



Australian Government

Department of Education, Employment and Workplace Relations

MSS027009A Coordinate site remediation or rehabilitation activities

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit of competency covers the ability to oversee the day-to-day environmental remediation or rehabilitation activities at a site in accordance with an established management plan. Personnel assist with the planning and implementation of specific remediation/rehabilitation activities, liaise with contractors and consultants, and monitor both the progress and effectiveness of the activities. They work under the supervision of an environmental scientist or engineer, site manager or enterprise environmental manager.

Application of the Unit

This unit of competency is applicable to environmental site coordinators, environmental managers and senior environmental officers working in a range of industry sectors, such as:

- environmental monitoring, sampling and field testing (e.g. air, water, soil and noise)
- geotechnical services
- natural resource management (e.g. wetlands)
- landfill management
- site remediation or rehabilitation services (e.g. mine, construction and industrial).

Note that the term ‘manager’ is used to refer to management of a function, project and /or program and does not necessarily imply line management.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

<i>Path 1</i>	<i>MSS025006A</i>	<i>Collect and evaluate groundwater data</i>
	<i>MSS025007A</i>	<i>Perform sampling and testing of soils</i>
	<i>MSS024008A</i>	<i>Recognise common geological landforms and samples</i>

<i>Path 2</i>	<i>MSS025006A</i>	<i>Collect and evaluate groundwater data</i>
	<i>MSS025007A</i>	<i>Perform sampling and testing of soils</i>
	<i>MSS025013A</i>	<i>Assist with assessing and monitoring wetlands</i>

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

1	Confirm scope of site remediation and/or rehabilitation activities with manager	1.1	Locate and review legislative, regulatory, licensing/ approval and planning requirements that apply to the site
		1.2	Review background information, site remediation/ rehabilitation management plan and any relevant reports
		1.3	Review site remediation/rehabilitation goals and strategies, key stakeholders and their issues and likely constraints
		1.4	Review the technical specifications and plans for each activity
		1.5	Confirm the roles and responsibilities of the enterprise staff, consultants and contractors involved; the work requirements and timeframe for each activity
		1.6	Confirm own role, limits of responsibility and reporting requirements for the coordination of assigned activities

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| 2 | Plan and organise activities | 2.1 | Consolidate schedules of activities, timeframes and milestones on a single planning management framework to enable efficient coordination of each activity |
| | | 2.2 | Use appropriate project management tools to achieve efficient integration and sequencing of activities |
| | | 2.3 | Ensure that forward planning takes into account variables such as seasonal factors, availability of equipment, seeds and plants and site access |
| | | 2.4 | Identify possible/actual clashes and negotiate solutions with other staff, consultants, contractors and/or own manager, as appropriate |
| 3 | Liaise with site personnel and community members | 3.1 | Confirm that staff, consultants and/or contractors understand the timing and technical specifications for their assigned remediation/rehabilitation activities |
| | | 3.2 | Confirm that staff, consultants and/or contractors are aware of hazards and understand site safety procedures and their environmental management obligations |
| | | 3.3 | Provide timely, authorised information to community members about remediation/rehabilitation activities in accordance with enterprise procedures |
| | | 3.4 | Solve problems and address issues/complaints arising from remediation/rehabilitation activities within scope of responsibility |
| | | 3.5 | Refer complex problems, issues and complaints to relevant personnel in accordance with enterprise procedures |
| 4 | Monitor progress of activities | 4.1 | Anticipate risks to progress and notify relevant personnel |
| | | 4.2 | Monitor completion of activities and progress against work requirements and milestones |

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| | | 4.3 | Develop solutions in response to problems or unforeseen/changed circumstances in consultation with site personnel and/or own manager, as appropriate |
| | | 4.4 | If necessary, negotiate and/or implement adjustments to work programs with site personnel in accordance with enterprise procedures |
| | | 4.5 | Record and store required information for each activity |
| 5 | Monitor the effectiveness of activities | 5.1 | Conduct, or arrange for, site inspections to check if work requirements for each activity have been met |
| | | 5.2 | Conduct, or arrange for, the monitoring of specified environmental parameters to assist with the evaluation of remediation/ rehabilitation activities |
| | | 5.3 | Examine results of regular surveys, inspections and environmental monitoring to identify significant trends in data, performance indicators or non-conformances |
| | | 5.4 | If necessary, clarify any significant remediation/ rehabilitation performance issues with the consultant or contractor involved to ensure details are fully understood |
| | | 5.5 | Seek manager's advice when challenges are beyond own technical competence or when further input from environmental specialists may be required |
| 6 | Report the progress and effectiveness of activities | 6.1 | Provide regular reports to relevant personnel about the progress and environmental performance of assigned remediation/rehabilitation activities |
| | | 6.2 | Report any instances of potential/actual environmental management non-conformance and incidents and the actions taken in each case |

- 6.3 Report opportunities and recommendations for improved coordination of remediation/rehabilitation activities accordance with enterprise procedures
- 7 Maintain records of activities
 - 7.1 Ensure all required records are legible, accurate and satisfy enterprise/legislative requirements
 - 7.2 Store records of remediation/rehabilitation activities to enable easy access and review by authorised personnel

Required Skills and Knowledge

Required skills

Required skills include:

- explaining and correctly applying enterprise site remediation/rehabilitation management plans, procedures and the technical details of specific activities
- analysing complex technical briefs and project plans
- managing logistics of multiple activities
- managing self, time and costs
- using project management tools to plan, implement and monitor activities
- using systematic, logical problem-solving techniques in response to problems and changed/unforeseen circumstances
- negotiating changes to timelines, roles, responsibilities and resources
- communicating and consulting effectively with enterprise managers, consultants, contractors, stakeholders and community members to achieve outcomes
- using enterprise information management systems, project management software
- recording complex information accurately
- writing recommendations and preparing reports involving complex technical issues
- working safely

Required knowledge

Required knowledge includes:

- environmental protection/management terminology, concepts and principles
- legislative, regulatory, permit, licensing, approval requirements/processes relevant to site remediation/rehabilitation activities
- common site remediation/rehabilitation goals, success criteria and strategies
- remediation/rehabilitation planning and design principles, including stakeholder engagement
- site remediation and rehabilitation methods and techniques relevant to job role
- common examples of environmental parameters, analytical tests, and flora and fauna surveys used to monitor the effectiveness of site remediation/rehabilitation
- site characteristics, nature of activities conducted at site, environmental management values, environmental issues, risks and impacts
- enterprise environmental management plans, procedures, control measures and management actions for site activities
- enterprise project management procedures and controls, such as:
 - project governance requirements
 - stakeholder management

- quality standards
- risk management plans
- record management and reporting, confidentiality and security of information
- quotation, tendering, procurement and contract management procedures, and delegations
- financial management procedures
- human resource management procedures and industrial agreements
- project management principles
- interpersonal communication, negotiation and conflict resolution techniques
- problem-solving techniques
- relevant health, safety and workplace emergency response procedures

Evidence Guide

Overview of assessment	Competency must be demonstrated in the ability to perform consistently at the required standard.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently apply the skills covered in this unit of competency in new and different situations and contexts. Critical aspects of assessment and evidence include: • applying a working knowledge of remediation/rehabilitation principles to analyse complex technical briefs and develop/refine plans • planning and coordinating the efficient implementation of site remediation/rehabilitation activities • supporting, communicating and consulting with site personnel and/or community members to achieve quality outcomes on time and within budget • analysing and solving project management problems • monitoring progress of activities and assisting with the evaluation of outcomes • maintaining accurate records of activities • providing regular information and reports of progress and outcomes of activities • recommending ways of improving the coordination of future activities.
Context of and specific resources for assessment	This unit of competency is to be assessed in the workplace or a simulated workplace environment.

	Assessment should emphasise a workplace context and procedures found in the candidate's workplace. This unit of competency may be assessed with: • <i>MSS025014A Perform sampling and testing of contaminated sites.</i> The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. Resources may include: • enterprise environmental management plans and procedures, and project management tools • background information for environmental sites and remediation/rehabilitation projects/programs • enterprise information management systems.
Method of assessment	The following assessment methods are suggested: • review of plans, records, outcomes and reports associated with remediation/rehabilitation activities that the candidate has coordinated • feedback from manager, other site personnel and community members about the candidate's ability to effectively coordinate remediation/ rehabilitation activities • questioning/interview to assess understanding of remediation/rehabilitation principles, project management and the candidate's problem-solving ability • observation of the candidate's interactions with site personnel and/or community members. In all cases, practical assessment should be supported by questions to assess underpinning knowledge and those aspects of competency which are difficult to assess directly. Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability. The language, literacy and numeracy demands of assessment should not be greater than those required to undertake the unit of competency in a work-like environment.
Guidance information for assessment	

Range Statement

Codes of practice	Where reference is made to industry codes of practice, and/or Australian/international standards, it is expected the latest version will be used
Legislation, standards, codes, procedures and/or enterprise requirements	Legislation, standards, codes, procedures and/or enterprise requirements may include: • federal legislation, such as: • Environment Protection and Biodiversity Conservation Act 1999 • Australian Heritage Council Act 2003 • Native Title Act 1993 • state/territory government legislation and regulations and local government by-laws, policies, and plans dealing with: • land use, acquisition, planning and protection • environmental protection • cultural/heritage protection • vegetation management • nature conservation and wildlife/plant protection • water, water management • soil conservation • pollution and contaminated sites • fisheries, forestry and mining operations • Australian and international standards, such as: • AS/NZS ISO 14000 Set:2005 Environmental management standards set • standards covering sampling, testing and/or monitoring of air, water and soils • National Environment Protection Measure (Assessment of Site Contamination) • ANZECC Guidelines for the Assessment of Contaminated Soil • Australian government guidelines, such as the Leading Practice Sustainable Development Program for the Mining Industry (Mine Rehabilitation) • environmental management plan, rehabilitation program plan, and site information about applicable legislative requirements and approval requirements • information about site processes, work schedules and

	remediation/rehabilitation processes • information about emergency preparedness and response • monitoring/inspection procedures and management actions to prevent/control environmental impacts or risks • procedures for monitoring remediation/rehabilitation program • sampling and in-situ measurement procedures (e.g. water, air, noise and soils) • job hazard analyses • safe work procedures and work method statements • material safety data sheets (MSDS)
Remediation/rehabilitation plans, programs and activities	Remediation/rehabilitation plans, programs and activities may include details of: • site goals and success criteria • regulatory, licensing and approvals requirements • consultation processes and community engagement • characterisation of site to identify materials and/or contamination present, such as: • materials segregation and selective placement • material budget and schedule • identification of limitations to plant growth • initial site assessment, such as : • protection measures for rare/endangered species and heritage sites • climate • water budget and salt budget • growth media (e.g. harvested topsoils) • remediation/rehabilitation program/activities, such as : • landform design (e.g. placement, height, footprint, drainage, mode of construction, profiles and covers) • management of waste rock, tailings and/or wastewater • removal, containment and/or on/off site treatment of contaminated materials • landform reconstruction, filling of voids/pits and reinstatement of water diversions • topsoil management to preserve soil fertility and biota, treatments and fertiliser use • establishment of vegetation (e.g. controlling weeds, collection and retention of local seeds and

	propagules, seeding (supply, treatment, spreading and hydro), and hand/machine planting of seedlings, mulching, watering, maintenance and staking/protection) • establishment of fauna communities (e.g. controlling problem animals and constructing habitats) • environmental parameters and monitoring procedures for remediation/rehabilitation program • recording and reporting requirements
Background information	Background information may include: • legislative/regulatory, permit, licence and approval requirements for site • site access protocols and permits • site history, client history and correspondence • site industrial processes and work schedules • records of consultations with stakeholders • maps (road and topographical) • existing databases (e.g. vegetation, topography, soils and regional ecosystem maps) • geological, hydro geological, ecological and meteorological data for site • enterprise environmental management plans for site • emergency plans and safety procedures • enterprise, regulatory or standard methods/procedures for environmental sampling, monitoring or in-field testing • relevant reports, case studies and good practice models for site remediation/rehabilitation
Site personnel and community members	Site personnel and community members may include: • enterprise employees, site and project managers • contractors and subcontractors • suppliers and service providers • consultants (e.g. scientists, planners, engineers and external auditors) • government/regulator representatives and inspectors • community representatives, landowners, traditional owners and community volunteers
Site hazards	Site hazards may include: • solar radiation, dust and noise • air and soil borne microorganisms • chemicals, radioactive and other hazardous materials • cuts, crushing and entanglement from tools or

	- moving machinery parts - manual handling of heavy materials and equipment - heavy vehicle traffic on site - slippery, uneven surfaces
Safety procedures	Safety procedures may include: - identifying hazards, assessing and reporting risks - cleaning, maintaining and storing tools, equipment and machinery - safe operation of tools, equipment and machinery - safe handling, use and storage of chemicals and other hazardous materials - safe manual handling of items - obeying signage and using safety equipment, such as protective barriers - using specified personal protective equipment
Environmental obligations	Environmental obligations of site personnel may include: - sustainable use of resources - duty of care to protect the site's natural, cultural and heritage values - not polluting, damaging or degrading the site's natural resources, ecological processes or biodiversity - avoiding introduction or transfer of weeds or plant/animal pathogens in soils
Monitoring strategies	Monitoring strategies may include: - use of transects to collect data across many types of landscape or ages of revegetation - use of point and quadrat sampling along transects - ecosystem function analysis: - landscape and soil analysis (e.g. rainfall, infiltration, run-off, erosion, plant growth and nutrient cycling) - vegetation analysis (e.g. species composition and structure) - habitat and fauna analysis (e.g. use of indicator species, such as reptiles and ants, and soil-litter biota) - use of remote sensing: (e.g. aerial photography and satellite imagery)
Environmental monitoring parameters for remediation/rehabilitation programs	Environmental monitoring parameters for remediation/rehabilitation programs may include: - air quality - quality of surface water and groundwater

	• residual contamination in soils • surface (and slope) stability • assessment of erosion, measurement of suspended sediment loads in run-off • performance of constructed covers over mine or industrial/mineral processing waste • properties of soil or root zone media, such as chemistry, fertility and water • plant community structural attributes, such as cover, and woody species density and height • plant community composition, such as presence of desired species, condition and abundance • presence of pest species, such as feral animals and weeds • selected indicators of ecosystem functioning, such as soil microbial biomass and ants • return of selected mammals, reptiles, macro-invertebrates, fish and birds to site
Occupational health and safety (OHS) and environmental management requirements	OHS and environmental management requirements: • all operations must comply with enterprise OHS and environmental management requirements, which may be imposed through state/territory or federal legislation - these requirements must not be compromised at any time • all operations assume the potentially hazardous nature of samples and require standard precautions to be applied • where relevant, users should access and apply current industry understanding of infection control issued by the National Health and Medical Research Council (NHMRC) and State and Territory Departments of Health

Unit Sector(s)

Environmental

Custom Content Section

Not applicable.