

Appendix 0

Waste management strategy information



Appendix 0 — Waste management strategy information

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EP6.02

COARSE REJECTS AND TAILINGS DISPOSAL

1. Purpose

To ensure that coarse rejects and tailings are adequately managed, handled and disposed of in a manner that will minimise the potential impacts to the surrounding environment.

2. Scope

This Procedure applies to all CNA managed mines, infrastructure and any associated activity.

3. Definitions

Co-disposal:	The mixing of coarse and fine waste streams to produce a waste material with superior physical handling properties to either of the constituent wastes.
Coarse Reject Material:	A mixture of coarse stone and carbonaceous material that does not satisfy the specification for product coal. Also described as chitter, reject or coarse reject material.
Reject Cell:	An area prepared with windrows of overburden to contain reject in areas designated for reject placement. Reject cells shall not be located in the cut i.e. beneath low walls and or high walls. (Bengalla only).
Tailings:	A wet mixture of fine clay, silt and fine carbonaceous material that does not satisfy the specification for product coal and is approximately 70% aqueous. Also described as fine reject or fine reject material.
MOP	Mining Operations Plan. A detailed mining, environmental and rehabilitation plan approved under Mining Lease.
Emplacement Permit	Approval under Coal Mine Health & Safety Act 2002 (s102) to construct an emplacement area.
Dam Safety Certificate	A certificate issued under the under the Dam Safety Act 1978 to show that the dam has been constructed in accordance with the design drawings and specifications.
ARD	Acid rock drainage

4. Actions

4.1 Coarse Reject

Reject material must be:

- Disposed of amongst non-carbonaceous overburden material.
- Placed into the overburden emplacements in a manner that must ensure adequate mixing with the overburden material and minimise potential instability.
- Covered with overburden material to a depth of at least: one (1) metre at HVO & MTW; five (5) metres at Bengalla; or as otherwise specified from time to time by site MOPs or Environmental Impact Statements. Where a risk of spontaneous combustion and/or acid generation is identified, the coarse rejects shall have a cover designed in accordance with procedures [EP 8.3 Spontaneous Combustion](#) and [EP 12.1 Acid Rock Drainage Prediction and Control](#).

4.2 Tailings

4.2.1 Design and Construction

Tailings Dams must be designed by a suitably qualified, competent, and independent dam engineer. Similarly, a suitably qualified and competent design engineer must design associated pump systems.

Before commencing construction, the dam design must be submitted to:

- The Dam Safety Committee for review. The Committee will determine if the dam should be prescribed under the NSW Dam Safety Act 1978.
- The Department of Primary Industries as part of an application for approval under Section 102 of the Coal Mine Health & Safety Act 2002..

Selected locations for tailings impoundments must take into account topography including the location of surface water drainage lines, the location of groundwater and infrastructure in the area, particularly downstream. In-pit locations are preferred.

Topsoil located in the vicinity of proposed tailings dams must be stripped for use in rehabilitation, in accordance with procedure [EP 5.1 Rehabilitation](#).

The walls of the tailings dam must be constructed using suitably competent materials.

Dams must be designed and operated with enough freeboard to contain the maximum rainfall runoff from a 1:100 Average Recurrence Interval storm.

The dam spillway level must be at least 1 metre above the water level from the 1:100 Annual Exceedance Probability flood in adjacent watercourses.

4.2.2 Disposal

Wet Disposal

Tailings must be pumped to the tailings impoundment using a system of pipes and pumps.

Pipes must be located or banded to ensure that tailings will not discharge off-site, into watercourses or into the site clean water management system in the event of a leak.

The pipes must be inspected daily for leaks and failures. Where indicated by risk assessment, the pipe system must be fitted with an automatic cut-off system that activates if flow rates at the pump and outfall differ by specified amounts.

Operation of all tailings dams and tailings pipelines must be in accordance with the applicable Tailings Facility Operations and Maintenance Manuals and construction approval conditions.

Co-Disposal (Bengalla)

Tailings must be dewatered, mixed with coarse reject and disposed of in the overburden emplacements in accordance with Section 4.1 of this procedure.

Rejects will be safely block tipped into a suitable reject cell, with a barrier of sufficient height and strength to prevent rear dump trucks passing through or over it. Reject **will not be tipped** over a face or in the cut under any circumstances.

4.2.3 Inspections and Monitoring

Each active tailings dam must:

- Prior to placing tailings, have an Operations & Maintenance Manual prepared by an experienced tailings dam engineer. The manual must set out accountabilities, inspection and operational requirements.
- Be operated in accordance with the Tailings Dam Operations & Maintenance Manual.
- Be inspected regularly in accordance with the inspection schedule set out in the Operations & Maintenance Manual.

Additional inspections may be performed under local site procedures.

Employees who perform inspections must be appropriately trained to a level of competence to perform the inspections.

Prescribed dams under the Dam Safety Act must be inspected in accordance with any additional requirements set out by the NSW Dam Safety Committee, and surveillance reports must be prepared as described in the Tailings Dam Operations Manual. Tailings impoundments must be inspected according to the established inspection regime for potential overtopping.

An independent, appropriately qualified and experienced engineering

specialist must be engaged to:

- Review the records of regular inspections on a quarterly basis.
- Perform structural and geotechnical inspections annually. The frequency should be bi-annual for the first two years of a new facility.
- Prepare a written report annually for each tailings facility. The report must meet Dam Safety Committee and construction approval inspection and reporting requirements. The report shall address performance against the operations and maintenance manual for each dam.

Independent, appropriately qualified engineering specialists must inspect tailings impoundments at least every two years to confirm correct operation, review past performance and structure stability and identify any potential failure. These inspections are required to meet Rio Tinto inspection requirements.

The decant water chemistry must be monitored from all tailings dams that contain material identified as potentially acid forming.

Groundwater monitoring must be undertaken down slope of tailings dams where the need is identified by a risk assessment.

4.2.4 Closure

Designs for the installation of tailings impoundment must include a design plan for closure. The closure plan must include obtaining regulatory approval to close the tailings impoundment. Tailings impoundments that are “life of mine” must be included in the Closure Plan for the site.

The closure design must address: tailings containment; minimisation of leaching into ground and surface waters; the final landform; surface drainage to protect the final landform and prevent erosion; minimising post-closure maintenance; contamination through surface dusting; and any identified ARD risks.

The closure design must include monitoring plans for landform stability and acid generation that are commensurate with the risk.

Rehabilitation must involve capping with at least 2m of inert material; covering with topsoil; and planting appropriate vegetation commensurate with any identified stability or ARD concerns.

4.3 Monitoring of Materials and Keeping of Records

- Although coarse and fine reject at Coal & Allied active operations are generally non-acid forming, there is a quantifiable risk that acid generating materials will be placed near the surface. To manage this risk a sampling programme must be implemented as defined in procedure [EP 12.1 Acid Rock Drainage Prediction and Control](#).
- A programme of targeted, routine sampling of coarse and fine reject streams shall be developed and conducted in accordance with procedures [EP 8.3 Spontaneous Combustion](#) and [EP 12.1 Acid Rock Drainage](#)

Prediction and Control. Potential acid forming and combustible material must be managed in accordance with the requirements of the above procedures.

- Records of the volume, disposal location and hazards of identified high risk material must be kept and managed in accordance with the requirements of the above procedures.
- The stability of overburden emplacements containing dumped reject material that is at risk of acid generation or of spontaneous combustion must be monitored. Monitoring records must be kept. Any potential stability problem must be managed in accordance with the requirements of the above procedures.

4.4 Facilities

4.4.1 Hunter Valley Operations

Tailings storage facilities at Hunter Valley Operations are:

- Bobs Dump Tailings Dam (West Pit)
- Howick Tailings Dam (West Pit)
- Centre Tailings Dam (North Pit)
- South East Tailings Dam (North Pit)
- North Pit Void Tailings Dam (North Pit)
- Lemington No. 5 (Cheshunt Pit)

4.4.2 Mount Thorley Warkworth Operations

Tailings storage facilities at Hunter Valley Operations are:

- Tailings Dam 1 (North Pit)
- Tailings Dam 2 (North Pit)
- Centre Ramp Tailings Dam (South Pit)
- Interim Tailings Dam (North Pit)
- The Mini-Strip (South Pit)

4.4.3 Bengalla Mine

Bengalla Mine utilises a co-disposal controlled waste operation.

5. Responsibilities

Manager Coal Preparation Plant

- Day-to-day operation and management of all tailings impoundments and tailings pipelines.
- Design, installation, operation, decommissioning and

	closure of all tailings impoundments located within the mining lease.
	• Ongoing structural inspections, technical review of, maintenance and repairs to the tailings impoundments.
Manager Mining	• Placement and disposal of coarse reject inside the mining lease.
Manager Mine Planning	• Short term mine planning and scheduling to provide adequate volume for storage of fine reject at the selected tailings storage facility. • Scheduling of selected material for timely construction of embankments.
Manager Resource Planning	• Develop and maintain a Tailings Strategy consistent with all regulatory approvals. • Long term site selection and feasibility designs. • Maintain and update the capital budget for tailings storage facilities. • Communicate the Tailings Strategy to Managers CPP, Mine Planning and Project Approvals.
Manager Environmental Services (RTCA)	• Perform audits against construction approvals and Rio Tinto Standards. • Review the environmental aspects of the designs for installation and closure for tailings impoundments and pipelines.

6. Attachments

[PRO-0259 Reject Handling When Mining Operations Are Not Being Carried Out](#)

7. References

Environmental Procedures

[EP 5.1 Rehabilitation](#)

[EP 8.3 Spontaneous Combustion](#)

[EP 12.1 Acid Mine Drainage Prevention and Control](#)

Other Mandatory Documents

Construction approvals for each active tailings dam.

Tailings Facility Operations and Maintenance Manuals.

Mining Operations Plans for each Pit.

Coal Leases for each Pit.

Development Consents for each Pit

title	date issued	revision status	date reviewed	page
EP6.02 Coarse Rejects and Tailings Disposal	25/10/07	1.2	10/9/07	6 of 7

Environmental Management Plans for each pit.

Guidelines

[Tailings Management Handbook, DRET Leading Practice Sustainable Development Program for the Mining Industry](#)

Revisions

Number	Date	Description of Change
1	24/09/2003	First draft released for general comment
2	9/8/2005	Reviewed and updated by BMC, MTW and HVO
3	15/8/05	Released as final version 1.1
4	4/9/07	Revised to include DPI MR requirement for 2m cap of inert material on tailings dams and released for general comment
5	10/9/07	Reviewed and updated by BMC, MTW and HVO
6	25/10/07	Released as final version 1.2

CNA-10-EWI-SITE-E7-008

NON-MINERAL WASTE MANAGEMENT

1. Purpose

To ensure that:

- Non-mineral waste management and disposal meets all regulatory requirements and relevant Rio Tinto standards;
- appropriate segregation, collection, handling, transport and disposal of waste is undertaken which minimises the impacts on the environment;
- planning, process design and purchasing will result in the maximum reuse and recycling of materials.

2. Scope

This Environmental Work Instruction applies to all CNA managed mines, infrastructure and any associated activity. The management of contaminated water and mineral wastes are addressed elsewhere in other CNA's environmental work instructions.

3. Definitions

Waste	Any material whether solid, liquid or gas resulting from an activity, operation or process for which the mine has no further use. Wastes are classified under the Department of Environment's Waste Classification Guideline. These waste classifications are broken into six waste classes, Special waste, Liquid waste, Hazardous waste, Restricted waste, General Solid waste (putrescible and non-putrescible).
Special Waste	'Special waste' is a class of waste that has unique regulatory requirements. It includes clinical waste, asbestos waste, and waste tyres.
Liquid Waste	Liquid waste means any waste that: • Has an angle of repose of less than 5 degrees, or • Becomes free flowing at or below 60 degrees Celcius or when it is transported, or • Is not generally capable of being picked up by spade or shovel
General Waste	Broken windscreens, food scraps, plastic food wrap, treated timber pallets, plasterboard, drained rubber hoses, waste rubber, waste rope, damaged air filters, lightly contaminated rags (no free oil), styrofoam cups, fibreglass, floor sweepings.
Restricted Waste	Restricted solid waste would only include wastes assessed and classified as restricted solid waste in accordance with Waste Classification Guidelines.
Hazardous waste	Waste that has properties that are potentially harmful to people or the environment, including: • waste with a pH less than or equal to 2.0 or greater than or equal to 12.5 • containers that have not been cleaned and that contained dangerous goods

NON-MINERAL WASTE MANAGEMENT

within the meaning of the Australian Code for the Transport of Dangerous Goods by Road and Rail

- lead-acid or nickel-cadmium batteries, being waste generated or separately collected by activities carried out for business, other commercial or community services purposes
- lead paint waste other than solely from residential premises or educational or child care institutions

any mixture of waste referred to above.

Recyclable material	Material that can be used as a raw material in the production of other materials or in another process, including scrap metals, paper and cardboard, most plastics, and woodchip.
Reusable materials	Material that can be reused in its present form, including but not limited to pallets, timber, conveyor belting, metals, air filters and office toner cartridges
Primary Waste Contractor (PWC)	The contractor awarded the contract for the collection, transport and disposal of wastes from the relevant CNA site in accordance with regulatory requirements. The primary waste contractor may engage qualified sub-contractors to manage individual waste streams.

4. Actions

4.1 Planning

Minimising resource usage and potential for the generation of waste must be an important consideration in:

- the redesign of equipment;
- the modification of processes; and
- the introduction of new or alternative processes.

Authorized contractors will undertake the removal of waste from Coal & Allied sites in a manner consistent with regulatory, Rio Tinto Standard and contractual requirements. Disposal or treatment of waste must only be carried out in engineered and approved facilities and in accordance with established operational procedures. The Primary Waste Contractor (PWC) will maintain records of all wastes collected. A verification assessment of PWC and their facility will be carried out every two years. Where the PWC uses sub-contractors, the PWC is to carry out a verification assessment of their contractors (used on CNA sites) annually.

4.2 Purchasing

Personnel ordering or purchasing materials or equipment will:

- give preference to products that are recyclable or reusable over products that are either not recyclable or reusable, or have a lower potential for recycling or reuse;
- avoid products that, because of their characteristics, require complex handling procedures or generate wastes that are hazardous or are difficult and expensive to dispose of;
- give preference to products that have the minimum of packaging and/or packaging which is reusable or recyclable.

NON-MINERAL WASTE MANAGEMENT

All contracts for the provision of goods and services to Coal & Allied will place on contractors and suppliers a duty of care in regard to waste management.

4.3 Waste Segregation

Waste facilities will be clearly signed for clear identification.

When handling waste materials all personnel shall ensure that the necessary safe working procedures are followed and that appropriate personal protective equipment is used. The following wastes shall be required to be placed in the respective storage bins.

4.3.1 General waste

General Waste Bins

The general waste bins are colour coded green and are clearly labelled to accept the following materials:

- Food scraps (putrescible waste)
- Food wrappers
- Non-recyclable plastics (cling wrap, plastic adhered to another material)
- Rope
- Rubber (Note: hydraulic hoses to be drained of oil)
- Polystyrene cups
- Green plant waste
- Damaged pallets or wooden products
- Rubber bands, metal clip binders, pens
- Damaged air filters
- Lightly soiled rags and absorbents containing diesel, oil or grease



Note: Items such as any solvents, saturated oily rags or absorbents should not be placed in these bins

Pallets

- Used wooden pallets no longer needed are required to be stored at the Waste Management Facility or Supply compound for collection by CNA's Primary Waste Contractor (PWC)
- To reduce the risk of fire hazards and improve housekeeping, no more than 50 pallets shall be stored at this facility at any one time
- Pallets and other wooden products will be taken off-site by the PWC.

4.3.2 Recyclable waste

General Recyclables

Recyclable waste bins are lilac in colour. Recyclable materials are able to be co-mingled in these bins and include:

- Paper—copy paper, newspaper, hand towels, phone books, envelopes
- Magazines
- Aluminium cans
- Glass bottles
- Cardboard
- Plastics which show a recyclable logo



Scrap metal

Scrap metal bins are coloured blue and are able to accept the following metal items:

- Heavy melted scrap (HMS)
- Light gauge scrap
- Aluminium
- Brass
- Lead
- Copper
- All scrap metal



Steel bin

Note: The safe working load for the scrap metal skip bins is no greater than 10 tonnes of material. Bins must not be overloaded.

NON-MINERAL WASTE MANAGEMENT**Plastic Packaging**

Bulk plastic frames are provided in stores areas for the recycling of plastic wrap from palletised packaging. Large plastic bags are supplied which are fitted inside the steel frames. Once the plastic bags are full they can be recycled via the 3 cubic meter recycling bins.

4.3.3 Regulated waste

Regulated waste must be tracked and recorded using DECCW approved forms and systems. These materials are required to be placed into the following colour coded and labelled storage bins.

Waste Grease and Blackjack

- Small volumes of waste liquid lubricants can be stored for disposal in closed topped 205L drums
- These are to be stored in brown 205L drums
- Disposal of materials with the grease (such as gloves, rags and plastics) should be avoided to reduce treatment costs.

*Waste Grease bin***Oily Rags, Hydrocarbon Contaminated Soil, and Used Oil Absorbents**

Hydrocarbon contaminated materials are to be stored in yellow wheelie bins, 205L drums or specially labelled workshop bins, and includes:

- **Any** absorbent material or rags containing **petrol or solvents**.
- **Heavily saturated** absorbent material containing **diesel, oil or grease**.

NOTE: Oily rag disposal is the most expensive form of waste disposal.

Lightly soiled rags containing diesel, oil or grease can go in general waste bins.

- Hydrocarbon contaminated soil should only be placed in bins if the site does not have a bioremediation area

*Oily rags and absorbent*

NON-MINERAL WASTE MANAGEMENT**Oily Filters**

- Oil filters only—all types



Bengalla blue bins – CNA yellow bins

Degreaser and Other Solvents

- The nominated supplier or service agent for CNA's parts washing machines is required to transport and dispose of waste degreaser or solvents and report on this as per section 4.5.



Hydraulic Hoses

- Hoses should be drained first and then stored in the general waste bin. Metal couplings should be docked and disposed in the scrap steel bin. This is a less expensive method of disposal than using hydraulic hose bins (provided for MTW and HVO).

**Waste oil and oily water**

- Waste oils shall be evacuated and stored in the operation's bulk waste oil storage tanks. These facilities are required to be bunded and compliant with AS1940 (includes the requirement for impermeable bund wall and floor; bunded area shall contain no less than 110% capacity of the largest tank)
- 205L drums of waste oil are to be evacuated to the bulk waste oil storage tanks, unless the oil is known to be incompatible with other oils.
- Waste oil must be collected and transported by the PWC
- Oily water shall be treated on site (as far as practicable) and stored within bulk oily water storage tanks for collection and treatment by the PWC



Bulk waste oil storage facility (fully bunded)

Waste coolant

Used coolant is required to be stored at the bulk fuel facility for collection by the PWC. The collection and frequency of pickups shall be determined by the Maintenance Department in consultation with the PWC.

20, 60 & 205 Litre Drums

- Used oil drums are required to be drained of all hydrocarbon based residues and taken to the Waste Management Compound for temporary storage
- Drums must be stored on honeycomb pallets or in a bunded area
- The PWC will arrange for the pick-up, crushing and recycling of these drums on an as required basis



Used drums stored in bunded areas prior to collection and disposal

Lead acid batteries

- At Bengalla used batteries are stored inside DG rated Battery storage unit on pallets.
- At HVO and MTW used batteries are stored on pallets in designated bunded areas.
- The area owner will inspect bunded pallets weekly and arrange for collection of any contaminated liquid by the PWC. It is the area owners responsibility to ensure batteries are stored appropriately for collection (on pallets stacked no more than two high).
- The PWC will arrange for the pick-up, packaging and transport of batteries to a licensed scrap metal merchant
- Light vehicle batteries not able to be recharged are returned to site to enable reconciliation prior to disposal by the PWC



Used batteries are stored inside DG rated Battery storage unit on pallets

4.3.4 Other Waste

Conveyor belting

- Used conveyor belt is required to be placed at either the designated waste management facility or supply compound
- The conveyor belt is required to be rolled into manageable lengths and strapped for ease of collection (no more than 2 kilometres of conveyor belting shall be stored at the Bengalla compound)
- The PWC shall be responsible for the collection and recycling of conveyor belt
- If there is no recycling or reuse market available, the strapped rolls will be treated in accordance with the heavy vehicle tyre procedure



Conveyor belting ready for collection

Toner cartridges

Office printer, photocopier and fax toner cartridges are required to be either

- placed back in their boxes and taken to the stationary storage area at HVO or MTW, from where they will be collected by the stationery supplier for reuse/recycling/disposal, or
- placed in the Planet Ark boxes located at Bengalla's Commercial and Technical Services Departments for collection by the PWC.

Tyres

Light Vehicle

Unserviceable light vehicle tyres, including medium truck tyres, must be:

- placed at a designated collection point at the store or maintenance area;
- removed from site by the contracted tyre supplier for repair, reprocessing or disposal.

Heavy Earthmoving

Where possible, heavy earthmoving tyres must be re-used for other purposes such as road markers or other delineation.

NON-MINERAL WASTE MANAGEMENT

Each mine site shall maintain a tyre tracking system. The tyre register will include, as a minimum, the following information:

- Tyre serial number
- Supplier
- Purchase date
- Disposal date
- GPS location (eastings, northings) of tyre disposal area in-pit
- RL of tyres placed in-pit



The responsible department will be required to liaise with the Mine Surveyors to obtain the required survey information.

Heavy earthmoving tyres that are to be scrapped shall be temporarily stored at an approved centralised location.

No more than 100 tonnes (equivalent to about 30 heavy vehicle tyres) will be stored at any one time on each site. Refer to site specific Tyre Management Plans for additional storage requirements.

The Mine/Production Department is responsible for the final placement and disposal of tyres in-pit. Tyres must be:

- spread out across the pit floor and buried as deeply as practicable, but, covered by at least 20 metres of inert overburden beneath the final rehabilitated surface; and
- placed at least 10 metres away from coarse reject material to reduce the risk of fire from spontaneous combustion.

4.3.5 Dragline or excavator maintenance and shutdowns

During designated maintenance shutdown periods for the dragline and/or excavators, contractors and mine personnel are required to place waste items into the labelled receptacles.

Waste handling facilities must be taken to the field servicing sites prior to the commencement of any works.

The Maintenance Department is required to notify the PWC of when and where the waste facilities are to be located.



A typical skid-mounted waste handling unit

4.4 Supply and removal of bins

The PWC will supply all bins. The PWC will be responsible for checking the capacity of the bins. When the industrial bins are full, the PWC will collect and dispose of the waste, or arrange for additional bins to be supplied in consultation with the Supply and Environmental Departments.

4.5 Waste Tracking and Recording

Regulated Waste must be Tracked

All regulated wastes must be managed strictly in accordance with regulatory and CNA requirements. To ensure the adequate tracking of waste the PWC will be required to provide suitable waste transport certificates to the site Supply Department. The waste transport certificates are uploaded electronically to DECCW by the PWC and a hard copy of the completed form returned to the Supply Department.

The tracking certificate shall include:

- details of the waste producer (Consignor) indicating the address and contact details of the CNA operation and nominated representative
- details about the waste including waste code, description, form, contaminants and classification.
- details about the physical nature of the regulated waste (liquid, solid, sludge), its volumes and proposed treatment
- details about the collection of the waste including the time and date of its collection
- details about the waste transporter which includes the name of the person who took delivery of the waste and the registration numbers of the licensed vehicles
- details about the proposed destination (waste Consignee)
- evidence that the waste was received at the disposal or recycling facility

Tracking and recording systems will be followed implicitly for those wastes that are regulated by authorities:

- waste records will be maintained accurately and kept up to date at all times;
- records will be available for audit at any time;

Waste records must not be destroyed. Coal & Allied is required to keep them in secure storage for at least five (5) years.

5. Responsibilities

All Employees	All employees are responsible for using the correct bins for the disposal of waste in accordance with this environmental work instruction.
Area Supervisor	The work area supervisor is responsible for ensuring the correct bins are located in the work area and that personnel are aware of CNA's waste disposal system.
Supply Officer	Checking and recording Waste Transport Certificates.
Manager Mining (HVO)	Allocate responsibility to manage the heavy equipment tyre tracking system for the site
Manager Maintenance (MTW and BMC)	
Environmental Specialist Operations / Bengalla	Manage waste management contract
Environmental Specialist	
Primary Waste Contractor	- Supply of all bins - Monitoring the capacity of bins - Manage and dispose of wastes in accordance with the requirements of this environmental work instruction and government regulations - Maintenance of waste tracking database and reporting system

6. References

NSW Legislation

Protection of the Environment Operations Act, 1997

Protection of the Environment Operations (Waste) Regulation, 2005

NSW Guidelines

Waste Classification Guidelines

Australian Standards

AS1940 – 2004 The Storage and Handling of Flammable and Combustible Liquids

Rio Tinto Environment Standards

E7 Non-Mineral Waste Management

Non-Mineral Waste Guidance Note

Document Control

	Name	Position	Signed	Date
Originator:	Sarah Poynton	Environmental Graduate		24/07/2010
Checked By	Carmen Dyer	Environmental Specialist - Systems		24/07/2010
Owner:	Andrew Speechly	Environmental Specialist - Operations		24/07/2010
Authorised By:	Andrew Speechly	Acting Manager Environmental Services		24/07/2010

Revisions

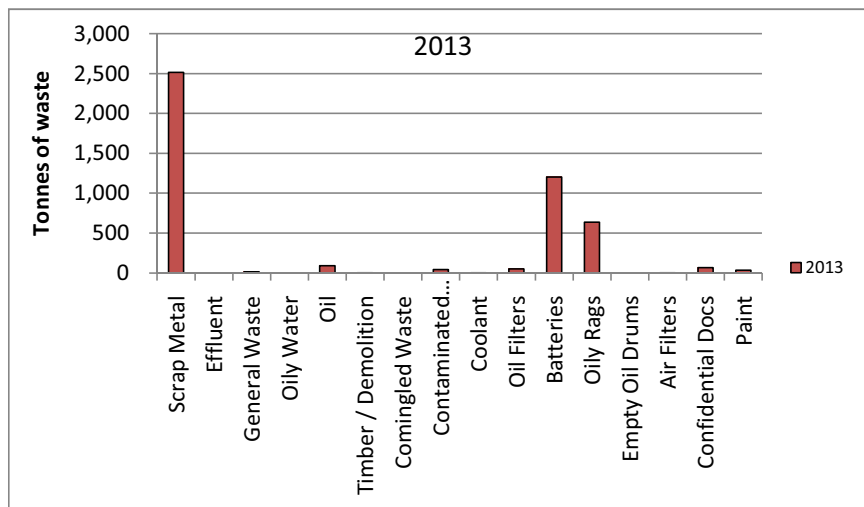
Ver	Date	Revision Description	By	Approved By
1.1	22/08/2003	Initial Release	-	-
1.2	16/11/2003	Improved formatting, update to tyre disposal	-	-
1.3	02/12/2003	Added photo of second type of oil filter disposal bin	-	-
1.4	14/04/2005	Remove need for PWC to chip pallets; add need to return light vehicle batteries to site for reconciliation prior to PWC disposal; better define who maintains tyre tracking system; add extra photos.	-	-
2.0	07/07/2009	Major Review. Incorporate changes made under the Protection of the Environment Operations Amendment (Scheduled Activities and Waste) Regulation 2008, address observation made in Bengalla RT HSE Standards audit, incorporate CNA Waste Management Standard (to be deleted), revise HME tyre storage, revise hydraulic hose disposal and revise waste tracking procedure.	Andrew Speechly	Rod Cameron
2.1	24/07/2010	CNA-10-EWI-SITE-E7-008 - Minor review and modified for site document register. Minor review to remove ATT6.1.1 Completing a Waste Data Form as superseded by DECCW online tracking process.	Sarah Poynton	Andrew Speechly

MTW	2013
Effluent On Site	1,259,000
Oily Water On Site	428,300
Washbay Sludge	15,000
Contained Total	1,702,300
Aerosols	349
Waste Oil	91,958
Contaminated Grease	44,503
Pallecon	15,177
Waste Batteries	1,203,625
Recycle HAZ Total	1,355,612
%	27.24%
Air Filters	2,312
Capacitor	0
Comingled Waste	65,210
Confidential Docs	1,302
Coolant	118,131
Effluent Off site	0
Empty Oil Drums	7,421
Oil Filters	103,170
Oily Water Off Site	15,500
Scrap Metal - G.E.T	49,630
Scrap Metal Oversize	0
Scrap Metal	2,515,160
Printer Cartridges	0
Timber / Demolition	35,480
Wate Oil Treatment	3,725
E-Waste	1,200
Recycle NonHAZ Total	2,918,241
%	58.64%
Air Filters - End of Life	14,609
Hydraulic Hose	8,635
General Waste	637,311
Tyre Disposal	5,885
Oily Rags	35,940
Disposal Total	702,380
%	14.11%
Total Recycling	4,273,853
%	85.89%
Total Volume	4,976,233

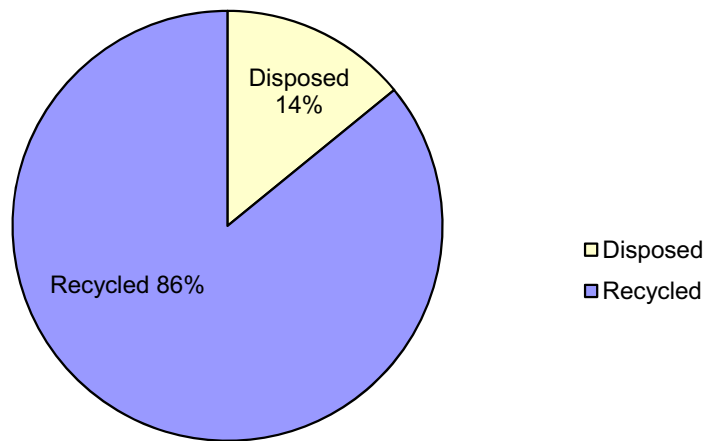
Waste Stream 2013

Scrap Metal	2,515
Effluent	0
General Waste	15
Oily Water	0
Oil	92
Timber / Demolition	1
Comingled Waste	0
Contaminated Grease	45
Coolant	1
Oil Filters	50
Batteries	1,204
Oily Rags	637
Empty Oil Drums	0
Air Filters	2
Confidential Docs	65
Paint	36

	Disposed	Recycled
MTW	14%	86%



MTW
Waste streams - recycled vs disposal for 2013





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SYDNEY
Ground Floor, Suite 1, 20 Chandos Street
St Leonards NSW 2065
T 02 9493 9500 F 02 9493 9599

NEWCASTLE
Level 5, 21 Bolton Street
Newcastle NSW 2300
T 02 4927 0506 F 02 4926 1312

BRISBANE
Suite 1, Level 4, 87 Wickham Terrace
Spring Hill Queensland 4000
T 07 3839 1800 F 07 3839 1866



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