



Australian Government

RIISTD401 Monitor quarry laboratory operations and the quality of results

Release: 1

RIISTD401 Monitor quarry laboratory operations and the quality of results

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to monitor laboratory operations and the quality of results in the extractive industry. It prepares individuals to establish resource requirements, procure resources, manage personnel within work area, assess the quality of data and results, report on findings and complete housekeeping activities.

It applies to those working in supervisory roles. They generally perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for the quantity and quality of the output of others, contribute to the development of technical solutions to non-routine problems and apply safety management plans to the workplace.

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

Unit Sector

Extractive

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to supervise laboratory operations and monitor quality of test results	1.1 Obtain, interpret and confirm work requirements 1.2 Access, interpret and apply documentation required to supervise laboratory operations and monitor quality of test results and confirm work activity is compliant 1.3 Monitor risk management and environmental protection and address non-compliance 1.4 Select and wear personal protective equipment required for work

ELEMENT	PERFORMANCE CRITERIA
	activity 1.5 Establish and implement communication system and coordinate activities with others prior to work activity 1.6 Prepare and implement an action plan in consultation with team members
2. Establish resource requirements and procure resources	2.1 Determine and confirm availability of required equipment and resources 2.2 Select and purchase new materials and equipment according to workplace procedures if required 2.3 Prepare operational plans which make the best use of available resources, considering client needs and workplace plans 2.4 Identify and analyse possible variances due to external/internal factors and prepare contingency plans
3. Manage personnel within work area	3.1 Confirm that personnel are competent to perform required tasks and organise training as required 3.2 Arrange for the recruitment and induction of personnel as required 3.3 Confirm personnel follow all relevant procedures, regulations and standards and that technical work is performed according to relevant standards, standard operating procedures (SOPs) and schedules 3.4 Monitor testing and sampling procedures for quality control according to workplace requirements 3.5 Develop and coordinate rosters to balance job requirements, laboratory efficiency and skill development opportunities 3.6 Empower work groups/teams in dealing with technical and workflow problems and suggest improvements 3.7 Provide coaching and mentoring to support personnel who have difficulties with meeting targets for performance and/or resource usage
4. Assess the quality of data/results	4.1 Review user checks and calibration performance records to confirm that equipment meets test specifications 4.2 Check for obvious sources of interferences that may have occurred during measurements 4.3 Review records of sample collection and preparation to confirm chain of custody requirements and adherence to sampling procedures 4.4 Check the condition of equipment and stored samples if available and appropriate 4.5 Review the quality of test results and data and document potential sources or instances of non-conforming work and asses their significance
5. Review performance and complete	5.1 Assess utilisation of plant, equipment and consumables and compare with planned usage

ELEMENT	PERFORMANCE CRITERIA
housekeeping	5.2 Program and arrange for maintenance of plant and equipment according to workplace maintenance schedules 5.3 Recommend preventative and corrective actions to improve sampling, testing and calibration activities 5.4 Maintain systems, procedures and records associated with resource usage according to workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Numeracy	Apply basic mathematical skills to determine data acceptability
Oral communication	Presents information and provides assistance using industry specific vocabulary
Reading	Identifies and interprets information from workplace documentation and legislation
Problem-solving	Identifies and rectifies deviations in results

Unit Mapping Information

New unit

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIISTD401 Monitor quarry laboratory operations and the quality of results

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- supervise laboratory operations and monitor quality of results on at least two occasions, including:
 - analysing at least two sets of test reports and data to detect potential or actual non-conformances, assess their significance, identify potential causes and recommend preventative or corrective actions
 - reviewing the accuracy and completeness of at least one set of technical records for sampling or testing activities, including:
 - instrument calibration/performance records
 - client requests or work orders however named
 - worksheets
 - competency records
 - reports
 - records of proficiency testing or quality assurance activities.

During the above, the candidate must:

- locate and apply required legislation, accreditation, documentation, policies and procedures
- interpret and implement required procedures and techniques, including:
 - using computers/data management devices and programs
 - reading and interpreting databases and spreadsheets
 - maintaining written and verbal reporting requirements and procedures
- work with others to supervise laboratory operations and monitor quality of test results to meet required outcomes, including:
 - communicating instructions to those involved
 - establishing and maintaining communication with all personnel and clients

- using a range of communication techniques and equipment to convey information to others.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key legislation required to supervise laboratory operations and monitor quality of test results, including:
 - National Association of Testing Authorities (NATA) accreditation program requirements
 - Australian and international standards and codes relevant to the laboratory's operations and scope of testing
- key policies, procedures and established requirement for supervising laboratory operations and monitoring the quality of test results, including those for:
 - budgeting, operational planning and efficient resource use
 - scheduling and completing internal audit
 - contingency planning
 - work health and safety
 - emergencies
 - environmental sustainability issues as they relate to the work task
 - workplace data quality and legal traceability
 - records and reports
 - housekeeping
- problem-solving techniques, including:
 - troubleshooting and fault-finding
 - risk analysis, cause analysis and/or aspect/impact analysis commensurate with the problem
 - non-routine operational, technical, administrative and/or personnel-related problems
- specifications for samples, tests or calibration activities under investigation
- procedures, equipment, materials and instrumentation used to generate test results and data
- apply basic mathematical skills to determine data acceptability
- typical sample collection and preparation problems and associated preventative and corrective actions
- human and environmental factors that may affect data
- sources of interference that may affect data
- workplace documents and/or plans covering management of laboratory services, quality, environment, personnel, budgets and maintenance
- laboratory services and/or products and customers in work or functional area
- business operational plans and key performance indicators (KPIs) for work or functional area

- team leadership, mentoring, coaching and training opportunities and techniques
- human resource management
- characteristic properties of the materials under investigation
- workplace industrial agreements and regulations dealing with hygiene, dress and behaviour of employees.

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - personal protective equipment
 - equipment required to supervise laboratory operations and monitor quality of test results
- be conducted in a safe environment; and,
- be assessed in the context of this sector's work environment; and,
- be assessed in compliance with relevant legislation/regulation and using policies, procedures and processes directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances.

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory regulatory standards as set out in the Standards for Registered Training Organisations 2015/Australian Quality Training Framework mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing the required level of RII training product knowledge
- having an understanding and knowledge of legislation and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence outlined in this unit of competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must have current industry skills directly relevant to the training and assessment being provided. This means the industry subject matter expert must demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 year
	2	2 years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 years
Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no industry standard is specified should comply with any relevant regulation.	

*Guidance on simulated environments has been stipulated in the RII implementation guide located on VETNet.

**Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a unit of competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

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