Australian Government

PMAOPS216 Operate local control system

Release: 1

PMAOPS216 Operate local control system

Modification History

Release 1. Supersedes and is equivalent to PMAOPS216B Operate local control system

Application

This unit of competency covers the skills and knowledge required to operate a local control panel.

These controllers use simple control algorithms and only a limited number of control loops. Typically it will be located on the plant, but may be located off-plant. This unit of competency also applies to simple panels in a control room which are not part of the main control panel.

This unit of competency applies to operators who are required to start up and shut down equipment using the local control system; monitor and control process variables, such as temperature or pressure; operate valves and pumps to add raw materials and/or additives; and discharge product.

The operator is expected to be capable of performing all parts of this unit of competency. Generally the operator would be part of a team during start-up and shutdown procedures. At all times they would be liaising and cooperating with other members of the team.

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	**Prepare for work**	1.1	Receive and give shift handover
		1.2	Identify work requirements
		1.3	Identify and control hazards

		1.4	Coordinate with appropriate personnel
		1.5	Check for recent work undertaken on plant units being controlled
		1.6	Note any outstanding/incomplete work
		1.7	Check operational status of plant units being controlled
2	**Interface with the control panel**	2.1	Monitor the process using the operator interfaces and keep appropriate personnel informed on developments
		2.2	Select appropriate controller modes to ensure the effective control of the process
		2.3	Undertake required set point/output changes to optimise plant and process requirements
		2.4	Access historical data and information
		2.5	Acknowledge messages and alarms
3	**Control the process using the local control system**	3.1	Obtain relevant data and information from the control system by applying systems knowledge
		3.2	Identify the status of individual pieces of equipment from the control panel and use information to identify potential faults
		3.3	Interpret alarms and prioritise steps to ensure control of system is maintained
		3.4	Minimise fluctuations and variations in process through the interpretation of existing trends and control schematics
		3.5	Make required set point/output changes to meet plant and process requirements
		3.6	Take other appropriate action as required
		3.7	Record process variations/irregularities in accordance with procedures

4	**Facilitate planned and unplanned process start-ups and shutdowns**	4.1	Respond to all alarms and take appropriate action
		4.2	Maintain coordination with all outside services and operations in order to assist in the correct identification and reporting of faults
		4.3	Conduct planned start-up and shutdown processes to procedures
		4.4	Conduct unplanned start-up and shutdown processes to procedures
		4.5	Communicate with all operational areas and personnel affected by unplanned events to ensure safety is maintained during the process
		4.6	Implement all required and stated emergency responses and ensure the outcomes of these responses are communicated to all affected areas
		4.7	Log all required information for further action to provide a historical record of all events

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.

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

Procedures are written, verbal, visual, computer-based or in some other form, and 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.

Hazards Hazards include one or more of the following:

- electricity
- gas
- 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 heat, noise, dusts or vapours
- 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

Routine problems

Routine problems must be resolved by applying known solutions.

Routine problems are predictable and include one or more of the following:

- variation/loss of feed
- unstable control of pressure, temperature level and flows
- control equipment failure
- process plant trips
- change in atmospheric conditions (rain, temperature, wind and lightning)
- emergency situations
- loss of power/utilities

Known solutions are drawn from one or more of the following:

- procedures
- training
- remembered experience

Non-routine problems must be reported according to according to relevant procedures.

Operate

Operate is to monitor, adjust/change the plant item/unit/system to meet specifications, by:

- using local controller in the plant

Operator interfaces

Operator interfaces include one or more of the following:

- keyboards/key pads
- track ball/mouse
- touch screen
- monitor
- standalone devices

Equipment

This unit includes all items of equipment which form part of the production/processing system. Equipment will be selected as required from the following:

- plant items requiring only simple control
- programmable logic controllers (PLCs)

- hard wired control and alarm panels
- analogue control systems
- personal computers
- printers
- fire and gas detection/protection systems
- emergency shutdown systems
- communications systems

Appropriate action

Appropriate action includes the following:

- determining problems needing action
- determining possible fault causes
- rectifying problem using appropriate solution within area of responsibility
- following through items initiated until final resolution has occurred
- reporting problems outside area of responsibility to designated person

Start up/shut down

Start-up/shut down includes the following:

- start up and shut down to/from normal operating conditions
- start up and shut down to/from isolated, cold or empty
- start up and shut down to/from all other conditions experienced on the plant (i.e. from any condition to any condition experienced on the plant)

Unit Mapping Information

Release 1. Supersedes and is equivalent to PMAOPS216B Operate local control system

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875