



NICKEL WEST

ALL SITES

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# PROCEDURE

## EQUIPMENT DECONTAMINATION PROCESS

REV	PREPARED	REVIEW	APPROVED	DATE	DESCRIPTION
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## 1.0 INTRODUCTION

### 1. Purpose

Describe the methods and procedures to be used for the removal of any equipment from plant areas that is in direct contact with Process and Chemical Materials. The procedure also covers the precautions required to ensure safe handling or inspecting by others.

### 2. Scope

This procedure covers the method and requirements for the removal and safe handling of all production equipment.

### 3. Implementation

#### 1.1.1 Who Has Responsibilities - Training Needed

- Area Production Coordinator
- Process Team Leader
- Area Process Technicians.
- Area Maintenance Team Leader
- Area Maintenance Technicians
- Repairables Coordinator.
- Supply Planner.
- Stores Dispatch Person.

#### 1.1.2 Who Else Should Know - Awareness Needed

- Area Superintendent
- Stores Superintendent
- Stores personnel

#### 1.1.3 For Information Only

- For all Niwest and contract personnel who are involved with removing and handling production equipment and offsite repair contracts.

## 2.0 DEFINITIONS

THA	Task Hazard Analysis
PPE	Personnel Protective Equipment
Permit	Authorisation to proceed with the task
MSDS	Material Safety Data Sheet
Process Material ID Tag	A Coloured Tag attached to equipment, with details to inform others of potential hazardous materials
OSR	Off Site Repair

## **3.0 DETAILS.**

### **3.1 Issues**

The majority of equipment used in Niwest Sites is exposed to some type of process material whether solid, liquid or gas. Some of these materials can pose safety, health or environmental hazards to those who work on this equipment. These risks can occur during handling, transportation and repair.

In most cases only the personnel removing the equipment can identify the process material which may be present in or on the equipment. In order to ensure the correct procedures are followed during all stages of removal, transport and repair the clear identification of these process materials is required.

Failure to identify process materials could also result in a possible breach of Dangerous Goods and Environmental Protection Regulations during transport and subsequent disposal of residues from cleaning.

### **3.2 Background**

Process, Maintenance and Projects personnel dealing with equipment and products which have potential health and safety impacts are aware of those hazards, and suitably protected themselves from the hazards. THA are used to ensure adequate PPE and precautions are taken.

Equipment receivers (stores personnel, offsite repair and transport companies etc.) are unaware of these hazards and are therefore unable to take appropriate safeguards to protect themselves and others when performing their tasks such as dismantle.

A systems exists which requires the attaching of a Process Material ID Tag to all equipment classified in the procedure. This Tag highlights possible Process Materials in or on the equipment.

**We have a duty of care to ensure the safety of ourselves and others.**

### **3.0 Requirement.**

#### **3.3.1. General**

The potential to expose equipment receivers to hazardous chemicals must be considered by the Process and Maintenance Technicians when preparing a Permit and associated THA.

It is the responsibility of both parties to ensure that items are not delivered to others, without first establishing that the equipment represents no unidentified health, safety or environment risk. Where possible the equipment should be flushed and drained whilst still installed. At times however, it may be necessary to partly disassemble and re-flush items at the point of removal, in a bund area, when product can be retained by the equipment eg. Acid retained in non return valves.

**The first requirement and where possible, equipment should be flushed and drained whilst still installed.**

In some exceptional instances it may be necessary to contain the equipment in an appropriate container to prevent spillage and deliver it to the site Process Wash Bay for further cleaning. In this instance a THA will be completed by the equipment owner technician and provided to the Crane Driver/Forklift operator and the equipment owner cleaning personnel so that the correct PPE can be worn.

It is the responsibility of the equipment owner technician and the Team Leader to ensure that adequate written information and verbal communication takes place with the other parties so that the hazards are clearly known and understood.

#### **3.3.2 Residual Contamination**

If there are any occasions where equipment genuinely cannot be cleaned to a state where there is no residual contamination or where there is no risk, then the Area Superintendent must be informed and shall sign off on the written safety precautions to be applied. A copy of the precautions and an MSDS must be securely attached to the equipment before it is forwarded to stores for dispatch.

Furthermore a Process Material ID Tag must be attached to the equipment with the MSDS.

Details of the contamination must be reported to the Repairables Coordinator.

The Repairables Coordinator will ensure the respective OSR companies are informed and have received all relevant documents.

Furthermore the Maintenance Team Leader must ensure the requirements of 3.3.4 are met.

### 3.3.3 Wash Down Procedure

- Isolate equipment from operation as per site isolation procedure.
- Equipment owner to perform risk assessment.
- Equipment owner technician to flush equipment while installed.
- Equipment owner technician shall remove equipment from operation.
- Equipment owner technician shall locate equipment into wash down area (bund/sealed area).
- Equipment owner technician shall drain out lubricants, example: oils. (if required)
- Equipment owner technician to remove blanks and flush out equipment.
- Equipment owner technician to wash equipment internally and externally.
- Equipment owner technician to complete information on Process Material ID Tag and attach Tag to equipment.
- All plugs must be re-fitted to equipment or plastics plugs fitted for transport by the equipment owner technician.
- Equipment owner technician to package equipment onto or into correct frame, stand, pallet or box for transport.
- Equipment owner technician to transport or organise transport for the equipment to the Equipment Assessment Area.

### 3.3.4 Transport

The Maintenance Team Leader must consider the requirements for transport of all equipment, particularly any equipment with possible residual contamination.

These requirements may include the installation of blanks, plastic wrapping or special transport containers.

The Maintenance Team Leader must ensure that the requirements are installed prior to shipping and communicated to the Repairables Coordinator. In addition, the Team Leader will ensure that the measures taken are sufficient for any possible contamination and will prevent any spillage during transport.

**If the above requirements are not met the equipment must not leave site.**

## 4.0 RELATED DOCUMENTS

[KNR-PR-G-0139](#) [Offsite Equipment Repairs](#)

[RNO-MTC-SWI-0021](#) [Electrical Isolation Test and Try](#)

[RNP-PR-00-OP-0003](#) [Energy Isolation.](#)

The Fatal Risk Control Protocol documents can be found at the BHP Billiton Zero Harm webpage:

<http://hsec.bhpbilliton.net/bb/home/homeContent.asp>

<b>FRCP 5</b>	BHP Billiton Fatal Risk Control Protocol	BHP Billiton Fatal Risk Control Protocol 5, Hazardous Materials Management
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## 5.0 RECORDS MANAGEMENT

Copies of all OGA Dockets are filed in the Supply Department.

## 6.0 REVISION INFORMATION

Review of procedure with minor changes

## 7.0 RESPONSIBILITIES.

## 8.0 APPENDICES.

Appendix A & B

Process Material ID Tags

## 7 RESPONSIBILITIES

Role	Major Responsibilities
<b>Maintenance Planners</b>	<ul style="list-style-type: none"> <li>▪ Raise notification for washing of equipment</li> <li>▪ Ensure procedure is correct and adhere to</li> </ul>
<b>Equipment Owners (Process Technicians)</b>	<ul style="list-style-type: none"> <li>▪ Ensure all safety precautions are taken</li> <li>▪ Ensure correct PPE for job being undertaken</li> <li>▪ Ensure all plant or equipment is washed down</li> <li>▪ Ensure all plant and equipment is tagged</li> <li>▪ Ensure tag is completely filled out and able to be read</li> <li>▪ Ensure correct package of equipment for transport</li> </ul>
<b>Workshop Supervisor</b>	<ul style="list-style-type: none"> <li>▪ Ensure all safety precautions are taken</li> <li>▪ Ensure all plant and equipment is tagged</li> <li>▪ Ensure procedure is correct and adhered to</li> <li>▪ Ensure correct package of equipment for transport.</li> </ul>
<b>Equipment Owners (Area Maintenance Technicians)</b>	<ul style="list-style-type: none"> <li>▪ Ensure all safety precautions are taken</li> <li>▪ Ensure correct PPE for job being undertaken</li> <li>▪ Ensure all plant or equipment is washed down</li> <li>▪ Ensure all plant and equipment is tagged</li> <li>▪ Ensure tag is completely filled out and able to be read.</li> <li>▪ Ensure correct package of equipment for transport</li> </ul>
<b>Rotables Coordinator</b>	<ul style="list-style-type: none"> <li>▪ Ensure all information is passed onto vendor if equipment is not washed down</li> <li>▪ Ensure all equipment is tagged</li> <li>▪ Ensure procedure is correct and adhered to</li> <li>▪ Ensure correct package of equipment for transport</li> </ul>
<b>Stores Supervisor</b>	<ul style="list-style-type: none"> <li>▪ Ensure tag fitted to equipment</li> <li>▪ Ensure all plant and equipment is tagged</li> <li>▪ Ensure procedure is correct and adhered to</li> <li>▪ Ensure correct package of equipment for transport</li> </ul>
<b>Store Dispatch Person</b>	<ul style="list-style-type: none"> <li>▪ Ensure equipment is washed</li> <li>▪ Ensure tag fitted to equipment</li> <li>▪ Ensure correct package of equipment for transport</li> </ul>
<b>Area Superintendents</b>	<ul style="list-style-type: none"> <li>▪ Awareness of procedures needed</li> </ul>
<b>Store Superintendents</b>	<ul style="list-style-type: none"> <li>▪ Awareness of procedures needed</li> </ul>
<b>Stores Personnel</b>	<ul style="list-style-type: none"> <li>▪ Awareness of procedures needed</li> </ul>

**Appendix A: Process Material ID Tag (KNR)**



KWINANA NICKEL REFINERY

**PROCESS MATERIAL**

**EQUIPMENT HAS BEEN**

	Y	N
FLUSHED	<input type="checkbox"/>	<input type="checkbox"/>
HOSED	<input type="checkbox"/>	<input type="checkbox"/>
HYDRO BLASTED	<input type="checkbox"/>	<input type="checkbox"/>
DISASSEMBLED	<input type="checkbox"/>	<input type="checkbox"/>
OIL DRAINED	<input type="checkbox"/>	<input type="checkbox"/>

**PROCESS MATERIAL IS:**

.....

.....

.....

**SIGNED:**

.....

**Appendix B Sample Process Material ID Tag (Ravensthorpe).**

**Material No:**

**Description:**

**Defect Description:** \_\_\_\_\_

Scrap <input type="checkbox"/>	Repair	Internal <input type="checkbox"/>
		External <input type="checkbox"/>

**Decontamination Required:**  Yes  No

**Decontamination Completed:**  Yes  No

This item may contain residual:

Sulphuric Acid       Acidic Slurry

Others (Specify) .....

**Name:**

**Signature:**

**Date:**

**Stored Energy Controlled:**  Yes  No

**WARNING**

This item may contain stored energy:

Electric Charge     Springs     Pressure

Others (Specify) .....



**Offsite/ Local Receipt Action**

Place Receipt Label in the space provided below:

A large, empty purple rectangular area intended for a receipt label.

**Vendor Action**

This tag must be completed by the vendor and attached to the repaired item on delivery to the designated delivery point.

**Vendor Name:**

**Vendor Reference:**

**Name:**

**Signature:**

**Date:**

Repairable items returned by the vendor without this tag attached may not be accepted.

**REPAIRER – DO NOT REMOVE THIS TAG**