Code of Practice for Managing End-of-Life Televisions

Final
August 2008

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Preface

This *Code of Practice for Managing End-of-Life Televisions* has been prepared on behalf of the NSW Department of Environment & Climate Change as part of the Environment Protection and Heritage Council Waste Working Group's sub-group for waste electrical and electronic products.

The aim of the Code of Practice is to provide television producers with guidance on how end-of-life televisions should be managed. The Code of Practice has been developed in conjunction with the proposed Television Product Stewardship Agreement. It is intended that the Code of Practice be attached to the Television Product Stewardship Agreement when the Agreement is finalised. The Code of Practice can also be used separately by anyone interested in achieving good environmental performance in the management of end-of-life televisions.

The proposed Television Product Stewardship Agreement would contain commitments by television producers (manufacturers and importers) for the collection and recycling of end-of-life televisions and for governments to support these efforts through the implementation and enforcement of regulations to maintain a level playing field in the television market. The Agreement would also include targets on rates of collection and recycling, including methodologies for measuring and reporting on data.

The goal of the Code of Practice is to provide a benchmark for all stakeholders involved in the management of end-of-life televisions. The Code of Practice outlines minimum guidelines for the collection, transportation, storage, refurbishment, recycling and disposal of end-of-life televisions. Where practicable, the Code is performance-focused rather than prescriptive to assist progress towards environmental best practice, regardless of the recycling or recovery technologies and approaches used. Best practice is expected to be driven by market conditions; contracts let under the Television Product Stewardship Agreement are expected to favour achievements beyond the minimum guidelines outlined in this Code of Practice.

The Code of Practice is intended to be a voluntary instrument and does not have the force of regulatory penalties for non-compliance. Reference to legislative requirements and other relevant Codes of Practice and guidelines is recommended to ensure that end-of-life televisions are managed in an environmentally sound manner and in accordance with the relevant regulations in each jurisdiction.

CONTENTS

GLOSSARY

Administering authority	An administering authority for an activity is the government body (local, state or commonwealth) with responsibility for administration and enforcement of that activity.
Best practice	Best practice represents the current 'state-of-the-art' and aims to produce outcomes consistent with the community's social, economic and environmental expectations. Continuous improvement is an important component of best practice.
Container	The term used to describe a bin, skip or other receptacle which can be used for the collection, transport or storage of end-of-life televisions.
Contamination	Materials and items within a recycling process that are not readily recycled by that process.
Hazardous waste	Waste with the potential to have a significant impact on the environment, such as explosive and toxic waste.
End-of-life television	A television that is taken to no longer be capable of performing the function for which it was originally intended
e-waste	Various types of electrical and electronic appliances which have ceased to be of any value to their owners, including all components, sub-assemblies and consumables which are part of the product at the time of discarding. E-waste may include products such as computers, televisions, printers, scanners, fax machines, photocopiers, video and DVD players, stereo equipment and whitegoods.
Landfill	A facility used for disposal of waste to land.
Processing	Activities that recover resource value from waste or prevent harmful emissions from residual materials.
Recycler	A person or organisation engaged in the business of purchasing or acquiring salvaged end-of-life televisions for the purpose of reselling the televisions or parts thereof, rebuilding or repairing the televisions for resale, or selling the basic materials and components.
Recycling	The reprocessing of materials and products into new products. Recycling does not generally include reuse, where existing products are used for a new purpose, remanufacture or refurbishment.
Recycling facility	A plant for reprocessing end-of-life televisions. This may include activities such as dismantling, shredding, separation, baling and refurbishment/remanufacturing and associated activities such as electrical safety testing. Some recycling facilities may reprocess various materials on-site, while others dismantle for distribution to materials reprocessors.
Refurbishment	Restoring equipment to its former condition or better condition by replacing or rebuilding component parts.
Reprocessor	A person or organisation engaged in the activity of providing special or additional processing for materials before reuse.
Television	An electronic appliance that receives electromagnetic waves and displays the reconverted images on a screen. Television technology may include cathode ray tube, liquid crystal display, plasma and rear projection
Waste management hierarchy	A waste management approach that sets out a preferred order of management options, with avoidance as the most preferred and disposal as the least preferred.

ABBREVIATIONS

AS	Australian Standards
EPA	Environment(al) Protection Agency/Authority
ISO	International Standards Organisation
OH&S	Occupational health and safety

1. INTRODUCTION

Televisions are part of the growing electrical and electronic waste (or e-waste) issue in Australia. As new technology is introduced, the number of new televisions on the market increases. This leads to an increase in the number of end-of-life televisions requiring disposal. It has also led to a growing expectation that television producers (manufacturers and importers) and others involved in the life cycle of televisions take greater responsibility for the appropriate management of televisions at end of life. There is an expectation that end-of-life televisions are managed in a way that safeguards the environment and the health and safety of those who work in the recovery industry.

Purpose

The *Code of Practice for Managing End-of-Life Televisions* is a voluntary commitment by participants in the television recycling chain to good environmental practice in the safe, cost-effective recycling of televisions.

The *Code of Practice for Managing End-of-Life Televisions* provides:

- minimum guidelines for the recovery of televisions
- information to external parties regarding recycling industry accreditation and standards of operation
- a benchmark for parties wishing to enter into agreements for television recycling.

The *Code of Practice* is being developed in order to promote good environmental practice in the recycling of televisions. This can assist in:

- improving diversion of resources from landfill
- improving environmental performance
- reducing environmental and social risk
- improving occupational health and safety at the recycling facility
- improving operational efficiencies
- developing a long-term sustainable business.

The *Code of Practice* encourages the diversion of televisions from disposal at landfills and the refurbishment and recycling of television units and/or components. The *Code of Practice* sets out minimum guidelines for television recyclers to follow in the activities undertaken at each recycling facility.

The *Code of Practice* incorporates an accreditation scheme, whereby recyclers, upon certification by a qualified auditor, can demonstrate that they follow uniform guidelines adopted by their peers and recognised by Australian environmental authorities.

The guidelines established in the *Code of Practice* may also be used as a minimum benchmark for practices adopted in potential product stewardship schemes, tenders and contractual arrangements.

Guiding Principles

The *Code of Practice for Managing End-of-Life Televisions* was developed in accordance with the objective of the waste management hierarchy. The application of the hierarchy for managing end-of-life televisions is (in order of preference):

- reuse – remanufacturing, refurbishment
- recycling
- disposal.

The following principles provide the basis for recycling operations under this *Code of Practice*:

- End-of-life televisions should be collected, reused and recycled wherever feasible with the minimum risk to human health and the environment.
- Recyclers will operate in accordance with regulations applicable in the State or Territory in which they operate.
- Each recycler must have the technical expertise and capability to safely and effectively process each type of material accepted.
- Recyclers have a duty of care to ensure that the materials and components they handle are managed by downstream processors in accordance with applicable regulations and environmental management practices. Where materials are disposed of to landfills, they should only be deposited at facilities licensed to accept that material.
- Recyclers should keep appropriate records to document their operations.
- Recyclers will ensure that legitimate end-use markets exist for refurbished televisions or the materials and components resulting from dismantling for recycling and reprocessing before commencing operations.

How to Use the Code of Practice

The *Code of Practice* addresses the following aspects of management of end-of-life televisions:

- collection, storage and transport
- infrastructure requirements
- refurbishment
- dismantling and recycling
- management systems
- accreditation scheme.

Each section outlines the background, requirements and documentation required to adhere to minimum guidelines on the management of end-of-life televisions.

A checklist is provided as an attachment to the *Code of Practice.* The checklist can be used as a self-assessment tool for pre-audit purposes, and can be amended to suit individual circumstances.

Updating the Code of Practice

Review of the *Code of Practice for Managing End-of-Life Televisions* occurs on an on-going basis. Stakeholders who have identified areas where the *Code of Practice* requires updating are invited to contact the Television Product Stewardship Stakeholder Group with appropriate comments. Updates must be approved by the parties to the Television Product Stewardship Agreement.

2. COLLECTION, STORAGE & TRANSPORT

BACKGROUND

How televisions are collected and transported can have important flow-on effects. Standards for collection and transport can help to:

- reduce contamination
- manage any environmental impacts during transport in accordance with relevant regulations
- present materials at processors in a manner which maximises recovery opportunities.

REQUIREMENTS

Collection

Collection of televisions at waste disposal facilities is often established as part of a drop-off point for all electronic waste (including computers, printers and other consumer electrical appliances).

Recyclers should work with entities establishing collection points to ensure that only the types of end-of-life products they can recycle are collected. Recyclers should agree to accept only those types of materials which they are capable of recycling.

The recycler should work with the collection facility in designing the most appropriate collection area for the end-of-life televisions, including work on suitable signage and information for people to bring their end-of-life televisions to the facility.

Collection contractual arrangements (for mixed e-waste or specific television waste) should specifically state the end-of-life products and materials that can be accepted. The contract between the recycler and the collection agent should also include clear responsibilities for managing contamination.

Some televisions can be large and heavy items, and impose occupational health and safety risks to both waste generators and recycling staff. Handling of televisions should be mindful of the health and safety risk involved and minimise this wherever possible. The recycler must have occupational health and safety protocols, procedures and training in place for the lifting of heavy and awkward objects.

Guidance on the type of containers to be used for collection and handling of televisions has been documented by the Australian Council of Recyclers in the *Guidelines for Standard E-waste Containers* (September 2006). These guidelines outline options for containers which minimise breakage, reduce health and safety risks, and optimise handling of materials in bulk. Recyclers should refer to these guidelines when establishing collection arrangements.

Storage at the Recycling Facility

Television units and component materials should not be stockpiled for potential future use or stored for long periods at the recycling facility. The recycler should accept only the volume it is capable of

handling, and seek to process all items in a timely manner. Records should be kept detailing the length of time the material has been held at the recycling facility.

Material at the recycling facility should be stored in a safe and secure manner which precludes breakage or contamination. Material should be stored undercover to reduce the risk of weather damage and potential leachate and particulate generation, and in a secure area to reduce the risk of theft or damage.

All television units and component materials entering the recycling facility should be tracked, and details of the date, type, amount, weight and source logged onto a database. A unique identification number should be given to each item or batch of material to enable tracking of the material through to its final destination point (e.g. broker, downstream processor, landfill). The database should be updated to include all activities carried out on each unit or component at the recycling facility, including the final destination point of the material.

Transport

Where recyclers are responsible for transporting televisions or component materials, recyclers must ensure that such transport is undertaken in accordance with all regulatory and local government requirements (e.g. covering of loads, maximum truck weights).

Where recyclers arrange the transport through a third party, the recycler must ensure that the transporter has all licences and approvals relevant to the activity.

All components and materials to be transported must also be packaged, identified and secured in compliance with applicable regulations, codes and guidelines.

Import and Export

The *Hazardous Waste (Regulation of Exports and Imports) Act 1989* implements Australia's obligations under the international *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.* This Commonwealth Act regulates the international export and import of some waste electrical and electronic equipment, requiring a permit in some cases where electronic equipment is exported.

Most televisions presented for recycling will contain hazardous components including the following defined by the *Hazardous Waste (Regulation of Exports and Imports) Act*:

- lead-containing glass from cathode ray tubes and imaging lenses
- printed circuit boards (these assemblies contain brominated compounds and antimony oxides as flame retardants, lead in solder as well as beryllium in copper alloy connectors)
- fluorescent tubes and backlight lamps from liquid crystal displays (which contain mercury)
- plastic components containing brominated flame retardants.

These hazardous wastes must not be exported without a permit.

The Act also precludes the export of waste electrical and electronic equipment which has a defect or damage that affects its functionality, or which has insufficient packaging to protect it from damage during transportation. A permit is also required to export this material.

There are different types of permits and application forms depending on what country the hazardous waste and/or faulty equipment is going to or coming from. Applications for permits must be made to the Department of the Environment, Water, Heritage and the Arts; further information and contact

details are available from the department's website (http://www.environment.gov.au/settlements/chemicals/hazardous-waste/index.html).

Transport of Controlled Waste within Australia

The *National Environment Protection Measure (Movement of Controlled Waste between States & Territories)* regulates the movement of hazardous wastes across Australian jurisdictions. It is enacted through legislation in each jurisdiction, and ensures that controlled wastes that are to be moved between States and Territories are properly identified, transported and handled in ways that are consistent with environmentally sound practices.

The recycler should contact the relevant administering authority in each jurisdiction to determine whether waste tracking provisions apply and whether any licences are necessary to carry out the activity.

Transporters may also have obligations under the Australian Dangerous Goods Code in relation to signage, containerisation and other matters.

DOCUMENTATION

Compliance with this section requires the following documentation:

- Collection contract arrangements
- OH&S protocols and procedures for handling of televisions
- *Guidelines for Standard E-waste Containers (*Australian Council of Recyclers, September 2006)
- Log of materials and components stockpiled on-site
- Detailed database of material and components accepted, processed and dispersed from the recycling facility
- Copy of licence of third party transporter (where applicable)
- Import and export permits (where applicable).

3. INFRASTRUCTURE REQUIREMENTS

BACKGROUND

Recycling facilities may undertake a range of activities including:

- dismantling
- repair, remanufacture and refurbishment
- shredding
- storage
- electrical safety testing
- baling and palletising
- gas extraction.

All activities for the management of end-of-life televisions must only be carried out in a building or at premises which are suitable for the type of activities to be undertaken.

REQUIREMENTS

All refurbishment and dismantling operations must be carried out in an enclosed and roofed building.

The building and storage areas must have impervious floors, adequate lighting and ventilation, and suitable containment systems for the safe management of the types of materials handled (including hazardous substances).

Storage areas should be undercover and be adequate to hold all processed and unprocessed inventory. A suitable method of storage of segregated materials should be installed. Where undercover storage is not practicable, appropriate weatherproof and secure containers must be used (e.g. shipping containers, etc).

Suitable site security measures must be implemented.

Suitable staff amenities must be provided in accordance with relevant occupational health and safety regulations.

Additional requirements apply to those facilities using automated dismantling and recycling processes (e.g. shredders). These facilities must be equipped with the following:

- dust/particulate collection and suppression systems
- emergency shut-off systems
- fire suppression equipment
- noise control mechanisms.

DOCUMENTATION

Necessary documentation to comply with this section will depend on site-specific circumstances for each facility but may include:

- planning approvals
- licensing of activities carried out on site (e.g. EPA licence)
- OH&S plan addressing regulated staff amenities.

4. REFURBISHMENT

BACKGROUND

Refurbishment of televisions for reuse can extend the life of the unit and reduce the consumption of resources. Refurbishment and reuse options therefore precede recycling in the waste management hierarchy.

REQUIREMENTS

Refurbishment must be undertaken in a safe manner by appropriately qualified and licensed technicians. Each television must be tested for electrical safety; it must conform to relevant legislation and Australian Standards (e.g. AS5761 *In Service Safety Inspection and Testing – Second-hand Electrical Equipment Prior to Sale*).

DOCUMENTATION

Records must be kept on the refurbishment undertaken on each unit including:

- unique identification number, make and/or model number
- a diagnostic of each unit
- repairs undertaken
- results of safety testing procedure.

Each unit must be labelled with appropriate safety labels and markings prior to sale.

New or used components utilised in the refurbishment process must be accounted for in the data recording system used for tracking components under the accreditation scheme.

5. DISMANTLING & RECYCLING

BACKGROUND

Televisions not suitable for refurbishment should be dismantled and recovery of materials maximised as much as practicable. Televisions suitable for refurbishment should be clearly identified.

REQUIREMENTS

Dismantling

Dismantling operations must be undertaken with the minimum risk to the environment and the health and safety of workers. Management procedures must be put in place to ensure any environmental releases are controlled and any hazards captured.

Staff must be suitably trained to undertake their duties, and the training updated as required. Staff training programs must enable workers to identify the types of materials to be separated for recovery.

Staff must only dismantle equipment to the level of their technical and operational competence. Staff must utilise appropriate personal protective equipment when dismantling equipment.

Records must be maintained of the weight of each unit at the start of the dismantling operations, and the amount and type of material separated from it for recovery.

Television units must be dismantled and the components separated into the following categories as a minimum:

Hazardous materials	Other
▪ Cathode ray tubes	▪ Ferrous metal
▪ Lead solder, leaded plasma display glass & other leaded glass	▪ Non-ferrous metal
▪ Mercury-bearing lamps & switches	▪ Plastics
▪ Printed circuit boards	▪ Wood
▪ Batteries (from remote controls)	▪ Glass (non-leaded)
	▪ Cables and wires

Other components should be segregated for recovery where it is viable to do so.

Plastics should be separated into their different resin types where possible. All materials potentially contaminated with brominated fire retardants must be further segregated and clearly marked.

Dismantlers must ensure that materials and components are sent to appropriate organisations for the next stage of reprocessing.

Recovered Materials

Recyclers should seek to maximise the amount of material recovered where feasible.

As a minimum, the following materials must be recovered and sent for recycling:

- leaded and unleaded glass
- ferrous and non-ferrous metals
- plastics
- printed circuit boards
- cables and wires
- mercury-bearing lamps and switches.

Additional materials may be recycled where the recycler has established viable markets to do so.

Recyclers have a duty of care to ensure that recovered materials sent to downstream processors are processed in recycling operations. Recyclers must maintain a documented process for the evaluation and selection of downstream processors that assesses the environmental, health and safety impacts of their operation.

Recyclers are responsible for clearly identifying any potential contamination in the materials they provide to downstream processors, e.g. brominated fire retardants.

Any materials or residual waste which cannot be practically recycled must be disposed of in accordance with documented protocols. It must only be sent to disposal facilities licensed to accept that type of waste.

Recyclers entering into an agreement with a broker or other third party must ensure that there is a chain of responsibility for this material to ensure that the material is managed appropriately.

Data records must be updated to reflect the broker, downstream processor or disposal facility to which the materials have been sent (including the date, type and amount).

DOCUMENTATION

The database of materials and components must detail dismantling and recycling activities carried out and dispersal points.

Other required documentation includes:

- environmental management plan
- staff training program
- OH&S plan addressing procedures and personal protective equipment to be used
- evaluation of environmental, health and safety aspects of downstream processors' operations
- evidence of disposal of any residual waste to appropriately licensed disposal facilities.

6. MANAGEMENT SYSTEMS

BACKGROUND

The recycling facility should establish management systems relevant to their operations.

REQUIREMENTS

As a minimum, strategies to manage the following must be developed, documented and maintained:

- occupational health and safety
- environmental management
- quality assurance
- accreditation to the *Code of Practice for Managing End-of-Life Televisions.*

Occupational Health and Safety

Employers must provide and maintain so far as is practicable a working environment that is safe and without risks to health. To do this, they must identify occupational health and safety hazards, determine the level of risk presented by these hazards, and implement appropriate hazard control strategies.

All applicable occupational health and safety regulations must be identified and complied with. A job safety analysis must be conducted and documented for all tasks that occur at the facility. An occupational health and safety plan must be developed to document how such risks are controlled.

The occupational health and safety plan must address as a minimum:

- safe operation and maintenance of plant and equipment
- safe work practices and procedures
- the use of personal protective equipment
- hazardous waste management practices
- maintenance of workplace cleanliness
- maintenance and/or monitoring of staff health
- staff training
- first aid
- emergency response procedures.

The facility must provide staff amenities and working conditions in accordance with regulatory requirements.

Environmental Management

All relevant environmental protection and management legislation must be identified and complied with. Environmental risks must be periodically assessed and suitable controls put in place to ensure that any impacts are appropriately managed.

The recycler must ensure that hazardous waste is appropriately handled, managed and/or disposed of in accordance with regulations.

Subject to the size and scale of operations, the recycler may give consideration to implementation of an environmental management system (such as an ISO 14001 Environmental Management System).

Quality Assurance

A quality control program must be established to ensure that materials produced are of consistent quality and in accordance with market requirements.

Subject to the size and scale of operations, the recycler may give consideration to implementation of a quality control and management system (such as an ISO 9001 Quality Assurance System).

Accreditation System

Recyclers must ensure that systems required for accreditation to the *Code of Practice for Managing End-of-Life Televisions* are in place. These requirements are discussed further in Section 7.

Other Management Aspects

Appropriate insurance must be held by the recycler to include coverage against fire, theft and malicious damage. Adequate public liability and workers compensation insurance must also be held. The recycler should ensure that they have adequate coverage appropriate to the size and risk associated with the activities undertaken.

Appropriate site security measures must be implemented to guard against theft and provide a secure site.

Should the recycler cease operations at the site, rehabilitation of the site must be carried out taking into consideration the future use of the site and any applicable environmental management requirements.

Recyclers must review and update management strategies on a periodic basis. They should evaluate new more effective technologies where applicable and seek to continuously improve their practices and processes.

DOCUMENTATION

Required documentation includes:

- OH&S plan (incorporating job safety analyses, risk assessment and control procedures, etc)
- register of relevant environmental protection and management legislation
- environmental management plan
- quality assurance program
- evidence of current insurance coverage
- site security procedures in place.

7. ACCREDITATION SCHEME

BACKGROUND

The accreditation scheme for television recyclers allows recyclers to demonstrate that their operations are carried out in accordance with the *Code of Practice for Managing End-of-Life Televisions*. The recycler must demonstrate that materials and components forwarded to downstream processors and brokers are managed in an environmentally responsible manner.

REQUIREMENTS

The accreditation assessment process will be completed by qualified independent third-party auditors. The auditor must be an individual trained and certified through an authoritative body to be an environmental auditor; they must possess a strong understanding of the *Code of Practice for Managing End-of-Life Televisions*, the regulatory requirements in the jurisdiction of the recycler, and ISO management systems.

The objective of the assessment process is to document the downstream flow of materials to their final disposition and to verify that all recyclers and downstream processors comply with the *Code of Practice for Managing End-of-Life Televisions.*

Accreditation is voluntary; however accreditation may be taken into account when assessing tender documentation or requests for service.

The accreditation process is completed in a four stage process, listed below.

Stage 1 – Material Pathways

The pathway of materials must be mapped and recorded.

Materials from recycled televisions are either sold directly by recyclers to brokers as commodities, sent to downstream processors for further processing and recycling, or disposed of to landfill. The recycler must document the flow of materials arising from their dismantling operations by type, quantity and end-point.

This materials flow can be presented in a flow chart format to provide a visual representation of the downstream flow of materials or in a manner that sufficiently documents all processes and processors involved.

Stage 2 – Documentation

Once the material pathways have been mapped, relevant supporting documentation must be provided to demonstrate compliance with the *Code of Practice for Managing End-of-Life Televisions.*

The recycler will provide documentation for their site. The information required includes:

- site information (contacts, site description, organisation structure, etc)

- a thorough description of the processing method, including a description of the controls to safeguard the environment and workers' health and safety
- copies of regulatory permits, insurance coverage, workers compensation coverage and (where relevant) ISO 9001 and/or ISO 14001 certification
- copies of policies and procedures for safeguarding the environment and workers' health and safety
- details of the downstream flow of materials and brokers, processors and disposal points used, including the amount of materials involved
- supporting evidence that demonstrates downstream processes manage materials and components in an environmentally sound manner
- confirmation that the facility and operations comply with all applicable government regulations for handling, transporting, storing and processing e-waste materials.

The auditor will verify the arrangements outlined in the mapping process (Stage 1) are in place, verify the amounts that were reported, and identify any potential regulatory non-compliance issues. All identified deficiencies must be addressed prior to the recycler being approved.

Stage 3 – Site Audit

A site audit will be carried out of the recycler's operations. The audit will verify activities are being carried out in compliance with the permits, policies and other documents provided in Stage 2.

All identified deficiencies must be addressed prior to the recycler being approved.

Stage 4 – Final Assessment & Approval

The auditor will evaluate all the collected information and prepare a final report which will include:

- mapping of the downstream flow of materials, including a mass balance of the materials
- the results of the document audits, including any identified deficiencies and the actions taken to correct them
- the results of the site audit(s), including any identified deficiencies and the actions taken to correct them
- confirmation of the compliance status of the recycler at the time of assessment.

Subject to a satisfactory audit, the auditor will approve the recycler as an accredited recycler under the *Code of Practice for Managing End-of-Life Televisions.* This approval will be valid for a period of 3 years, after which time the recycler will require re-assessment. Interim assessments may be undertaken by the auditor on a random basis where considered appropriate (e.g. if a substantial change of circumstances occurs).

CHECKLIST

This checklist has been provided as guidance for self-assessment purposes only and may be tailored by operators to meet the specific circumstances of their facility. The checklist is not intended to be used by auditors as part of the accreditation scheme of the Code of Practice.

Ref	Issue	Response / Details
	GENERAL	
1	Does the facility comply with relevant State/Territory regulations for establishment & operation?	
1	Do workers have the necessary technical expertise & capabilities to undertake recycling?	
1	Are management aware of their 'duty of care' responsibilities for the fate of end-of-life television materials & components?	
1	Does the facility have a database which tracks materials & components?	
1	Is the database maintained for all activities undertaken at the facility, including transport off-site to downstream processors?	
1	What markets exist or can be developed for recovered materials?	
	COLLECTION, STORAGE & TRANSPORT	
2	Are contract arrangements in place for collection and acceptance of end-of-life televisions?	
2	Have collection systems been developed to minimise breakage & contamination?	
2	Are OH&S protocols in place to address lifting & manual handling of televisions?	
2	What is the annual volume of material accepted at the facility?	
2	Is this volume within the capacity of the facility to recycle?	
2	How long are televisions retained on site before processing?	
2	How long are dismantled components & materials retained on site before transport off-site (to downstream processors or waste disposal facilities)?	

Ref	Issue	Response / Details
2	Is material stored undercover & in a secure manner?	
2	Does the facility's database log all relevant information on the incoming televisions?	
2	Is transport carried out in accordance with regulations?	
2	If a third party transporter is used, does the transporter have the necessary licences & permits?	
2	Are transported materials packaged, identified & secured in accordance with regulations?	
2	Is it proposed to import or export end-of-life televisions or components?	
2	Are the necessary import/export permits in place?	
2	Do waste tracking provisions apply to end-of-life televisions or components in the State/Territory?	
2	Are all relevant State/Territory licences in place?	
2	Does the Australian Dangerous Goods Code apply to operations carried out?	
	INFRASTRUCTURE	
3	What area is required for the facility?	
3	Does this area allow for storage & operation, and any future expansion?	
3	Are operations carried out in an enclosed & roofed building?	
3	Does the building have impervious floors & adequate lighting & ventilation?	
3	Are management systems in place to contain the materials handled?	
3	Are storage systems in place for segregated components?	
3	Are all materials stored undercover or in a weatherproof container (e.g. shipping container)?	
3	Does the site have suitable security measures in place?	

Ref	Issue	Response / Details
3	Do workers have access to staff amenities as required by State/Territory OH&S regulations?	
3	If the facility undertakes automated processes (e.g. shredding), are the following systems in place: - dust/particulate collection & suppression - emergency shut-off - fire suppression - noise control.	
	REFURBISHMENT	
4	Are refurbishment activities carried out at the facility?	
4	Is refurbishment undertaken by qualified & licensed technicians?	
4	Are refurbished televisions tested for electrical safety prior to sale?	
4	Does the testing procedure conform to relevant Australian Standards and State/Territory regulations?	
4	Are relevant safety labels affixed to refurbished televisions prior to sale?	
4	Are refurbishment activities tracked & recorded on the facility's database?	
	DISMANTLING & RECYCLING	
5	Are appropriate systems in place to manage environmental releases?	
5	Are workers suitably trained to undertake their duties? Is the training updated as needed?	
5	Are workers able to identify materials they handle?	
5	Do workers use appropriate personal protective equipment?	
5	Are end-of-life television components separated into designated minimum categories?	
5	Are materials contaminated with brominated fire retardants segregated and marked accordingly?	
5	Are materials & components sent to appropriate organisations for reprocessing?	

Ref	Issue	Response / Details
5	Are the following components recycled (in accordance with minimum requirements): - leaded & unleaded glass - ferrous & non-ferrous metal - plastics - printed circuit boards - cables & wires - mercury-bearing lamps & switches?	
5	Are additional materials recycled? If so, what materials? …… …… …… …… ……	
5	Does the selection of downstream processors consider the environmental, health & safety impacts of their operations?	
5	Is the selection of downstream processors documented?	
5	Does the facility produce any waste or non-recoverable materials?	
5	Is this non-recoverable waste disposed of at an appropriately licensed facility?	
5	Are dismantling & recycling activities recorded on the facility's database?	
	MANAGEMENT SYSTEMS	
6	Are all relevant OH&S regulations complied with?	
6	Has a job safety analysis been documented for all tasks carried out at the facility?	
6	Does the facility have an occupational health & safety plan in place?	
6	Does the OH&S plan meet all State/Territory regulatory requirements?	
6	Do staff amenities and working conditions comply with OH&S requirements?	
6	Does the facility have an environmental management strategy in place?	

Ref	Issue	Response / Details
6	Does the facility comply with relevant environmental regulations?	
6	Is hazardous waste managed in accordance with regulations?	
6	Does the facility have a quality control system in place?	
6	Is adequate insurance held to cover fire, theft & malicious damage?	
6	Is adequate public liability insurance held?	
6	Is appropriate workers compensation cover in place?	
6	Are appropriate site security measures in place?	
6	Are management strategies periodically reviewed & updated?	
6	Does the facility have a strategy to address future rehabilitation of the site?	
	ACCREDITATION SCHEME	
7	Does the facility intend to become an accredited recycler of end-of-life televisions?	
	NB: The following issues relate only to facilities seeking accreditation	
7	Have material pathways been mapped & recorded?	
7	Is all the necessary documentation in place?	
7	Has an appropriately qualified independent auditor been engaged?	