PROCEDURE

OFFSITE EQUIPMENT REPAIRS

Rev	Prepared	Review	Approved	Date	Description
0	N Palmer	E McKinlay	P Bird	26/05/2000	Approved
1	N Palmer	Outage Planner	Mntce Services Superintendent	26/10/2004	Updated descriptions
2	N Palmer	Outage Planner	Mntce Services Superintendent	27/02/2007	See revision information

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1.0 INTRODUCTION

1.1 Purpose

To ensure that equipment needing repair offsite is managed in a cost effective and timely manner.

1.2 Scope

This document covers the repair process for both planned and unplanned outages of repairable equipment.

1.3 Implementation

1.3.1 Who Has Responsibilities - Training Needed

- Repairable Procurement Officer (Melbourne).
- Offsite Repair Coordinator
- Maintenance Team Leader
- Maintenance Technicians

1.3.2 Who Else Should Know - Awareness Needed

- Maintenance Planners
- Area Superintendents (operations)
- Team Leaders
- Project Engineers
- Supply personnel
- Off site repairers

2.0 DEFINITIONS

GSAP:	In-house computerised maintenance and materials management system for requesting and processing Maintenance Orders and Purchase Orders.
Offsite Repair Coordinator (ORC):	The KNR contact person for all OSRs when repair information is required.
Offsite Repairer (OSR):	Approved offsite repair companies that are under contract to carry out maintenance work on KNR's repairable equipment.

Offsite Repair Priority Codes:	A coding of 1,2 or 3 is marked on the offsite repair tag used by KNR to communicate to the OSR the urgency of the required work. Note that this coding is completely different to the maintenance order priorities in GSAP. The OSR priority coding is used to ensure that both KNR and the OSR fully understand the conditions that apply to a repair request. Refer to Appendix B for definitions of the different codes.
Planned Work:	Work which is fully resourced with the materials required and an estimate of the labour needed to complete the work
Scheduled Work:	Work which is planned and agreed to by the Area Management Group to be performed in a particular week.
Maintenance Order:	A document (electronic or hard copy) used to define, authorise, control and record work undertaken on the plant.
Planned Maintenance Order:	Work order which has been resourced (labour and material) min 1 week prior to execution. GSAP code is “PL”
Unplanned Maintenance Order:	Maintenance order which has not been planned. GSAP code is “UP”.
Maintenance Order Emergency:	A maintenance order raised to initiate work immediately due to a safety or environmental hazard that has arisen which can not be isolated or guarded against. GSAP code is “EM”.
Maintenance Order Urgent:	A Maintenance order raised to initiate work that has been detected and diagnosed as an imminent threat of equipment failure. GSAP code is “UR”.
Repairable Procurement Officer (RPO)	The person responsible for the purchasing of external services at KNR.
Maintenance Team Leader (MTL):	The person responsible for authorising the equipment to be repaired, ensuring that the equipment is cleaned and tagged ready for dispatch and ensuring that a requisition is raised in GSAP.

3.0 DETAILS

3.1 Overview

Repairable equipment is repaired by one of several specialised offsite repairers (OSR). In certain circumstances, however, the equipment may be repaired in one of the smaller area workshops or alternatively in situ. This will depend largely on the urgency of the repair and the capability of the resources at KNR, but for the purpose of this procedure it is assumed that all repairable equipment is repaired offsite.

The circumstances surrounding equipment repair falls into 2 main categories:

a) Scheduled Work
b) Unscheduled Work

The POR notifies the OSR when equipment is ready for collection from KNR.

Note: Equipment will not be dispatched from KNR unless the equipment is cleaned, has a completed Offsite Repair Tag and a Material Process ID Tag (Yellow) attached and a requisition raised in GSAP.

Ref to Docs 98229.

3.2 Responsibilities and Process Flow

3.2.1 Scheduled Work

The equipment is identified to the OSR by the ORC at least 1 week before it is removed from service.

The equipment is removed from service by a KNR Maintenance Technician, cleaned, tagged and placed at the store for pick-up by the OSR.

The OSR services/repairs the equipment as per OEM or KNR specifications and returns the equipment back to the store where it is received, inspected and booked in.

Unless otherwise indicated on the repair tag, all service/repair will be treated as Priority 3 (see Appendix B for definitions of priority codes).

3.2.2 Unscheduled Work

Work resulting from a breakdown situation. The same steps apply as for Scheduled Work except there is no prior notification to the OSR by the ORC.

3.2.3 Offsite Repairer

On receiving notification of equipment to be repaired, arranges for it to be picked up from KNR.

As per the instructions on the repair tag (and sometimes by a KNR Communication/ Feedback form if more information is needed), strips the equipment, provides a quote, strip down report and overhaul duration to the PO.

On receiving authority to proceed, (a signed quote), repairs the equipment as per OEM or KNR specifications and then notifies the ORC to inspect the repair and / or witness testing if required.

Delivers repaired equipment to KNR for receival into the store.

Provides KNR with repair report and test reports / certificates.

3.2.4 Maintenance Team Leader

On receiving strip down report and repair quote:

1. Authorises the OSR, via the RPO, to carry out the repairs

or

2. Scraps the equipment and authorises its replacement or raises a JFE for a replacement if required.

3.2.5 Offsite Repair Coordinator

On receiving notification from the OSR, inspects the repairs being carried out on the equipment and witnesses any testing required as per OEM or KNR specifications at the OSR's workshop.

On receiving notification from the RPO, inspects the equipment before it is received into the store.

The ORC will provide, and where necessary develop, written work instructions for the OSR to ensure that the repairs are to OEM or KNR specifications.

3.2.6 Warranties

In some cases the OSRs may provide a warranty on specific repairs/service. These are kept by the POR and may be recorded as appropriate in GSAP.

3.2.7 Installation of Repaired/Serviced Equipment

When a Maintenance Technician installs equipment that has been repaired or serviced offsite, an Installation Check Sheet, DOC43181, is completed. If for some reason the equipment fails on installation, the KNR Communication/Feedback to OSRs form is completed and given to the ORC for follow-up.

4.0 RELATED DOCUMENTS

KNR-PR-G-0139 Safe Removal of Contaminated Equipment from Plant Areas.

KNR-FM-G-0019 KNR Communication/Feedback to OSRs

KNR-PR-G-0068 Inspection and Receipt of Purchased Goods

KNR-PR-G-0089 Maintenance Order Types and Priorities

KNR-PR-G-0091 Work Scheduling

KNR-PR-G-0128 Work Execution and Maintenance Order Closure

KNR-WI-G-1035 Installation/Commissioning of Rotating Plant Equipment

5.0 RECORDS MANAGEMENT

Working copies of communication with OSRs and other related documents such as repair quotes and installation check sheets are kept by the ORC.

6.0 RISK RANKING - MEDIUM

Document Risk Ranking

7.0 REVISION INFORMATION

3.2.1 and 4.0 – added reference to KNR-PR-G-0139 Safe Removal of Contaminated Equipment from Plant Areas

8.0 APPENDICES

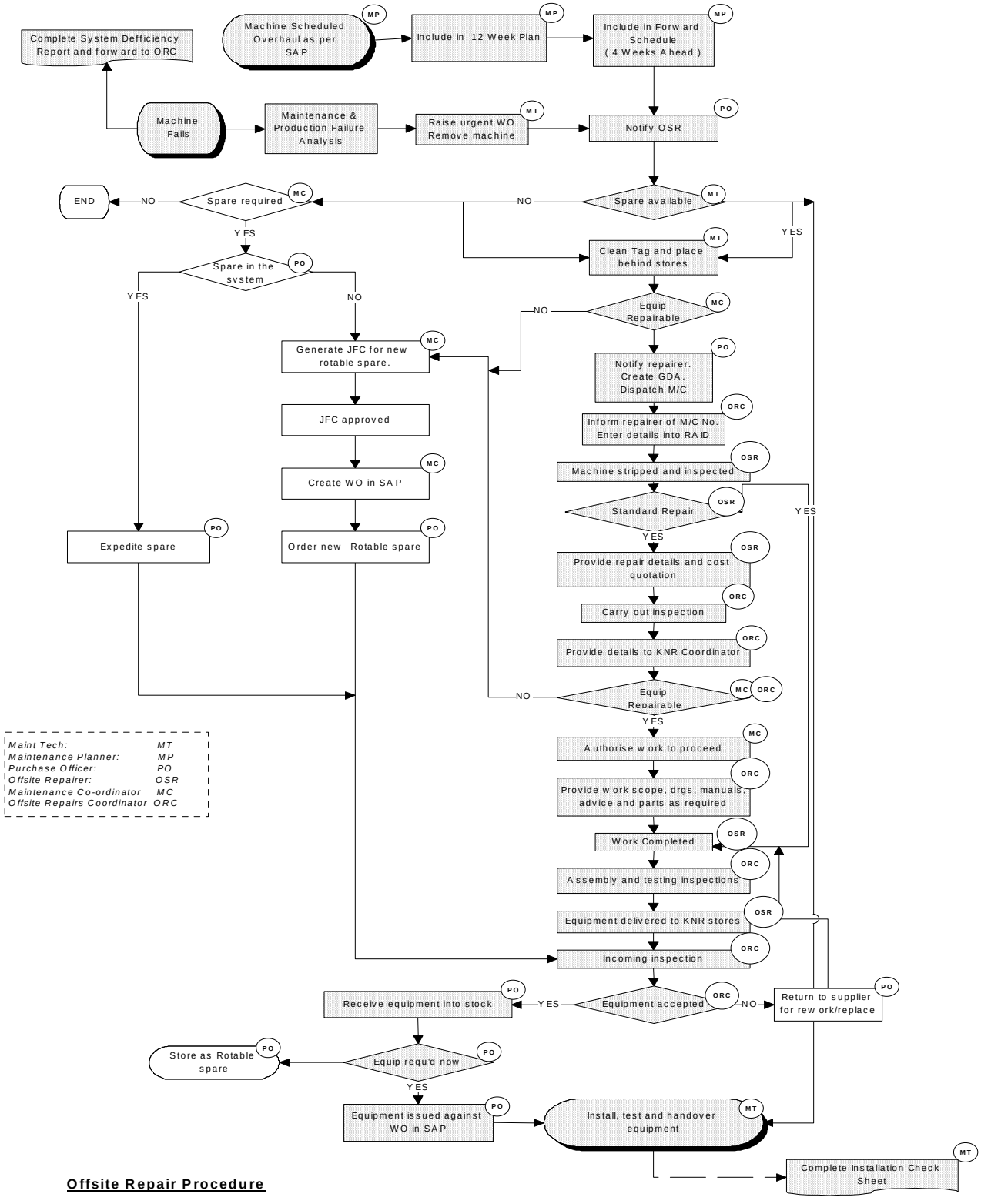
Appendix A: Offsite Repair Procedure Flow Chart

Appendix B: Offsite Repair Priority Codes Definitions

Appendix C: Offsite Repair Priority Codes Overview

Appendix A

Offsite Equipment Repair Process Flow Chart



Appendix B
Offsite Repair Priority Codes Definitions

As part of improving the way we plan and manage our business, KNR aims to eliminate the need for all Priority One and Priority Two work. Any variation from the conditions outlined below must be approved by the ORC.

PRIORITY ONE

Note: This priority code may incur penalty rates for labour, shipping of parts etc and may be over and above a standard repair cost.

Equipment that has been allocated the Priority One code requires urgent attention.

This priority should only be allocated when the equipment that has failed causes loss of production or may impede on the safety of personnel and/or the environment.

If the OSR receives equipment with Priority One allocated the OSR will work continuously on this equipment so as to return it to site as soon as possible.

KNR accepts that **Second hand, refurbished or non-standard parts** may be used if new parts are not immediately available.

The equipment will not be painted unless some undercoat is required and applied by hand to protect some welding, eg weld to a crack in a Pump or Valve Body.

The equipment may not be tested unless a test is required to prove or set up the equipment, eg Control Valve bench test or a hydro pressure test to prove equipment integrity.

A repair cost/quote may be supplied after the repair.

KNR requests a detailed report within two working days of the completion of the repair, so as to be aware of the expected “life” of the equipment and therefore take the appropriate actions.

PRIORITY TWO

Note: This repair may incur some penalty rates for the shipping of parts and may be over and above a standard repair.

This priority should be allocated when the equipment is one of two on site and has no stock spare, for example: Machine “A” fails, Machine “B” is left operating. If “B” fails, production is affected.

Priority two means that the repair will be completed within five (5) days from the day of dispatch.

A summarised repair quote, marked “**urgent**”, will be supplied within two (2) days.

All worn parts are replaced with new, but some parts may be refurbished when new parts are not readily available.

All painting is completed where possible but “touch ups” may be done when time does not permit.
All testing is completed where possible, KNR to approve.

PRIORITY THREE

Note: This code will be the cost of a standard repair plus extras such as major machining or refurbishments. Unless otherwise indicated on the offsite repair tag, all offsite repairs will be regarded as a Priority Three.

This priority code applies to planned/scheduled Machine overhauls and services. It may also apply to equipment that has failed and a spare has been installed, allowing a complete overhaul to occur. It is envisaged that this equipment would be placed in the KNR store.

A detailed quote is supplied to the PO.

On approval, this overhaul would comply with all manufacturers specifications and/or a KNR work scope.

All required testing is completed and witnessed by KNR.

All painting or surface protection is completed as per the KNR specification.

All equipment is returned in a condition so as not to degenerate or be damaged whilst in storage, for example, hard protection on Gasket Faces.

The OSR provides a detailed repair/overhaul report and all details/drawings of any modifications. (All modifications must be approved by KNR).

KNR takes full responsibility to ensure that replacement equipment is purchased through the KNR supply process as required.

Appendix C

Offsite Equipment Repairs Priority Codes - Overview

	PRIORITY ONE	PRIORITY TWO	PRIORITY THREE
Repair Time	As soon as possibly (realistically)	Within five days, not including day of despatch.	Within 10-14 days, after approval of quote. (strip & survey).
Spare Parts	Second hand, refurbished or non-standard parts may be used.	All new parts wherever possible. Some refurbishment, depending on timeframe.	All new parts, as per repair manual and/or KNR work scope.
Painting	Undercoat applied by hand, as required.	Full painting as per scope, but there may be some touch-ups only, depending on timeframe.	Full painting as per scope.
Testing	Only to provide set-up, confirm operation or to prove integrity.	Complete testing applies, but there may be some exceptions depending on timeframe.	All required testing is completed.
Repair Reports	Within two working days of completed repairs.	Within five working days of completed repairs.	Within ten working days of completed repairs.