facilities to prepare for, and respond to, emergencies including emergency arising offsite such as

- ☐ *exceptional pollution releases*
- ☐ *fires*
- ☐ *spills*
- ☐ *storms, floods and earthquakes*
- ☐ *medical incidents*

☐ Have we considered the need for provisions to inform anyone who may be affected by an incident as part of this plan?

Does our response plan include:

- ☐ (a) notifications required by law, regulatory authorities and/or those required by contractual arrangements?
- ☐ (b) Alternative collection (or notice of suspension), storage or transport and Recovery timeline?
- ☐ (c) Clean up methodology and validation process.
- ☐ (d) Requirements for training all responsible people.
- ☐ (e) Documentation to be made available during and after the emergency.
- ☐ (f) Review of relevant documentation to prevent reoccurrence.
- ☐ (g) Drills undertaken at least annually and within three months of a change of persons, procedures or actions identified in the plan.

☐ **1.6.5 Training**

Have we trained and kept records of competence for person(s) performing tasks that have the potential to cause an environmental or safety impact(s)?

1.6.6 Training material

☐ Are training materials and information readily available or easily accessible at all times and include risks inherent but not limited to substances of concern identified in Appendix B?

Have we considered the need for training materials in the form of

- ☐ (a) Technical guidance documents.
- ☐ (b) Risk assessments and/or Safety statements
- ☐ (c) Information charts and tables.
- ☐ (d) Photos or examples of components
- ☐ (e) Safety data sheets for hazardous substances.

1.7 RECORDS MANAGEMENT

☐ Do we keep record to allow the traceability of equipment, assemblies, parts, commodities and waste?

Do these records include

- ☐ (a) Manifests, bills of loading, chain of custody documents, transport records?
- ☐ (b) Any other record keeping requirement outlined in this Standard?

☐ Are these records accessible, identified, legible and maintained for at least five years?

1.8 DATA SECURITY

☐ Have we considered the need to prominently display advice at our collection locations for the process for removing private or confidential data?

☐ Have we considered the need to have information available to make the disposer aware that file deletion does not mean privacy data has been fully removed?

1.9 DISPOSAL TO LANDFILL

☐ Do we dispose of waste at a waste facility that is licensed to accept the waste?

1.10 RE-USE AND REFURBISHMENT OF EQUIPMENT

☐ Do we ensure that equipment identified and collected for re-use and refurbishment is collected, stored, transported and treated separately to equipment identified and collected as end-of-life?

SECTION 2 - REQUIREMENTS FOR COLLECTION AND STORAGE

2.1 GENERAL

☐ Are your facilities authorised according to the relevant legal and other requirements for the location of your facilities?

2.2 ACCESS

☐ Are our public collection areas easily accessible and kept clean and free of hazards?

2.3 SIGNAGE AND INFORMATION

Have we considered the need for providing signage to communicate information such as

☐ (a) Safety warnings.

☐ (b) Instructions to the public.

☐ (c) Site access times for the public.

☐ (d) Details of equipment that is or is not accepted at the facility.

☐ (e) Have we considered the need for our advertising and/or display material used for promoting the collection service include similar details?

☐ Have we considered the need for providing information to persons disposing of data storage media, that file deletion does not mean privacy data has been fully removed?

2.4 STORAGE AND HANDLING

2.4.1 General

☐ Do we ensure that the physical integrity of assemblies, components and parts is maintained during receiving, handling and storage?

☐ Do we avoid release of hazardous substances into air, water or soil, as a result of damage and/or leakage?

Do we ensure that collected materials are handled and stored in a way that

☐ (a) prevents theft and vandalism;

☐ (b) provides protection from exposure to the elements where hazardous substances may be released;

☐ (c) prevents exposure of people on site to unsafe storage and handling conditions or hazardous substances; and

☐ (d) prevents damage or breakage of

- cathode ray tubes (CRTs)
- flat panel displays
- equipment with mercury containing lamps and globes
- gas discharge lamps,
- equipment containing
  - asbestos
  - ceramic fibres
  - petroleum fluids,
  - polychlorinated biphenyls (PCBs)
  - batteries,
  - refrigerant gases.

☐ Do we package and load breakable assemblies, components and parts to ensure they are not damaged during loading and transportation?

☐ Have we considered if we have the appropriate tools, receptacles and fixings to ensure effective recovery and recycling?

☐ Do we undertake disassembly or processing on-site before transportation?
If we do we undertake disassembly or processing do we do so in accordance with Section 5 of this Standard?

2.4.2 Storage facilities

Does our storage have

- ☐ (a) impermeable surfaces;
- ☐ (b) weatherproof coverings; and
- ☐ (c) measures to prevent potentially hazardous material entering storm water drains.

Do we have a procedure for control of document that includes processes for

- ☐ (a) approval
- ☐ (b) review and updates
- ☐ (c) revision status
- ☐ (d) versions
- ☐ (e) legibility
- ☐ (f) required external documents
- ☐ (g) obsolete documents

2.4.3 Consolidation and sorting facilities

☐ Do we ensure that, during the collection, storage and transport of end-of-life equipment, it is not mixed with other types of waste with the same container of receptacle?

2.4.4 Requirements for handling and storing end-of-life electrical and electronic equipment

Do we have storage and handling processes in place to

- ☐ (a) Prevent the combustion, explosion or leaking of batteries
- ☐ (b) Prevent the short circuits or flows of current by insulating the electrical contacts with electrical tape or other safe means of assuring electrical safety.

☐ *Have we investigated the need for special consideration given to wet cell batteries and exposed lithium type batteries?

☐ (c) Store refrigerant system in receptacles that clearly identify the contents of on the outside?
* Receptacles must meet dangerous goods UNEP guidelines

☐ (d) Prevent CRT displays from imploding and/or loss of phosphorescent coatings.

☐ (e) Protect against damage to equipment with mercury containing lamps and globes, gas discharge lamps and smoke detectors containing hazardous components or materials to avoid breakage and discharge into the environment.

☐ (f) Protect against rough handling and damage to appliances containing petroleum fluids, polychlorinated biphenyls and other liquids and gases to avoid spillages and other emissions.

☐ (g) Protect against damage to appliances containing asbestos to avoid the release or inappropriate disposal of asbestos fibres.

2.5 BROKEN OR DUMPED MATERIAL

☐ Do we handle, store and dispose of equipment that is broken on-site or dumped in the immediate vicinity in accordance with this Standard?

SECTION 3 - RECOVERY FOR RE-USE FROM END-OF-LIFE ELECTICAL OR ELECTRONIC EQUIPMENT.

3.1 GENERAL

☐ Do we repair, refurbish and re-market used whole equipment (outside the scope of this Standard)?

☐ Have we considered the information in Appendix C of this standard?

3.2 PREPARING FOR RE-USE

☐ Do we recover assemblies, components or parts from end-of-life electrical and electronic equipment into a condition for re-use?

Have we considered if re-usable assemblies, components and parts require to be

☐ (a) separated from other forms of end-of-life electrical and electronic equipment

☐ (b) collected, handled, labelled and stored so as to identify and maintain functionality and physical integrity.

☐ (c) stored in weatherproof facilities or receptacles.

3.3 HARVESTING OF ASSEMBLIES, COMPONENTS AND PARTS

In preparation of end-of-life electrical and electronic assemblies, components and parts for reuse, have we considered if we require

☐ a) written procedure showing the re-use process?

☐ b) implementing risk assessment and management system(s) for processing for re-use in accordance with the requirements in Clause 1.6 of this Standard?

☐ c) removing, where practicable, all distinguishing marks that would link the assemblies, components and parts back to the disposer?

☐ d) keeping records of the asset type and total weight of end-of-life assemblies, components and parts entering and leaving the facility to support mass balance accounting and reporting?

☐ e) implementation of a procedure to track end-of-life equipment through the process at the facility that enable mass balance (total volume) accounting as a whole for the facility, detailing the quantity

- i) received into the facility,
- ii) diverted for re-use and
- iii) of residual waste sent for material recovery, recycling or disposal;

☐ f) provide clear labelling of assemblies, components and parts which indicates whether it is refurbished, upgraded and/or repaired and safe for use;

☐ g) providing a secure, weatherproof infrastructure and competent personnel for the testing of the safety and functionality of re-usable assemblies, components and parts in accordance with their intended use or application.

☐ When recovering, dispose of and recharge ozone depleting substances, flammable gases or synthetic greenhouse gases from refrigerant appliances, have we considered if do those undertaking these activities are required to?

(i) ☐ hold relevant licenses and ensure personnel are competent, and qualified?

☐ (ii) work within the relevant guidelines for handling refrigerants; and

☐ (iii) ensure equipment that is used to carry out any process involving the gas that might be contained within a refrigeration system is adequate for the purpose.

☐ Have we considered if we are required to adhere to the most recent version of relevant electrical safety Standards i.e. AS/NZS 3760; AS/NZS 3820; AS/NZS 5761; AS/NZS 5762; and AS/NZS 4701.

3.4 MANAGEMENT OF RESIDUAL WASTES FROM RECOVERY ACTIVITIES

Do we ensure that our facilities that prepare assemblies, components and parts for re-use ensure that:

☐ (a) all assemblies, components and parts that are not re-used are processed in accordance with Section 5 in this Standard; and

☐ (b) all parts and consumables replaced during repair and refurbishment that contain hazardous substances are processed in accordance with Section 5 of this Standard.

SECTION 4 - REQUIEMENTS FOR TRANSPORTATION

4.1 GENERAL

☐ Have we considered that some assemblies, components and parts of end-of-life electrical and electronic wastes are regulated, traceable, hazardous and/or prescribed industrial waste?

☐ Do we comply with all transport licensing requirements under local legislation?

☐ Are we exporting assemblies, components and parts, that may be considered hazardous waste, where this waste, and its disposal, may be subject to domestic legislation, requiring national obligations to control the transboundary movements?

4.2 OBJECTIVES OF TRANSPORTING END-OF-LIFE ELECTRICAL AND ELECTRONIC EQUIPMENT

When transporting end-of-life electrical and electronic equipment for recovery or recycling purpose, have we considered

- ☐ (a) minimizing vehicle movements and avoid unnecessary stockpiling of waste?
- ☐ (b) Minimizing damage or breakage of CRTs or flat panel displays or equipment with mercury containing lamps and globes, gas discharge lamps, asbestos, ceramic fibres, petroleum fluids, printed circuit boards, batteries and refrigerant gases?

When transporting end-of-life electrical and electronic equipment for recycling purposes, do we ensure that

- ☐ (a) Staff are appropriately trained and licensed?
- ☐ (b) Appropriate lifting, handling and transportation equipment is used.
- ☐ (c) Storage and handling is undertaken in accordance with Clause 2.4 of this Standard.

☐ Do we maintain documentation when we transport materials classified as traceable waste, controlled waste, hazardous waste or prescribed industrial waste?

SECTION 5 - REQUIREMENTS FOR THE TREATMENT OF END-OF-LIFE ELECTRICAL AND ELECTRONIC EQUIPMENT

5.1 GENERAL

Do we ensure that hazardous substances, preparations, and components can be monitored to

- ☐ a) prove environmentally safe treatment at the end of the treatment process?

- [ ] b) maximize material recovery?

5.2 PROCESSING AND HANDLING

- [ ] Are we recovering resources from end-of-life electrical and electronic equipment in accordance with Table 1 of the Standard?
- [ ] Do we handle and store end-of-life equipment in a way that avoids damage and/or leakage and any release of hazardous substances into air, water, or soil?
- [ ] Are our facilities that are undertaking processing and separation activities equipped with the following:
  - [ ] (a) A dust collection system/apparatus engineered to reduce dust to within requirement levels environmental emission worker exposure to hazardous emissions and particulate matter?
  - [ ] (b) An emergency shut-off system.
  - [ ] (c) Fire suppression equipment for the size/type of facility.
  - [ ] (d) Other safety/environmental control equipment identified in the plan arising from the risk assessment.

Have we removed the following items before processing?

- [ ] Mercury containing lamps, gas discharge lamps and globes.
- [ ] Gas discharge lamps.
- [ ] Ink and toner cartridges.
- [ ] Batteries.
- [ ] Components containing refractory ceramic fibres.
- [ ] Components containing petroleum products.
- [ ] Components containing asbestos.

- ☐ Gases used as refrigerant in a refrigeration system.
- ☐ Components containing beryllium.
- ☐ Components containing polychlorinated biphenyls.
- ☐ Components that might contain residual gases.
- ☐ Components with radioactive materials.
- ☐ Plastics containing Persistent Organic Pollutants where required in relevant legal and other requirements.
- ☐ Printer and copier drums containing selenium or arsenic.

☐ Have we determined, through risk assessment, any other components that poses an environmental or safety hazard and have we removed these components before mechanical processing occurs?

☐ Have we ensured hat that these items are kept separate and are managed in accordance with Table 1 and Appendix B of the standard?

☐ Are our processes or materials/components e.g. metal or plastic fractions, that could release hazardous substances into the environment stored under cover or other manner that prevents release to the environment?

☐ Have we considered alternatives to landfill, energy recovery or incineration as a treatment as standard practice for disposal of end-of-life electrical and electronic equipment?

5.3 TRACEABILITY

☐ Do we keep records of the weight and flow and the handling of materials/components coming into our facilities through to final disposal?

Do we track the downstream flow through each downstream processor to the point of final disposal, including

- ☐ how goods are transported at each point
- ☐ how goods are processes at each point
- ☐ the % recovered and % processes materials sent to each downstream
- ☐ processor and recovered by each downstream processor.

☐ Do we maintain source documents (e.g., waybills, shipping documents, invoices) verifying all materials transfers and items and components sold for re-use?

Do we maintain documentation to the point of final disposal including

- ☐ (a) Waste Storage Licenses and Waste Transport Licenses from all jurisdictions where required, such as permitting/licensing of transport vehicles.
- ☐ (b) Site safety management plans, risk assessments and emergency plans.
- ☐ (c) Evidence of import and/or export permits.

☐ Have we considered implementing a documented process to evaluate and select the downstream processors that are treating substances of concern and, that includes and evaluations against the Standard?

5.4 RECYCLING AND RECOVERY RECORD MANAGEMENT

☐ If providing a mass balance, do we maintain records demonstrating, at least annually, that mass (inputs) equals mass (outputs) + losses in process in accordance with Appendix D of the standard?

☐ Does our reporting include the traceability requirements (Clause 5.3) and Recycling and Recovery Record Management (Clause 5.3)?