



Australian Government

PMAOPS505 Control the process during abnormal situations

Release: 1

PMAOPS505 Control the process during abnormal situations

Modification History

Release 1. Supersedes and is equivalent to PMAOPS505A Control the process during abnormal situations

Application

This unit of competency covers the skills and knowledge required to control a process during abnormal or declared incident situations to prevent or avoid an emergency and restore the plant/process to a stable condition.

This unit of competency applies to senior technicians or those in similar roles who are required to apply in-depth knowledge of process and plant operations and problem solving in order to clarify the situation, prioritise the responses and actions, organise and direct the operations team, review the situation and respond to any changes, and communicate with all relevant stakeholders.

This person may, or may not be 'hands on' with the control panel during this abnormal situation, but will take control and direct the response to the abnormal situation. The person will often be a shift supervisor or similar.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Operations

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Identify the abnormal situation	1.1	Identify the state of the plant/process
		1.2	Gather available information on the plant/process with particular focus on trends and rates of change
		1.3	Verify and confirm situation with other technicians in

the area and any upstream or downstream units

- | | | |
|---|---|---|
| 2 | Respond appropriately | <div>2.1 Apply immediate actions to respond to the abnormal situation to bring the plant/process to a safer state</div> <div>2.2 Decide whether to continue operations, shutdown or abandon</div> <div>2.3 Keep in contact with other technicians in the area</div> |
| 3 | Review and respond to changes | <div>3.1 Review the situation, gather data on the state of the plant/process and the trends and rates of change</div> <div>3.2 Make changes to the state of the plant/process to keep parameters within limits</div> <div>3.3 Rectify or initiate procedures to rectify any faults or adjustments to secure the safe operation of the plant/process</div> <div>3.4 Review the state of the recovery, making adjustments as required</div> <div>3.5 Keep all other stakeholders informed of progress</div> <div>3.6 When plant is restored to stable conditions, continue to monitor the situation</div> |
| 4 | Document abnormal situation and response | <div>4.1 Complete all logs and workplace documentation relating to the abnormal situation, ensuring all details, actions and responses are accurately recorded</div> <div>4.2 Record any further ongoing production problems and report to appropriate persons or authority</div> |

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Regulatory framework The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, must be used, and include one or more of the following:

- legislative requirements, including work health and safety (WHS)
- industry codes of practice and guidelines
- environmental regulations and guidelines
- Australian and other standards
- licence and certification requirements

All operations to which this unit applies are subject to stringent health, safety and environment (HSE) requirements, which may be imposed through state/territory or federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between performance criteria and HSE requirements, the HSE requirements take precedence.

Hazards Hazards include one or more of the following:

- electricity
- gas clouds
- gases and liquids under pressure
- structural hazards
- structural collapse
- equipment failures
- industrial (machinery, equipment and product)
- equipment or product mass
- noise, rotational equipment or vibration
- plant services (steam, condensate and cooling water)
- working at heights, in restricted or confined spaces, or in environments subjected to smoke, darkness, heat, dust, vapours or other atmospheric hazards
- fire and explosion
- flammability and explosivity
- hazardous products and materials
- unauthorised personnel
- sharp edges, protrusions or obstructions
- slippery surfaces, spills or leaks
- extreme weather

- other hazards that might arise

Procedures All operations must be performed in accordance with relevant procedures.

Procedures are written, verbal, visual, computer-based or in some other form, include one or more of the following:

- emergency procedures
- work instructions
- standard operating procedures (SOPs)
- safe work method statements (SWMS)
- formulas/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant

Unit Mapping Information

Release 1. Supersedes and is equivalent to PMAOPS505A Control the process during abnormal situations

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875>

Assessment Requirements for PMAOPS505 Control the process during abnormal situations

Modification History

Release 1. Supersedes and is equivalent to PMAOPS505A Control the process during abnormal situations

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria, and include the ability to:

- analyse and interpret schematics, technical information, performance data and operational practices
- determine and initiate any immediate corrective action (quick fix) required
- communicate effectively with internal and external stakeholders under stress
- analyse rapidly changing and possibly confusing data to determine best course of action
- monitor and adjust actions and directions to other personnel to meet changing conditions
- identify and resolve problems
- lead and direct operational team.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- principles of operation of plant/equipment, its characteristics and limitations
- impact of variations in plant/process and the distinctive signs of each variation
- process chemistry, physics and biochemistry and its application to abnormal situations
- problem isolation techniques
- problem analysis techniques
- systems operating parameters, system integrity limits, process control philosophies and strategies, product specifications and tolerances
- hierarchy of control
- hazards that may arise in the job/work environment, and:
 - their possible causes
 - potential consequences
 - appropriate risk controls.

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence based on a holistic assessment of the evidence.
- The collection of performance evidence:

- should occur over a range of situations which include typical disruptions to normal, smooth operations
- will typically include a supervisor/third-party report focusing on consistent performance and problem recognition and solving. A supervisor/third-party report must be prepared by someone who has a direct, relevant, current relationship with the person being assessed and who is in a position to form a judgement on workplace performance relevant to the unit of competency
- must include the use of industrial type plant and situations allowing identification and review of abnormal situations
- may use industry-based simulation for all or part of the unit particularly where safety, lack of opportunity or significant cost is an issue.
- Assessment should occur in operational workplace situations. Where this is not possible, or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment reflecting realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Assessment in a simulated environment should use evidence collected from one or more of:
 - walk-throughs
 - pilot plant operation
 - demonstration of skills
 - industry-based case studies/scenarios
 - 'what ifs'.
- Knowledge evidence may be collected concurrently with performance evidence (provided a record is kept) or through an independent process, such as workbooks, written assessments or interviews (provided a record is kept).
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- The regulatory framework will be reflected in workplace policies and procedures and is not required to be independently assessed.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- In addition, the assessor or anyone acting in subject matter expert role in assessment must demonstrate both technical competency and currency. If the assessor cannot demonstrate technical competency and currency they must assess with a subject matter expert who does meet these requirements.
- Technical competence can be demonstrated through one or more of:
 - relevant VET or other qualification/Statement of Attainment

- appropriate workplace experience undertaking the type of work being assessed under routine and non-routine conditions
- appropriate workplace experience supervising/evaluating the type of work being assessed under routine and non-routine conditions
- Currency can be demonstrated through one or more of:
 - being currently employed undertaking the type of work being assessed
 - being employed by the organisation undertaking the type of work being assessed and having maintained currency in accordance with that organisation's policies and procedures
 - having consulted/had contact with an organisation undertaking the type of work being assessed within the last twelve months, the consultation/contact being related to assessment
 - conducting on-the-job training/assessments of the type of work being assessed
 - being an active member of a relevant professional body and participating in activities relevant to the assessment of this type of work.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875>