

Annex A

Module Titles:

- Module 1: Operate safely in used water treatment plant
- Module 2: Monitor and operate liquid stream facility in used water treatment plant
- Module 3: Perform sampling of used water
- Module 4: Perform basic laboratory tests for used water
- Module 5: Monitor and operate solid stream and odour control facilities in used water treatment plant
- Module 6: Operate and perform minor maintenance for mechanical and electrical equipment in used water treatment plant
- Module 7: Apply quality systems
- Module 8: Apply teamwork in the workplace

Course Outline:

Module 1:

Operate safely in used water treatment plant

This module provides generic knowledge and application skills in operating safely in a used water treatment plant. It covers the safety requirements in the Workplace Safety and Health Act, organisational safety procedures, use of Personal Protective Equipment (PPE) and safety equipment, and an emergency preparedness response plan. This unit provides learners the opportunity to apply, demonstrate and practise the knowledge and skills learnt to operate safely in a used water treatment plant through classroom and practical sessions.

On completion of this module, learners will have the generic knowledge and application skills to apply Workplace Safety and Health practices and organisational safety procedures to operate safely in a used water treatment plant.

Module 2:

Monitor and operate liquid stream facility in used water treatment plant

This module provides generic knowledge and application skills in monitoring and operating the liquid stream facility in a used water treatment plant. It covers monitoring and recording used water parameters, operating screening and grit removal process, operating sedimentation process, operating activated sludge process and operating nitrogen removal process. This unit provides learners the opportunity to apply, demonstrate and practise the skills learnt to monitor and operate the liquid stream of the used water treatment process through classroom and practical sessions.

On completion of this module, learners will have the generic knowledge and application skills to monitor and record used water parameters, operate screening and grit removal, sedimentation, activated sludge and nitrogen removal processes.

Module 3:

Perform sampling of used water

This module provides generic knowledge and application skills in performing sampling of used water in a used water treatment plant. It covers the theory and practical aspects of preparation, sampling activities and post-sampling activities. This unit provides learners the opportunity to apply, demonstrate and practise the knowledge and skills learnt to perform sampling of used water through classroom and practical sessions.

On completion of this module, learners will have the generic knowledge and application skills to carry out preparation, sampling and post-sampling activities.

Module 4:

Perform basic laboratory tests for used water

This module unit provides generic knowledge and application skills in performing basic laboratory tests for used water. It covers the theory and practical aspects of preparation, testing, analysis and documentation phases in performing laboratory tests. It also includes the handling and safety aspects. This unit provides learners the opportunity to apply, demonstrate and practise the knowledge and skills learnt to perform laboratory tests through classroom and laboratory sessions.

On completion of this module, learners will have the generic knowledge and application skills to safely handle, prepare, test, analyse and document laboratory tests.

Module 5:

Monitor and operate solid stream and odour control facilities in used water treatment plant

This module provides generic knowledge and application skills in monitoring and operating solid stream and odour control treatment process. It covers monitoring and recording sludge parameters, operating sludge thickening process, operating sludge digestion process, operating sludge de-watering process and operating odour control process. This unit provides learners the opportunity to apply, demonstrate and practise the skills learnt to monitor and operate solid stream and odour control treatment process through classroom and practical sessions.

On completion of this module, learners will have the generic knowledge and application skills to monitor and record sludge parameters, operate sludge thickening, sludge digestion, sludge de-watering and odour control processes.

Module 6:

Operate and perform minor maintenance for mechanical and electrical equipment in used water treatment plant

This module provides the knowledge and application skills to operate mechanical and electrical equipment in a used water treatment plant. It covers the basic operation and identification of necessary maintenance of mechanical and electrical equipment in a used water treatment plant. It is intended for operational personnel working in a used water treatment plant. This module provides learners the opportunity to apply, demonstrate and practise the skills learnt to operate mechanical and electrical equipment through classroom and practical sessions.

On completion of this unit, learners will have the generic knowledge and application skills to operate and identify the necessary maintenance required for mechanical and electrical equipment in a used water treatment plant.

Module 7:

Apply quality systems

On completion of this unit, learner will have the knowledge and application skills in carrying out planning and carrying out daily work to meet quality system requirements as well as maintaining and improving work quality.

Module 8:

Apply teamwork in the workplace

On completion of this unit, learners will have the skills and knowledge in working as a team and participating in team activities in their work area.