Australian Government

MSS027008 Coordinate noise management activities

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MSS027008A Coordinate noise management activities

Application

This unit of competency covers the ability to oversee the day-to-day noise management activities for a site, project or ongoing program. Personnel are required to interpret and implement a noise monitoring plan, organise specified monitoring activities, verify the quality of monitoring data and investigate and rectify unexpected or unacceptable results, monitor compliance with relevant noise standards/limits and provide reports. They work under the supervision of an environmental scientist or engineer, site manager or workplace environmental manager.

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 services involved with sampling, monitoring and/or control of noise; environmental compliance, auditing and inspection. 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.

While no specific licensing or certification requirements apply to this unit at the time of publication, environmental monitoring and management activities are governed by relevant legislation, regulations and/or external accreditation requirements. Local requirements should be checked.

Pre-requisite Unit

MSS025008　　　　　Monitor and evaluate noise

Competency Field

Management

Unit Sector

Environmental

　　　　Innovation and Business Skills Australia

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.	
1 **Confirm scope of noise management activities with supervisor**	1.1	Review legislative, regulatory and licensing requirements and approvals that apply to site/project/program.
	1.2	Review current noise monitoring plan, including objectives, known issues, specified management activities and any required changes.
	1.3	Review previous noise monitoring records and reports, if available.
	1.4	Confirm that noise monitoring sites, sampling and measurement methods, instrumentation and workplace procedures are in accordance with relevant standards and guidelines.
	1.5	Clarify own scope of responsibility/authority for achieving specific outcomes and the roles of other key personnel.
	1.6	Identify resources available to conduct noise management activities.
2 **Organise noise management activities**	2.1	Develop a consolidated schedule to ensure all activities can be conducted efficiently with the available resources.
	2.2	Develop checklists/clear work instructions to enable personnel to perform assigned tasks efficiently and with minimal errors.
	2.3	Ensure that personnel who conduct monitoring are competent to undertake their assigned tasks.
	2.4	Ensure noise monitoring equipment is regularly calibrated and maintained and that adequate stocks of consumables are available.
	2.5	Conduct, or arrange for, regular site inspections to monitor the effectiveness of noise control/reduction actions (if relevant to site/project/program).

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		2.6	Advise relevant personnel when specified noise control/reduction actions are not being implemented effectively (if relevant to site/project/program).
		2.7	Conduct, or arrange for, additional monitoring/inspections after atypical events, legitimate complaints or government requests.
3	**Verify noise data**	3.1	Identify relevant job instructions, data and technical records in workplace information management system.
		3.2	Confirm that technical records provide sufficient information to ensure traceability for the monitoring activities involved.
		3.3	Compare monitoring data with expected values and identify any outliers.
		3.4	Inspect data records to identify any gaps and to check the integrity of data entry, transfers, alterations and calculations.
		3.5	Notify manager when data is incomplete, or contains significant errors, and clarify what action to take.
4	**Determine if results are acceptable and within expectation**	4.1	Compare results with expected values, relevant standards and/or statutory limits and identify any significant differences or trends.
		4.2	Check the reliability of results by examining data/results from repeat measurements or other monitoring sites.
		4.3	Assess the significance of any documented observations of atypical environmental or meteorological conditions.
		4.4	Check that all adjusted data and calculations are free from error.
		4.5	Check that estimations of uncertainty are reasonable and consistent with the relevant standard, if relevant.
		4.6	Report results that meet workplace data quality standards and are consistent with expectations.

5	**Investigate/rectify unexpected or unacceptable results**	5.1	Examine records of pre-use checks and calibration performance to ensure that the monitoring instruments used meet specifications and workplace requirements.
		5.2	Establish whether human, environmental and/or meteorological factors could have affected the reliability of results.
		5.3	Check for obvious errors in measurement positions and/or techniques.
		5.4	Report unexpected results that meet workplace data quality standards.
		5.5	Identify possible root causes of unacceptable results and appropriate preventative/corrective actions.
		5.6	Report investigation outcomes and recommendations for improvements in accordance with workplace procedures.
		5.7	Seek manager's advice when challenges are beyond own technical competence or when input from environmental specialists may be required.
6	**Keep management informed about noise performance**	6.1	Provide regular reports about noise performance, including instances of potential/actual non-conformance and incidents and the actions taken in each case.
		6.2	Report opportunities and recommendations for improvements in noise monitoring or management in accordance with workplace procedures.
7	**Maintain noise records**	7.1	Ensure all noise records are legible, accurate and satisfy workplace/legislative requirements.
		7.2	Store noise records to enable easy access and review by authorised personnel in accordance with workplace procedures.
		7.3	Regularly review noise records to identify any significant trends and impacts.
		7.4	Identify any problems with the maintenance and security of noise records and resolve them promptly.

Foundation Skills

This section describes those required skills (language, literacy and numeracy) 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.

Legislation, regulations, standards, codes, workplace procedures and requirements include the latest version of one or more of:	• federal legislation such as the Environment Protection and Biodiversity Conservation Act, and National Environmental Protection Measures • state/territory government legislation and local government by-laws, policies, regulations and plans dealing with land use; and environmental protection • legislation, standards and codes of practice for work health and safety (WHS) • Australian and international standards covering environmental management (e.g. AS/NZS ISO 14000 Basic Set:2007 Environmental Management Basic Set), acoustics (e.g. AS 1055 Acoustics - Description and measurement of environmental noise series), and electroacoustics (e.g. AS IEC 61672 Electroacoustics series, AS IEC 60942-2004 Electroacoustics - Sound calibrators) • registration/licensing and/or accreditation requirements • industry guidelines and manuals, such as Noise Measurement Manual (QLD EPA), A Guide to Measurement and Analysis of Noise (VIC EPA), Noise Guide for Local Government (NSW); established noise standards and statutory noise limits • site-specific requirements; workplace procedures for sampling, monitoring and in-field testing; recording, processing, presenting and reporting data • workplace documents, such as standard operating procedures (SOPs); work schedules; recording and reporting procedures; equipment manuals and warranties; supplier catalogue and handbooks; safety data sheets (SDS) and safety procedures; waste minimisation, containment, processing and safe disposal procedures.

Noise management activities include one or more of:	- assessing compliance with a statutory condition, such as a licence - investigation of a noise complaint - noise impact assessment studies - long-term monitoring programs - occupational hygiene monitoring - noise surveys - assessing effectiveness of noise control devices and reduction measures.
Noise measurements and surveys include one or more of:	- techniques for conducting sound and noise level measurements, such as: - sound power and sound pressure level measurements - frequency analysis and weighting networks (including at least A and Lin) - techniques for measuring different noise types, including steady noise, discretely varying noise, impulsive noise, industrial, road, traffic, rail traffic and air traffic - background noise level (LA90) - day and night sound levels (L_{DN}) - measuring noise exposure, including equivalent continuous sound level (L_{eq}) - time weighted exposure measurement (L_{AeqT}) - common errors in sound level measurement, including mishandling of equipment, wind, humidity, temperature, reflected and absorbed sound and background noise - effects of meteorological conditions on noise - effects of topography and built structures on noise - data processing techniques, such as: - calculation of combined sound levels using graphical and mathematical equation techniques - background noise calculations - statistical analysis, including LA_{eq}, LA_{10}, LA_{50}, and LA_{90} - characterisation of noise by octave band analysis - calculation of individual noise exposure - noise mapping - noise rating curves - sound attenuation with distance and mathematical calculation of associated quantities - using a wide range of instruments, instrument functions and

	displays, such as:
	• sampling rate
	• optimum level range, sensitivity and self-generated noise
	• measurement time intervals, integration and averaging
	• response rates for sound meters, including fast, slow, impulse and peak
	• hold features
	• overload and under-range indications
	• threshold levels
	• data transfer and interfacing
	• calibration and reference checks of sound level meters, including both electrical and acoustic.
Noise monitoring instruments and ancillary equipment include one or more of:	• type 1 and type 2 portable sound level meters • integrating and non-integrating sound level meters • noise dose meters • sound level calibrators • octave analysers • statistical analysers, data loggers and recorders • telemetry equipment • sound monitoring stations • microphones • wind shields.

Additional resources and equipment include one or more of:	• meteorological instruments, such as:
	   • thermometers
	   • hygrometers
	   • barometers
	   • anemometers
	• digital cameras
	• global positioning system (GPS) equipment
	• site plans, maps and aerial photographs
	• noise measurement and survey forms
	• personal protective equipment.

Meteorological measurements include one or more of:	• temperature • relative humidity • barometric pressure • wind speed and direction.

Noise reports include one or more of:	- weekly and monthly environmental reports - non-conformance report form - contributions to regulatory agency reports (where required by permit, approval or licence conditions).
Noise records include one or more of:	- digital photographs of noise monitoring sites - data files - records required by permit, approval or licence conditions - records of monitoring equipment purchase, calibration, inspection, maintenance and service - records of complaints and government requests - records of noise non-conformances, incidents or significant impacts - contractor and supplier information - internal quality/environmental audit reports - electronic/hard copy correspondence - records of approved expenditure and orders.
Noise control/reduction actions include one or more of:	(re)design of work practices to minimise noise emissions, such as: - increase distance between noise generator and sensitive receiver - re-orient equipment to direct noise away from sensitive area - schedule operations so that noisy equipment is used separately rather than concurrently - use 'quiet' work practices (e.g. requiring trucks to turn off rather than idling for long periods) - substitute noisy equipment for quieter equipment (e.g. improved fan design, vibrating pile drivers and hydraulic crushers) - install specific noise reduction devices, such as equipment silencers and mufflers, noise barriers and enclosures, and installation of sound insulation - consult with nearby receivers, especially if 'one-off' or rare noise generating activities are to be conducted outside standard hours.
WHS and environmental management	- compliance with relevant federal/state/territory WHS legislation at all times - assuming that samples are potentially hazardous and applying

| **requirements include:** | standard precautions |
| | • accessing and applying current industry understanding of infection control issued by the National Health and Medical Research Council (NHMRC) and state/territory Departments of Health, where relevant. |

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet - https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=5b04f318-804f-4dc0-9463-c3fb9 a3fe998