



Australian Government

Department of Education, Employment and Workplace Relations

SUGPARS2A Operate an ash separation system

Revision Number: 1

SUGPARS2A Operate an ash separation system

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to operate a system to separate ash solids from boiler sluice water by use of clarifiers and filters.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare the ash separation system for operation	1.1 Materials are confirmed and available to meet requirements 1.2 Services are confirmed as available and ready for operation 1.3 Equipment is checked to confirm readiness for use 1.4 The ash separation process is set to meet production requirements 1.5 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures
2. Operate the ash separation process	2.1 The ash separation system is operated within limits of manufacturer's specifications to meet workplace requirements 2.2 The ash separation system is monitored to confirm performance is maintained within manufacturer's specifications to meet workplace requirements 2.3 The workplace meets housekeeping standards
3. Analyse and respond to abnormal performance	3.1 System operating conditions are monitored to identify causes of abnormal performance 3.2 Corrective action is taken in accordance with workplace procedures in response to Hazards and abnormal plant performance 3.3 Emergency procedures are implemented as required according to workplace procedures and manufacturer's recommendations
4. Handover ash separation operations	4.1 Operating log is maintained in accordance with workplace procedures 4.2 Handover is carried out according to workplace procedure 4.3 System operators are aware of system and related equipment status at completion of handover
5. Complete ash separation operations	5.1 Ash is collected and disposed according to company procedures 5.2 Maintenance requirements are identified and reported according to workplace reporting procedure 5.3 Workplace information is recorded according to

Element

Performance criteria

workplace recording requirements

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information ash separation requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm status of equipment and that services are available
4. Conduct pre-start checks
5. Demonstrate start up procedures for preparing and operating each equipment component in the system
6. Demonstrate safe chemical preparation and handling
7. Monitor the ash separation system. This typically includes visual inspection and conducting tests to monitor characteristics such as:
 - moisture content of ash going out of the system
 - available storage capacity of ash holding area
 - filter performance and condition
8. Take corrective action in response to abnormal or unacceptable performance
9. Report and/or record corrective action as required
10. Demonstrate shift handover procedure and confirm that replacement operators are aware of equipment status and operating requirements prior to completing handover
11. Record operating information
12. Maintain work area to meet housekeeping standards

May include ability to:

13. Use process control systems

Knowledge of:

14. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
15. Safe work procedures including awareness of health and safety hazards related to operation of the ash removal system and associated control measures. Hazards typically include working with airborne particulates containing silica, chemical handling and use of hot water
16. Purpose and limitations of protective clothing and equipment
17. Methods used to render equipment safe to inspect, maintain and/or clean including lock-out, tag-out and isolation procedures
18. Properties of ash or soot and the impact on filter operation
19. Functions and operating principles of ash separation system and related equipment
20. Relationship between vacuum, filter speed and cake permeability
21. Operating requirements and parameters
22. Test methods
23. Common causes of variation and corrective action required
24. Procedures for responding to emergency situations. This includes safe shutdown procedure
25. Handover and long term shut down and storage procedures
26. Environmental issues and controls
27. Procedures for containing and managing ash spills

- 28. Housekeeping standards for the work area
- 29. Reporting and recording systems

May include knowledge of:

- 30. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Ash separation system and related equipment
- Relevant codes and standards
- Operating procedures and related advice on equipment operation
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- Equipment may include grate cleaning system, ash and soot blowing equipment, ash removal system, pumps, weirs, tanks, belt and rotary filters, chemical addition systems and clarifier
- Ash separation may involve use of clarifiers followed by a filter, use of screens or by filter only
- Services may include general mill water supply, power and mill and instrumentation air
- Chemicals may include caustic soda and flocculants

- Typical test requirements include pH, settling tests, clarity or turbidity
- Confirming equipment status involves conducting relevant pre-start checks, confirming that housekeeping standards are met, all safety guards are in place and equipment is operational
- Operation and monitoring of equipment and processes may require the use of control panels and systems
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.