

## 1 Purpose

The purpose of this Procedure is to outline Mid West Ports Authority (**MWPA**) requirements for the testing and/or commissioning of new plant or processes.

Commissioning is the process during which plant components and systems, having been constructed or modified, are made operational and verified to be in accordance with design and to have met the appropriate safety criteria.

Commissioning consists of the in-situ testing of equipment and systems that have not yet contributed to normal operation of a plant. It is carried out in order to verify that all systems meet their design functional requirements and achieve a satisfactory performance. Any shortcomings revealed are to be documented and corrected, and the appropriate workers informed.

Commissioning should include:

- risk assessment conducted and documented;
- the setting to work of systems;
- validation of documented design assumptions;
- proving up system capability;
- validation of operating, emergency and maintenance procedures;
- verification and optimisation of overall performance;
- training of workers;
- submission and approval of plant handover documentation on completion; and
- verification of required critical spares.

## 2 Key Objectives and Principles

Commissioning should follow an orderly process as defined in the Commissioning Plan. It should be a bottom up process, gradually increasing levels of integration of the system. There should be clear demarcations separating the levels and any hold points. Any changes to the commissioning process must be documented and the appropriate workers informed. This information must include:

- what the reasons were that caused the changes;
- what actions were put in place to mitigate the issues; and
- who was informed.

A risk assessment must be documented prior to commissioning and must include the input of all relevant stakeholders. Refer to Risk Assessment Form.

Commissioning does not normally extend to the testing of smaller sub-components of the system – these should be tested individually prior to commissioning. Commissioning tests the integrated plant system or process although may take place at various stages during the construction process.

Commissioning provides an opportunity to train the maintenance and operational workers and confirm what competencies are required.

Checking of the completeness, readability and maintenance of up-to-date system manuals, drawings and procedures should be included.

## 3 Commissioning Plan

A documented Commissioning Plan must be in place and must include:

- a schedule of specific commissioning tests that encompass all equipment, systems and design assumptions associated with safety;
- acceptance criteria, prerequisites and any post-test actions;
- process flowcharts or other suitable documentation/drawings to show how the system ties together as a whole;
- fault management, including contingency plans for unexpected events;
- a risk assessment;
- details of workers involved including training/qualifications;
- defined responsibilities;
- communication arrangements including a pre-start meeting;
- access/security arrangements to prevent unwanted interference;
- record of actual commissioning and any issues; and
- arrangements for handover to operational workers.

Commissioning of Plant or Process Template Form provides a Commissioning Plan template as a guide for MWPA internal use. The Plan should be modified to suit the complexity of the process and may require additional sections depending on the risks identified during the risk assessment.

## 4 Contractors

Contractors undertaking commissioning work that impacts on or interfaces with MWPA infrastructure must provide MWPA with a copy of their Commissioning Plan and the process must meet the standards outlined in this Procedure. MWPA template can be used if the company does not have their own form, however, the MWPA logo and reference must be removed.

## 5 Classified Plant

Chapter 5 of the *Work Health and Safety (Mines) Regulations 2022* sets out broad duties for people who design, manufacture, import, or supply plant for use at workplaces. These duties are to ensure that the design and construction of plant does not expose people who properly install, maintain or use it to hazards.

The Act also includes similar duties for those who design or construct buildings or structures. The *Mines Safety and Inspection Levy Regulations 2010* (MSIR) require classified plant to be designed, constructed and tested to the appropriate Australian Standard:

- Boiler – AS 1228;
- Pressure Vessel - AS 1210;
- Crane or Hoist - AS 1418; and
- Lift – AS 1735.

MWPA shall ensure that before any classified plant of a type set out in the MSIR 6.34 sub-regulation (5) is used at a mine; the plant has been registered with the State Mining Engineer. This includes, but is not limited to, pressure vessels, cranes and hoists.

In accordance with the MSIR 6.35, any worker who repairs or modifies any classified plant must ensure that before the plant is used, that it conforms to the Australian Standard applicable in MSIR 6.33, and that such repairs or modifications are inspected by an approved competent worker authorised to carry out such inspections prior to the plant and equipment being put back to service.

Following repairs and modifications to classified plant, the respective risk assessment for that plant and equipment shall be reviewed to reflect modifications and repairs made. A change management process shall be implemented to ensure all workers, are made aware to the extent of repairs and modifications to plant and equipment.

The appointed Classified Plant Coordinator will ensure all classified plant is recorded in the Classified Plant Register and all repairs and modifications are recorded as per legislation.

## 6 Associated Documents

Document Title
Classified Plant Register
Commissioning of Plant or Process Template Form
Job Safety Environment Analysis (JSEA) Risk Assessment

**Location** – Mid West Ports Intranet – [Document Centre](#)

## 7 References

Act or Regulation	Description
<i>Work Health and Safety (Mines) Regulations 2022</i>	Chapter 5 - Plant and Structures - Duties of
	Division 7 - General duties of a person conducting a business or undertaking involving the management or control of plant

Location - Western Australian - <https://www.legislation.wa.gov.au> | Australian - <https://www.legislation.gov.au>

## 8 Monitoring, Evaluation and Review

This document is required to be reviewed every two years from the last scheduled review date.

Minor updates made within this two year period, will not be taken as a *full review*.

The Document Custodian is responsible for conducting the review in accordance with **Controlled Documents Review and Approval Process Work Instruction**.

## 9 Administration

Document Custodian: Maintenance Services Manager

Document Approver: Chief Operating Officer

Approval Date: 31 July 2023

Document Review Period: 2 yrs