



WHS- 41 Plant and Equipment Procedure

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1.0	15/05/2014	n/a	Procedure approved and released
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1 Purpose

The purpose of this procedure is to define the requirements for managing plant and equipment at Territory Generation controlled sites, including:

- Application of the risk management process in order to identify hazards associated with the use of plant and equipment in the workplace in order to ensure that risks to health and safety associated with plant are assessed and controlled.
- Legislative and manufacturer's compliance requirements in regards to testing, maintenance, installation, commissioning, use, repair, alteration, dismantling, storage and disposal of plant and equipment.
- Legislative compliance requirements in regards to the registration of items of relevant plant such as pressure vessels, boilers, lifts, gantry cranes, mobile cranes with a capacity over 10t etc. and
- The requirements to provide relevant information, training and licencing to safely operate plant.

2 Scope

This procedure applies to all Territory Generation controlled sites.

This procedure does not apply to Projects conducted under PWC procurement procedures, however, the same WHS legislative requirements and outcomes of this procedure shall be met.

Plant and equipment covered by this procedure includes machinery, equipment, appliances, implements and tooling for example cranes, forklifts, elevated work platforms, vehicles, power tools (not including hand held power tools bought from a retailer) etc.

For mobile plant this procedure is to be referred to in conjunction with G-WHS-40 *Territory Generation Mobile Plant and Machinery* procedure.

Plant that relies exclusively on manual power for its operation and is designed to be primarily supported by hand, e.g. a screw driver; is not covered by this procedure. The general duty of care under the WHS Act applies to this type of plant.

3 Document Roles and Responsibilities

Role / Title	Responsibility
Chief Executive Officer	Shall ensure that : <ul style="list-style-type: none"> • All personnel are aware of requirements of this procedure and its management in sites under Territory Generation control. • Initiates procedure review as required.
All Managers/Site Coordinators	Shall ensure that: <ul style="list-style-type: none"> • This procedure is put in place at all Territory Generation controlled power stations sites. • Personnel are advised and trained as necessary in the procedure to be followed. • Contractors are informed of and follow the procedure, where applicable. • Contribute to procedure reviews

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Project Officers/Contract Managers	<p>Shall ensure that:</p> <ul style="list-style-type: none"> Contractors under their control are informed of and follow the procedure, where applicable. Contribute to procedure reviews
All Personnel	<p>Shall ensure that:</p> <ul style="list-style-type: none"> This procedure is followed personally and by contractors/visitors under their control, where applicable Contribute to procedure reviews
Document Owner	<ul style="list-style-type: none"> The position responsible for the preparation, review and accuracy of this document.
Document Sponsor	<ul style="list-style-type: none"> The position responsible for the approval and use of this document

4 Definitions

<i>Approved</i>	Means having appropriate organisation endorsement in writing.
<i>Authorised (Under WHS Act)</i>	Means authorised by a license, permit, registration or other authority (however described) as required by the NT WHS (NUL) Regulations.
<i>Authorised person (PWC)</i>	Means a competent person with technical knowledge or sufficient experience who has been approved to act on behalf of Power and Water to do the duty concerned.
<i>Competent Person</i>	Means a person who has acquired through training, qualification or experience the knowledge and skills to carry out the task
<i>Commissioning</i>	Means performing necessary adjustments, tests and inspections to ensure that plant is in full working order to specified requirements, and includes recommissioning.
<i>Design</i>	Means a substance or a structure includes design of part of the plant, substance or structure and redesign or modify a design
<i>Plant</i>	<p>Means:</p> <ol style="list-style-type: none"> Any machinery, equipment, appliance, container, implement and tool; and Any component of any of those things; and Anything fitted or connected to any of those things
<i>Plant Purchasing Officer</i>	For the purpose of this procedure means the person responsible for the sourcing, purchase and introduction of new plant or equipment to a

	Territory Generation controlled site. This role may be conducted by an individual or a specific Project Manager.
<i>Worker</i>	Means a person who carries out work in any capacity for a person conducting a business or undertaking (PCBU) as specified in Section 7 of the WHS (NUL) Act
<i>Shall</i>	Mandatory requirement
<i>Should</i>	Advisory requirement

5 References

- Work health and Safety NUL Act 2011
- Work Health and Safety NUL Regulations 2013
- Code of Practice "Managing the Risks of Plant in the Workplace" 2013
- G-WHS-030 Territory Generation Operational Risk Assessment template

6 Records

The following records shall be kept in accordance with the relevant legislative and/or best practice policies.

- Risk Assessments and/or JSEA's
- Specific operational procedures
- Risk Management plans
- Training and licensing records
- Plant and equipment maintenance records, including commissioning.
- Statutory notifications.

7 General requirements

7.1 Site Managers/Coordinators shall ensure that:

- a) All hazards associated with plant and equipment on the sites under their control are identified and managed
- b) The identification of hazards should include all aspects associated with the legislative roles and duties as per WHS regulatory requirements (i.e.: designers, owners, employers, importers, suppliers, manufacturers, installers/commissioners).
- c) The hazard identification process should include all aspects of the lifecycle of any plant or equipment. (i.e.: purchase/hire/lease; commissioning; use; maintenance; decommissioning; alteration)

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- d) Plant risks shall be recorded and assessed using the [WHS-030 Operational Risk Assessment Template](#) (BDOC2013/326).
- e) Any risks not previously identified on the Territory Generation risk register shall be added to the Territory Generation Risk Register in GRACE (Speak to your friendly Territory Generation OH&S Staff about uploading into GRACE).
- f) The task based risk assessment process (Job Safety Environmental Analysis {JSEA} or equivalent) shall be used where job activities require the use of plant and equipment
- g) Appropriate training shall be provided and undertaken prior to activities associated with the use of plant and equipment
- h) Training process shall include identification of core competencies for plant, equipment and associated activities.
- i) Plant operators shall hold appropriate licencing, where applicable
- j) Contractor activities associated with the use of plant and equipment are coordinated, supervised, monitored and reviewed for compliance.
- k) Appropriate inspection requirements for plant and equipment are identified, undertaken and recorded, (pre-operational checks, periodic maintenance checks, safety inspections, regulatory inspections etc.)
- l) Where required, certification occurs (e.g. Pressure vessels, certificate of occupancy etc.)
- m) Where required log books for pre operation checks are completed by all workers
- n) That relevant records are retained and are available (e.g. certification documents, inspection check sheets, training records, corrective action records etc.
- o) That any corrective or preventative actions required for the continual improvement of the plant and equipment is implemented at the sites under their control

7.2 Workers shall:

- a) Follow safe operating procedures and/or manufacturer's instructions for plant and equipment at all times
- b) Use any aids, personal protective equipment and safety equipment provided in relation to the safe operation of plant and equipment
- c) Not use plant or equipment that has been locked out or tagged out of service, or cause those tags to be removed or damaged
- p) Not use any plant or equipment for which they have not been appropriately instructed, trained, authorised or licenced, as applicable.
- d) Attending relevant training, when required
- e) Immediately report hazardous situations or safety problems associated with plant and equipment to their Manager, Supervisor or Team Leader
- f) Assist in assessing plant and equipment risk, implementing control measures and evaluating them for effectiveness as required

8 Risk Management

- 8.1 The Site Manager/Coordinator *shall* ensure that the hierarchy of controls is applied in the management of plant risks for the sites under their control. This process includes:
- a) Eliminating the hazards or hazardous work practice associated with the plant
 - b) Substituting the plant (or the hazardous parts of it) with plant that is less hazardous and presents lower risks
 - c) Isolating workers from the hazardous plant by distance or barriers
 - d) Incorporating engineering controls including possible modifications to tools or equipment
 - e) Administrative controls, such as safe operating procedures
 - f) Personal Protective equipment (PPE) as the last line of defence if higher order control measures are not practicable; or to supplement other control measures.
 - g) Monitoring and evaluating controls for effectiveness
 - h) Recommencing the risk assessment process if new plant hazards are identified
 - i) Communicating the outcomes of the risk assessment process to relevant stakeholders,
- 8.2 The [WHS-030 Operational Risk Assessment Template](#) (BDOC2013/326) shall be used to document the conduct of plant risk assessments

9 Introducing New Plant or Equipment

A risk assessment based plant selection and acceptance process shall be conducted by the relevant *plant purchasing officer* prior to purchase.

The *plant purchasing officer* shall, where reasonably practicable, apply the following processes:

- 9.1 A pre-purchase review of the item of plant or equipment with relevant stakeholders including where appropriate Territory Generation WHS personnel, Health and Safety Representatives and workers who will be using the new plant or equipment;
- 9.2 If relevant and practicable a demonstration should be conducted by the supplier with relevant stakeholders before the purchase occurs.
- 9.3 A review of the risk assessment provided by the supplier
- 9.4 A review of the operating instructions provided by the manufacturer
- 9.5 A review of legislative and relevant Australian Standard requirements including plant registration, certification and licenses etc.
- 9.6 Identification and control of any specific plant hazards such as moving parts, manual tasks to operate, pressure, electricity, noise, extreme temperatures etc.
- 9.7 The identification of any specific requirements for plant installation, maintenance, inspection, storage etc.
- 9.8 The identification of any specific requirements for plant decommissioning or disposal etc. of old plant or equipment being replaced, if applicable

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- 9.9 The identification of any specific training, instruction or operator licensing etc. for plant users/operators/maintainers (NOTE: This shall be complied with before the plant is operated)
- 9.10 Consideration of the need to develop any specific plant operational procedure's/safe working instructions in consultation with end users, prior to operating the plant
- 9.11 In the event of complex plant or missing documentation, specialised expertise may be required to assist in completing the risk assessment process. These situations include those where:
- a) There is uncertainty about the degree of risk
 - b) There is a significant risk, for example, exposure to sustained noise, plant that requires complex guarding etc.;
 - c) Plant that has not been manufactured in Australia;
 - d) Plant that is of such a nature that specialist knowledge is required to complete the risk assessment competently;
 - e) Plant that requires a Hazard & Operability Analysis (Hazop) or similar
- 9.12 A Territory Generation Operational Risk Assessment template shall be used to document the conduct of plant risk assessments and shall be completed by the *plant purchasing officer*
- 9.13 The relevant site Manager/Coordinator *shall* ensure that the plant risk assessment conducted by the *plant purchasing officer* demonstrates that:
- a) Any risks associated with the plant are eliminated or reduced to as low as reasonably practicable through the hierarchy of controls prior to the plant being purchased
 - b) All hazards identified during the risk assessment process are added to the Territory Generation WHS Risk Register
 - c) If the risk assessment has rated the risk of using the plant as extreme, then:
 - i) The purchase shall only proceed if an alternative item of plant with lower risk is not able to be sourced or additional controls in line with the hierarchy of controls can reduce the risk rating; or
 - ii) If an alternative item of plant with lower risk is unable to be sourced, and the risk is unable to be reduced from extreme, the purchase shall not proceed.

10 Installation and Commissioning of new plant

- 10.1 The relevant Project Manager *shall* ensure during the installation, erection or commissioning of plant:
- a) An installation, erection or commissioning plan *shall* be documented, prior to the activity occurring.
 - b) A competent person undertakes any installation, erection or commissioning, and is provided with such information as is necessary to enable the plant to be installed and commissioned so as to minimise any risk to health or safety;
 - c) That the plant is installed or erected in a location that is suitable for the operation being undertaken and the type of plant in use;

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- d) That there is sufficient space around the plant to allow the plant to be used and repaired so as to minimise any risk to health or safety;
- e) That a proper layout of the workplace, and safe access and egress, is provided;
- f) If the final means of safeguarding is not in place during any testing or start-up, that an interim safeguard is used;
- g) As far as can be determined by commissioning, that the plant is in an appropriate state to be transferred into active service.

10.2 On commissioning the relevant Project Manager shall ensure that:

- a) The plant or equipment is recorded in the Asset Management System and
- b) Relevant maintenance and inspections schedules are to be established, where applicable
- c) Records of the installation and commissioning process are retained, in accordance with Territory Generation Procedures.

11 Inspection, testing, maintenance, alteration and repair

11.1 A maintenance schedule *shall* be developed by the Project Manager in consultation with the Asset Manager and/or Maintenance Manager detailing the inspection, testing and or maintenance requirements for each item of plant (including any registration or certification requirements).

- a) The maintenance schedule shall include the testing and maintenance requirements for all safety features and/or warning devices.
- b) Inspections, maintenance and cleaning shall be conducted in accordance with procedures recommended by the designer or manufacturer, or those developed by a competent person.

11.2 If access is required for the purpose of maintenance, cleaning or repair, the plant shall be accessed in accordance with Territory Generation Access to Apparatus procedures, where applicable.

11.3 If plant is altered, it must be altered, inspected and tested by a competent person, having regard to any relevant design specification (taking into account any alteration to the design) prior to the plant being returned to service.

11.4 Only competent persons shall undertake inspection, testing, maintenance and repair activities.

- a) Repairs *shall* be carried out so as to retain the plant within its design limits
- b) Records of repair, inspection, testing and maintenance activities *shall* be retained.

11.5 All mobile plant and equipment shall have log books for the recording of pre-operation inspection checklists

11.6 If a hazard has been identified during plant use the Site Manager/Coordinator in consultation with the Territory Generation WHS personnel, Health and Safety Representatives and workers using the new plant shall:

- a) Re-evaluate the existing controls

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- b) Document an action plan and implement and monitor the controls selected from the Hierarchy of Control
- c) If the function or condition of plant is impaired or damaged to an extent that gives rise to an immediate risk to health or safety, the plant *shall* be immediately withdrawn from use until the risk is controlled or the plant is repaired in accordance with the following:
 - i. The operating controls shall be isolated and/or tagged out of service and the item of plant withdrawn, when practicable, from the usual operating environment.
 - ii. Where appropriate, the requirement not to use an item of plant shall be formally communicated to all end users and a record of the communication shall be retained.
 - iii. Corrective and preventative actions shall be identified and implemented in accordance with Territory Generation Procedures.
 - iv. Monitoring occurs to ensure control actions are effective.
- d) The Site Manager/Coordinator shall check that the appropriate report has been made in the Incident reporting database (GRACE).

12 Dismantling and Storage

- 12.1 Plant *shall* only be dismantled and/or stored by *competent* and *authorised* persons.
- 12.2 When in storage, plant shall be left in a state that does not create a hazard in the workplace.
- 12.3 Where required plant shall be stored in accordance with manufacturers requirements
- 12.4 Dismantled or stored plant shall remain on the Asset Management System.
- 12.5 The responsibility for plant in storage remains with the Site Manager/Coordinator.

13 Movement of plant and equipment between sites

- 13.1 The Project Manager, in consultation with Territory Generation WHS personnel, Health and Safety Representatives and workers who will be using the plant shall undertake a risk assessment for the movement and use of plant at the new location.
- 13.2 The Project Manager shall notify the Asset Manager if the location of the plant has been changed permanently and the Asset Management System shall be updated to reflect the changes made.

14 Disposal or Salvage

- 14.1 Any plant for disposal or salvage shall comply with the requirements of the NT WHS (NUL Regulations, Section 204.)
- 14.2 The person who is being supplied with the plant shall be given any relevant:
 - a) Health or safety information prepared by the designer or manufacturer of the plant, which Territory Generation holds, and
 - b) Any records relating to the plant
- 14.3 Point 13.2 does not apply to plant that is being sold for scrap or spare parts.

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- 14.4 If the plant for disposal contains materials which are likely to present a risk to the health and safety of individuals or the environment, relevant regulatory requirements shall be observed.
- 14.5 The Site Manager/Coordinator or delegate shall:
- Notify NT WorkSafe if the item being disposed of is a registered item of plant
 - Arrange for the plant to be removed from the Asset Management System.

15 Plant related accidents or incidents

- 15.1 No person shall put themselves at risk to deliver first aid when plant is involved. If the situation is hazardous and cannot be made safe for the delivery of first aid, the person on the scene shall initiate the appropriate emergency response in accordance with that sites emergency plan.
- 15.2 The Site Manager/Coordinator or delegate shall secure the scene of an accident or incident to ensure accurate information can be obtained for investigation purposes, where appropriate
- 15.3 The Regulator shall be notified immediately after the Site Manager/Coordinator or delegate becomes aware that a notifiable incident has occurred.

Notifiable incidents are as follows:

- The death of a person; or
- A serious injury or illness of a person; or
- A dangerous incident.

NOTE: More information on what constitutes a notifiable incident is in the *NT WHS (NUL) Act*, Part 3 Sections 35 to 39.

- 15.4 The incident *shall* be logged into GRACE and the Territory Generation incident reporting and investigation procedure *shall* be complied with.

16 Training

- 16.1 Site Managers/Coordinators shall ensure, so far as is reasonably practicable that any item of new plant is not operated or maintained at the workplace, unless the operators and maintenance staff have been provided with adequate information, instruction and training.
- The information, instruction and training must be commensurate with any risk to health or safety that has been identified by the risk assessment process.
 - When required, workers *shall* hold a current licence for plant operation and maintenance
 - Employee training and licensing records shall be recorded in the Training Management System.
- 16.2 Contractors shall only be authorised to use Territory Generation owned and controlled plant and equipment in circumstances such as where the equipment is fixed and not easily replaced by contractor's equipment, such as lifting gantries in workshops, anchorage points etc. or where authorisation has specifically been given as part of the contracted works e.g. forklift usage, overhead crane usage

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- 16.3 Contractors authorised to use Territory Generation owned and controlled plant and equipment shall demonstrate evidence of training and licensing (where required) and the Project Manager/Site Contact *shall* be responsible for the verification of all competencies.