

NATIONAL OCCUPATIONAL STANDARDS

**HEALTH, SAFETY & ENVIRONMENTAL
MANAGEMENT
IN THE EXTRACTIVE & MINERALS
PROCESSING INDUSTRIES**

LEVEL 3

INTRODUCTION

This document contains the National Occupational Standards for Health, Safety & Environmental Management in the Extractive & Minerals Processing Industries at Level 3.

These National Occupational Standards have been produced at the request of industry. They are a minor rewording of the National Occupational Standards – Health, Safety & Environmental Management in Quarries to permit the application and access to these standards by staff with supervisory and managerial responsibility within the industrial sector who are not currently operating in a quarry but are involved in other sector operational sites e.g. : processing plants; mines; transfer and storage sites (wharves and railheads); recycling plants. [Please refer to Glossary in Appendix A].

The recommended qualification structure for the N/SVQ at Level 3 based on these standards is for all 6 units to be mandatory units in the attainment of a full N/SVQ.

HEALTH, SAFETY & ENVIRONMENTAL MANAGEMENT IN THE EXTRACTIVE & MINERALS PROCESSING INDUSTRIES LEVEL 3

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EPIC

Assessment Strategy for: Health, Safety & Environmental Management in the Extractive & Minerals Processing Industries Level 3

**Endorsed Edition of 2002,
with amended Annex 6 approved October 2004.**

An Assessment Strategy to cover the EPIC Group of NVQ and SVQ Awards

Assessment Strategy for the Extractives and Mineral Processing Sector

A General Requirements

- 1 The Assessment Strategy for all EPIC units and qualifications is detailed below. It applies throughout the standards and should be used as the basis for all individual assessments.
- 2 The requirements have been brought together in this single document in order to avoid repetition and they represent a key part of the assessment process. They are supplemented by award-specific Assessment Guidance which identify appropriate forms of evidence for the particular competence being assessed.
- 3 In the development and implementation of all EPIC standards and awards, reference should be made back to this strategy when specifying the assessment requirements for each element of competence. The Internal and External Verifier will seek evidence that they have been addressed by candidates and Assessors at all times.

4.0 Requirements

4.1. Assessment must take place

- within the workplace (or in specialist centres which replicate the workplace in terms of equipment and environment)
- during normal working situations.
- using relevant industrial or commercial standards and procedures
- in accordance with the Assessment Plan jointly prepared by and agreed between the Candidate and their Assessor

4.2. At levels 2 and 3 observation of normal working activity should be the primary assessment method used. At higher levels, review and questioning of documentation held in the candidate's file that is relevant to work activities and decision-making will also play a significant part in assessment.

4.3. Observation should be supported by documentary evidence of having met specific components of the standard. This should be detailed in the Assessor's reports of observation. At higher levels, where more of the evidence will be in documentary form, it is particularly important that the material is clearly presented and cross-referenced to the National Occupational Standards.

4.4. Simulation generally is not acceptable, but may be allowed as an alternative to direct observation in appropriate situations e.g. where real task performance in the normal working environment is clearly not possible. This includes situations where generation of performance evidence would only be possible during emergencies where risks to people, the environment and the facility were present.

- 4.5. In addition to inferring knowledge from performance, knowledge will be assessed via questioning by the Assessor. This illustrates the importance of the level of the Assessor's occupational competence. Whilst not precluding the use of pre-set questions, the Assessor will use planned 'free-form' questioning on all aspects of competence referred to in the Standards but not adequately demonstrated by other forms of evidence.
- 4.6. Assessment of knowledge at higher levels will need to be sufficiently rigorous to reveal the candidate's understanding of the theories and principles that inform key actions and decision making.
- 4.7. Evidence should be produced over a period of time sufficient to demonstrate consistency of competent performance and application of knowledge for each element. A minimum period of time is specified in the Specific Guidance for each award. However, where the evidence for any Unit is more than two years old, the Assessor must review the evidence to ensure it remains valid in terms of current practice.
- 4.8. Evidence should be drawn from separate assessments taken over a period of time in order to demonstrate all components of the standards. The time period between assessments should fit the complexity, variability and duration of the activity and the frequency of normally occurring opportunities for assessment. Assessment of simple, routine and regularly occurring tasks can be carried out over a much shorter timescale than those in which there are significant variables, such as weather conditions or technical complexity or where opportunities to demonstrate competence are relatively infrequent.
- 4.9. Wherever possible, evidence for assessment should be drawn from work activities in which the candidate has been continuously involved throughout the process i.e. preparing for and setting up the task, carrying out the task, completing the task and accounting for / recording actions taken.
- 4.10. While bits and pieces of evidence can usefully be drawn from different contexts to complement the candidate's file, to demonstrate breadth in competence and to fill gaps, ill-assorted material should not constitute the main part of the evidence presented for assessment
- 4.11. A single assessment event and the accompanying evidence can be used to demonstrate more than one competence and as such may apply to more than one element of the standards. This 'integrated (or holistic) assessment' approach is strongly recommended by EPIC NTO.
- 4.12. Individual pieces of evidence should be substantially different from each other and should be representative of the range of activities and conditions encountered within the job role of the candidate.
- 4.13. Evidence presented should be accompanied, where appropriate, by a clear statement of the specific context in which it has been generated. The evidence should be cross-referenced to other forms of evidence including observation.
- 4.14. Overall, the evidence presented should reflect realistic work activities which seek to satisfy all of the standards.

B Specific Requirements

- 5 Each component of the Evidence Requirements has implications for designing an effective assessment procedure to ensure valid and reliable measurement of the standards. These are clarified below.

5.1. Location and context of assessment

There must be evidence of candidates' demonstrating competence in the real (or, at least, realistic) work environment. For most candidates this means his/her normal place of work. Short work placements or non-realistic work environments, which do not replicate the pressures and requirements of normal commercial or industrial activities, will not be acceptable. The bulk of the candidate's evidence should be drawn from their normal working activity and not consist of artificially contrived opportunities for one-off demonstration of competence. Similarly equipment must be that used in current commercial and industrial contexts. Procedures and standards used should be those that are nationally or internationally recognised or devised by specific companies as standard operating procedures. In the assessment of knowledge, particularly where this relates to legislation, regulations and procedures, it is essential that currently applicable documentation be used as a basis for assessment.

5.2. Acceptable forms of evidence

5.2.1 Candidates will need to present evidence that will include the following components:

5.2.2 Proof that qualified Assessors or third parties such as line managers have **observed** the candidate correctly performing the competences required in the standards. The specified number of observations **must¹** be made and details of the nature of the work being performed during the observation must also be available for external verification. Third parties involved in providing 'witness testimony' must be competent to make judgements about the activity (ies) for which they are providing the testimony. They act as secondary and corroborating sources of evidence and must be carefully selected and approved. The Assessor will make all decisions on the candidate's competence. See 7 below.

5.2.3 For the more experienced candidate, the Accreditation of Prior Learning (APL) method of proving competence should also be considered.

5.2.4 Observations must be formally recorded, in hard copy or electronic form, and fully describe what has been observed and how the activity/ task has met the standard. In addition, documentation can be used to support the successful performance of an activity when not directly observed by the Assessor where this is permitted. Normally this evidence would consist of specifications or standard operating procedures, production or process records, quality assurance records and final records of end results. If the candidate proposes to use such supplementary documentation, they should list what it is and identify where it is stored and only bring it forward if the Assessor agrees it will be helpful in the assessment process.

¹ More observations than the minimum may be necessary where the Assessor remains uncertain about the consistency of the candidate's performance or the work context offers only limited opportunities for making a rounded judgement about the candidate's capability.

5.2.5 The supporting documentation² must be validated as relating to the candidate's normal work and must be clearly cross-referenced to the standards and, where appropriate, to the specific requirements for each award. This is usually confirmed by line manager or QA signatures on work documents. In particular cases, specified in the Assessment Guidance for an award, additional evidence such as customer endorsements or reports of results may be required.

5.2.6 To avoid the unnecessary assembly of supporting documentation, the Assessment Plan should seek to define:

- what evidence is to be collected
- what will be acceptable sources of evidence
- what will constitute sufficient evidence for assessment purposes

5.3. Candidates with special assessment requirements

5.3.1 Where candidates have poor reading and writing skills or where they have a physical and/or a sensory impairment and where their impediment does not constrain their ability to operate competently and safely in the workplace, the Assessor should adapt the method(s) of assessment to ensure that the candidate is not put at a disadvantage because of the assessment process (e.g. the Assessor might use oral questioning in place of written tests).

5.3.2 The language of assessment will normally be English but can be bilingual or in any other language providing that:

- There is a translation³ of the relevant standards, approved by the awarding body and available to the candidate
- The Assessment Centre, Internal Verifier and Assessor(s) are competent to carry out such assessments and to give feedback to candidates in their own language.
- The Assessment and Verification reports are in English to facilitate External Assessment

5.4. Simulation

5.4.1 Simulation, where permitted, can be used to demonstrate particular competences that would be difficult or dangerous to demonstrate directly (e.g. in dealing with emergencies). They should only be used where direct evidence of candidate performance cannot be obtained.

5.4.2 The External Verifier must approve in advance the use of simulation and will require clear reasons for its planned use. Details of planned assessment using simulation should be provided to the External Verifier and should include the following details:

- Which competence (and standards) the simulation is designed to assess
- The kind of equipment, facilities and physical environment proposed for the simulation of performance
- How the simulated activity will relate to the candidate's normal work context

² At higher levels, documentation in the form of a 'portfolio' will be a very important source of evidence. Not only should it contain material that provides an audit trail of decision-making where the candidate has been involved in critical incidents, but also should reveal the candidate's systematic approach to the management and control of health, safety and environmental matters.

³ It is not the responsibility of the Awarding Body to provide translations from English unless specifically commissioned to do so by the responsible Government Departments and/or National Accreditation Authorities.

- How the simulation is to be set up and conducted, preferably supported by physical evidence such as photographs or inspection of a test rig
- 5.4.3 If approval is given, all specific Awarding Body guidance and requirements for simulation should be observed. Also, Assessors, Internal Verifiers and External Verifiers should monitor the proportion of evidence generated via simulations to ensure that it will not be the primary source of a candidate's claim to competence.
- 5.4.4 Simulation is therefore reserved for aspects of competence illustrated by the following contexts:
- Where demonstration, for example, of emergency shutdown and related safety procedures would be; **dangerous and/or disruptive** to plant/environment/individuals; **too costly** such as total plant shutdown or dealing with spillage of dangerous substances; where **issues of confidentiality/security** restrict access to real work opportunities
 - Demonstrating specific aspects of contingencies which rarely or never occur due to effective QA systems
 - The capacity to integrate disparate knowledge to cope with unforeseen events and to solve problems

5.5. Knowledge and Understanding

- 5.5.1 Knowledge and Understanding will be assessed via (pre-set and/or free form) questions and by evidence of performance, which cover three primary types of knowledge:
- Knowledge of facts and procedures
 - Understanding of principles and concepts underpinning procedures
 - How to apply principles and procedures in specific contexts
- 5.5.2 All questions must be asked by the Assessor at appropriate moments throughout the assessment process, preferably linked to observed activity and/or review of documentary evidence. The questions asked of, and answers provided by, the candidate may be recorded and used as the basis for a useful question/answer bank. The order in which the candidate provides the response is not material. Where the candidate fails to provide a complete answer, the Assessor should carry out further questioning to check whether or not the candidate has the necessary knowledge and understanding. This can take the form of further open questioning or providing a guided opportunity to acquire the missing knowledge and re-present for assessment.
- 5.5.3 There must be some form of verification that the questions have been asked either by detailed cross-referencing to other forms of evidence, by a sample selection of candidate's responses provided in writing or by an Assessor report on when and how the questions were asked. The precise form of verification must be agreed between the Assessor, the Internal Verifier and the External Verifier applying specific Awarding Body procedures.
- 5.5.4 The second form of knowledge and understanding questioning encouraged is the free-form questioning of the candidate during other forms of assessment e.g. during observation or when reviewing procedures and related documentation. Assessors should ask "What if?" questions that test the candidate's depth of understanding. For example: how they would deal with anomalies and special requirements; how they would go about tackling rare occurrences;

cope with new situations or solve problems. Sometimes this requires the description by the Assessor of different 'scenarios' that help to reveal whether the candidate has an adequate grasp of what action is required in situations that only occur infrequently. Using 'scenario testing' should not be confused with 'simulation'. The former is based on evidence that the candidate has already demonstrated the essentials of competence in the workplace and tests versatility and depth; the latter is used as a substitute for evidence of work based competence.

- 5.5.5 At higher levels, it may be necessary to establish and confirm candidates' understanding of underlying theory and principle through more formal measures such as professional and/or guided discussions, written tests, case studies, work based projects. Where this is the case, the selected method/s should be designed to realistically reflect the range of circumstances and contexts in which candidates are likely to have to demonstrate their understanding. Scenario testing is used quite frequently at higher levels

5.6. The sufficiency and balance of evidence required

- 5.6.1 Candidates will be expected to bring together evidence over a period of time which, collectively, meets all the requirements of the Unit, the individual components of each Element and adequately reflects the range of work situations and contexts. The broad requirements of section A of this document must also be met and the evidence must follow the detailed assessment guidance for the award as well as meeting the requirements set out and agreed in the Assessment Plan by the Candidate and their Assessor.

- 5.6.2 The following features of sufficiency should be addressed:
- **Sustained performance over time** is required to show competence and consistency in performance across the full range of normal working conditions, meeting all the requirements and providing an adequate number of examples of varied work activity. What is being looked for is the capacity to consistently perform what is required of the candidate in the work environment over the full range of activities, conditions and contexts.
 - Much will depend upon the nature of the activity in question, as some complex activities may take a considerable period of time and involve a series of mutually independent stages. Some simple sampling or testing activities are frequent and repetitive and may be demonstrated over a relatively short period of time.
 - Assessors should always attempt to achieve an appropriate **balance of types of evidence**.
 - As a safety critical industry, no assessments are valid unless the health, safety and environmental requirements set out in the National Occupational Standards have been fully met (even where health and safety issues are not the primary focus of the assessment event).
 - Similarly, Assessors, Internal and External Verifiers must not conduct work-based assessments in contexts, and under conditions where they are dissatisfied with the health and safety arrangements in place.
 - In such situations, the Assessor must give appropriate feedback to the candidate and, as necessary, to the appropriate employer's representative.

5.7. Expertise of Assessor and Verifiers

5.7.1 Assessors and Internal Verifiers must:

- be registered by an approved centre
- be competent to make qualitative judgements about the units they are assessing/verifying. This may be illustrated by:
 - the Assessor/Internal Verifier having achieved the award themselves and/or
 - having substantial current or recent (within the past 5 years) experience at a fully skilled level in the job function(s) being assessed (including working with current legislation, regulations, procedures and technology), or
 - being in a day to day line management, technical or quality assurance role that involves making detailed appraisals and/or assessments of those carrying out work covered by the units they are assessing/verifying (and will have substantial experience in this post) (see Award Specific Guidance).
- be in possession of the appropriate Assessor award(s)⁴.
- carry out their duties in accordance with the National Occupational Standards for Assessment and Verification and current guidance on best assessment practice issued by the regulatory authorities.

5.7.2 External Verifiers must:

- be registered with an approved Awarding Body
- be sufficiently familiar with and/or experienced in the quarrying, mining, or mineral processing industries to be able to verify that candidate evidence has met the National Occupational Standards.
- be in possession of the appropriate External Verifier Award⁴.
- carry out their duties in accordance with the National Occupational Standards for Assessment and Verification and current guidance on best verification practice issued by the regulatory authorities.

5.7.3 Also, the Assessor/Verifier will have a working knowledge of awards and a full understanding of that part of the award for which they have responsibility⁵.

5.7.4 The appointment of Assessors and Internal Verifiers at levels 4 and 5 may require the prior approval of the Awarding Body Executive on the recommendation of the External Verifier.

⁴ These are currently referred to as the D-units. As a minimum requirement the Assessor must be in possession of units D32 and D33 (or those designated units which replace these). Where a new centre wishes to deliver an award, or an existing centre wishes to deliver an award from a different functional area, then the centre may be approved if it can provide evidence that the potential Assessors satisfy the experience criteria (above) and are registered and actively undertaking the D32 and D33 units. Internal Verifiers must be in possession of D34 (or the designated unit which replaces this). External Verifiers must be in possession of D35 (or the designated unit which replaces it).

⁵ **The Awarding Body will confirm this through examination of relevant CVs supported by relevant references.**

- 5.7.5 Third party 'Witnesses' referred to in section 5.2 must also be competent to make judgements about the activity (ies) for which they are providing the testimony. **As the assessment *decision* lies with the Assessor, it is their responsibility to verify this and, where challenged, to justify their acceptance of third party 'witness testimony' to the Internal Verifier.**

5.8. External Quality Control

- 5.8.1 The external quality control of assessment is to be provided, in this highly regulated and safety critical sector, by the use of External Verifiers employing 'Enhanced External Verification' and 'Enhanced Internal Verification'.

5.8.2 **Enhanced External Verification Strategy**

This will involve the 'traditional' External Verification role supplemented by verifying a representative sample of candidates work from each Assessor. However, it will cover **all** Assessors in each Centre over an agreed period of time, and for **each** Assessor will always include:

- The Key Unit within the award (specified in the award specific guidance)
- Plus all evidence from simulations
- Plus a minimum of one other unit (agreed with the External Verifier)
- Plus the evidence of internal verification

5.8.3 **Enhanced Internal Verification Strategy**

The Internal Verifier must provide evidence of having verified:

- The Key Unit(s) for 100% of candidates
- Every simulation
- Additional Unit(s) - as specified in the Supplementary Assessment Guidance for each award
- For each Assessor a sample of **all** units they are qualified to assess
- Verification of **all** assessment methods and **all** assessment stages (e.g. induction; assessment planning; feedback to candidate)

- 5.8.4 The Key Unit in each award is identified by the sector, through EPIC (as the industry Standard Setting Body) and is identified in the Award Specific Guidance.

- 5.8.5 Awarding Bodies (ABs) will continue to ensure that external quality control for EPIC awards will be through the use of External Verifiers thus:

- External Verifiers will visit the centre as soon as possible after the centre has become approved to deliver the award. This initial External Verification will be shortly after the Centre Approval, candidate registrations and first assessments. This will normally be within 3 months and must be before the completion of any unit for any candidate. At this initial meeting, the External Verifier will meet a selection of Centre Staff to confirm understanding of the quality standards expected by the awarding body in terms of evidence requirements, assessments, documentation and support systems.

- There will be at least two External Verification visits to each centre each year
- Centres will have full access to the External Verifier for guidance on the assessment process and related matters.
- External Verifier visits will review candidate evidence, the judgements made by workplace Assessors and Internal Verifiers, and the support systems required to deliver the awards. Only after the External Verifier is satisfied that the centre is meeting the quality standards will the first certificates be issued to candidates.
- If centres are not able to meet the requirements then the External Verifier will state in writing what improvements are to be made and the date by which they are to be made. The External Verifier will then return to the centre on an agreed date to confirm that the centre has remedied the non-compliance. If the centre is not satisfied with the External Verifier's judgement then it can appeal to the awarding body according to the Awarding Body's published Appeals Procedure.
- Centres will be required to conduct internal networked events attended by Assessors and verifiers. The purpose of these events will be to compare evidence sources and judgements made to ensure that assessments comply with best current practice. The frequency of these events will be determined by the size, scope and degree of risk of the centre. There will be a minimum of one event per year and formal records will be maintained of attendees, agenda, communications with the Awarding Body and action points arising.
- In order to ensure that all centres are meeting the quality standards, the External Verifier will be responsible for comparing the work of different centres. The Awarding Body may facilitate this by convening meetings or events attended by staff from different centres, who will be expected to attend, to ensure that consistency is being maintained between centres. These meetings may take place at intervals determined by the awarding body who will also be responsible for the agenda.
- The Approved Centre must retain all documentation and evidence related to all submissions for certification which have occurred since the last satisfactory External Verification visit.

Annex 6 Award Specific Assessment Guidance linked to Assessment Strategy to cover the EPIC Group of Awards

Health, Safety & Environmental Management in the Extractive & Minerals Processing Industries⁶ N/SVQ at Level 3

General Please note the following:

- This award will be implemented in accordance with the EPIC Assessment Strategy
- The following information should be read alongside the EPIC Assessment Strategy
- The following information is intended to complement the EPIC Assessment Strategy
- Evidence of performance will normally be drawn from activities carried out regularly over a period of no less than **13 weeks**.

1 External Quality Control

The Enhanced Internal and External Verification method of achieving External Quality Control will be adopted. It has been agreed that the unit requiring 100% Internal Verification will be:

Unit HSE 1 - Contribute to a positive health, safety and environmental culture in extractive industries sites

External Verification

It has been agreed that the enhanced External Verification Quality Control to be adopted will be: As specified in the General Assessment Strategy i.e. section 5.8.2.

2 Workplace Assessment

It has been agreed that all of the units are suitable for Workplace Assessment. Although evidence from Assessor observation will be a primary source. It is expected that products of work/works documents will be a substantial source of evidence of competence for this award.

3 Supporting Evidence

This evidence **may** be supported by additional evidence such as:

- Candidates appointments and certificates
- Witness Testimony (see Assessment Strategy)
- Work plans and schedules
- Staff appraisal reports
- Training needs assessments
- Induction and training programmes and associated learning materials prepared for the site
- Hazard and environmental risk assessments
- Incident & accident reports

4 Simulation

Simulation is only permitted for the following performance criteria: 5.2f, 5.3.c, 5.3.d, 5.3.e, 5.3.f. In the event of a candidate being unable to generate workplace evidence for a particular Standard of Performance, then the use of this method of assessment must be agreed in advance with the External Verifier (See Assessment Strategy).

5 Knowledge Assessment

- Responses to pre-set questions (oral/written) and/or
- Responses to Assessor devised questions. (Assessor devised questions and responses to be recorded)

6 Assessor/Verifier Expertise

See EPIC Assessment Strategy.

Assessors must have sufficient competence in health, safety and environmental management, at or above the level they propose to assess, and an understanding of its applications in the extractives sector. [Under normal circumstances someone with less than 3 years experience in a similar or higher level job in the extractives and mineral processing sector would not normally be considered to have sufficient occupational competence].

Internal Verifiers must have sufficient technical understanding of health, safety and environmental management, its application and scope covered by the qualification.

⁶ Sites for the purposes of these National Occupational Standards cover all sites involved in the extraction, processing and storage of rocks and minerals and mineral products. [See Glossary of Terms – Appendix A].

Unit 1 Contribute to a positive health, safety and environmental culture in extractive industries sites

Unit Summary

Overview

This unit is about encouraging a positive culture within the extractive industries site/s in relation to health, safety and the environment. It is also concerned with promoting the achievements of the site and organisation to all people who are under the control of the supervisor, encouraging them to understand their role and responsibilities and how they can bring about improvements to health, safety and environmental performance. To assist in achieving these ends appropriate training must be identified, recommended, implemented and then evaluated.

This unit is for you if you are:

- A supervisor with responsibility for a section or sections of an operational site working under the direction of a manager

This unit contains two elements

1.1 Provide advice and support for improving health, safety and environmental performance

1.2 Provide advice on the training required for improving health, safety and environmental performance

Performance requirement

In performing effectively in this unit you will need to demonstrate that you do the following:

In order to *provide advice and support for improving health, safety and environmental performance* you need to communicate the benefits of health, safety and environmental performance to the people at the site who are under your control. You need to gain their support to develop a positive attitude to health, safety and environmental responsibilities. You also need to assist them to play an active role in the drive for improvement and encourage them to make suggestions. To do this you will need to use a number of methods of communication

In order to *provide advice on the training required for improving health, safety and environmental performance* you need to be able to identify the training required to satisfy the needs of the workplace under your control and also the needs of the individual workers. You will need to prepare and agree training plans with your manager, implement the training and then collect feedback about the training activity. You are operating in a highly regulated industry and as such it is important that you keep up to date with developments in legislation which affect the area under your control.

Knowledge and understanding

To perform effectively in this unit you need to have a knowledge and understanding in the areas of

- communication, involvement and motivation
- health, safety and environmental training requirements in relation to the area under your control
- health, safety and environmental legislation in relation to the area under your control
- identification of training needs
- how to plan training
- how to encourage feedback
- record keeping

Unit 1 Contribute to a positive health, safety and environmental culture in extractive industries sites

Element 1.1 Provide advice and support for improving health, safety and environmental performance

The National Standard

This section provides criteria to assess whether you provide advice and support for improving health, safety and environmental performance to the National Standard of competence. It also lists the knowledge and understanding that are essential for effective performance.

Performance criteria

You must ensure that

- a) you present the benefits of continuous improvements to health, safety and environmental performance clearly, accurately and in line with the organisation's policies
- b) you take opportunities to promote awareness and achievements in health, safety and environmental matters using effective **methods of communication**
- c) the information you provide on health, safety and environmental achievements is accurate and up to date
- d) you encourage **individuals** in the workplace to take an active role in the drive for improved health, safety and environmental performance
- e) you encourage **individuals** to offer suggestions, ideas and views on improvements to health, safety and environmental performance
- f) you enable **individuals** in the workplace to understand their health, safety and environmental responsibilities and help them to make an active contribution
- g) you give **individuals** the opportunity to seek clarification of any areas of concern

Knowledge requirements

You need to know and understand

Benefits of improved health, safety and environmental performance

- 1. the benefits to individuals and the organisation from improved health, safety and environmental performance
- 2. the consequences of failing to improve health, safety and environmental performance
- 3. the benefits of participation of persons at work

Communication

- 4. how to communicate effectively
- 5. how to identify and use effective opportunities to promote awareness, understanding of, and enthusiasm for health, safety and environmental issues
- 6. sources of supporting information, resources and materials
- 7. how best to publicise achievements
- 8. the range of available presentational techniques and how to use them effectively

Organisational context

- 9. the organisation's procedures for publicising health, safety and environmental matters
- 10. the organisation's achievements in health, safety and environmental management
- 11. the organisations record keeping requirements

Health, safety and environmental management

12. examples of best practice and best available techniques
13. key aspects of current and proposed legislation applicable to the workplace under your supervision
14. workplace health, safety and environmental performance and identified improvement needs
15. details of operational activities and associated hazards and risks

Unit 1 Contribute to a positive health, safety and environmental culture in extractive industries sites

Element 1.2 Provide advice on the training required for improving health, safety and environmental performance

The National Standard

This section provides criteria to assess whether you provide advice on the training required for improving health, safety and environmental performance to the National Standard of competence. It also lists the knowledge and understanding that are essential for effective performance.

Performance criteria

You must ensure that

- a) you encourage **individuals** to identify the skills and knowledge they need to work safely and avoid causing harm to the environment
- b) **training** is identified that satisfies workplace needs
- c) **training** is identified that meets the occupational needs of **individuals**
- d) you agree the identified training with your manager
- e) effective **training** is implemented and monitored in accordance with an agreed training plan
- f) you encourage **individuals** to provide useful feedback on training activities
- g) clear individual **training records** are kept which conform to company requirements
- h) you keep up to date with developments in health, safety and environmental legislation which affect the workplace under your supervision

Knowledge requirements

You need to know and understand

1. the organisation's record keeping requirements
2. how to communicate effectively
3. how to identify the skills and knowledge individuals require
4. how to plan training
5. how to encourage feedback and assess effectiveness of training

Training requirements in relation to:

6. health and safety induction
7. environmental induction
8. refresher/retraining
9. use of fire extinguishers
10. safe methods of manual handling
11. incident and emergency procedures
12. use of personal protective equipment
13. safe use of mobile plant
14. safe use of fixed plant
15. handling of waste to include recycling
16. reporting of problems in connection with emissions to air, releases to water and contamination to ground
17. material and product handling to include control and reporting of spills
18. key aspects of legislation applicable to the workplace under your supervision
19. *where applicable* training requirements in relation to use of explosives

Unit 2 Recommend and support improvements to health and safety in extractive industries sites

Unit Summary

Overview

This unit is about recommending and supporting improvements to health and safety in the operation of an extractives industries site/s. Improvements may relate to changes in systems which help the management of health and safety or they may relate to actual improvements to the workplace which may include site security, plant and equipment, methods of working etc.

This unit is for you if you are:

- A supervisor with responsibility for a section or sections of an operational site working under the direction of a manager

This unit contains three elements

- 2.1 *Identify health and safety improvements*
- 2.2 *Recommend changes to improve health and safety*
- 2.3 *Support the implementation and evaluation of health and safety improvements*

Performance requirement

In performing effectively in this unit you will need to demonstrate that you do the following:

In order to *identify health and safety improvements* you will need to critically examine the working environment yourself for opportunities. It is vitally important that you also involve others working in the area under your control and encourage them to make suggestions to improve health and safety. If after evaluation it is not possible to act on a suggestion then you will provide an explanation. As a part of this process you need to ensure that staff are provided with information about health and safety in the workplace.

In order to *recommend changes to improve health and safety* you need to look at any trends or developments within the workplace that may affect the proposed improvement. You need to recommend changes that take into account contributions and feedback from all those concerned and your plans will take into account the effects of normal, abnormal and emergency situations.

In order to *support the implementation and evaluation of health and safety improvements* you will ensure that you efficiently use the resources provided for the implementation of the improvement and allow all concerned to contribute to the process effectively. You will assist with the implementation of the approved health and safety improvement in line with agreed objectives and plans. After implementation you will monitor the improvement, recommending corrective action, if necessary to ensure achievement of objectives. You will ensure that all staff for whom you have responsibility and who are affected by the improvement are committed to the improvement programme at all times. After implementation you will need to compare the outcome of the improvement with the original expectation specified in the recommendations. You will keep records of health and safety improvements.

Knowledge and understanding

To perform effectively in this unit you need to have a knowledge and understanding in the areas of:

- benefits of improved health and safety performance
- how to identify hazards and risks
- making and implementing plans
- communication, involvement and motivation
- health and safety performance in terms of the parts of the process under your control
- interpretation of patterns and trends
- record keeping
- operational aspects of the area of the site under your control with regard to health and safety
- relevant health and safety legislation for the area of the site under your control

Unit 2 Recommend and support improvements to health and safety in extractive industries sites

Element 2.1 Identify health and safety improvements

The National Standard

This section provides criteria to assess whether you identify health and safety improvements to the National Standard of competence. It also lists the knowledge and understanding that are essential for effective performance.

Performance criteria

You must ensure that

- a) you give accurate information about health and safety relating to the **working environment** to **appropriate people**
- b) you encourage suggestions to improve health and safety in the **working environment** from **appropriate people**
- c) where it is not possible to act on a suggestion, you promptly provide clear and relevant reasons to those concerned
- d) your evaluation of suggestions takes into account all relevant **information** concerning the work activity
- e) you take the opportunity to examine the **working environment** and assess opportunities for health and safety improvements
- f) you identify **improvements** to health and safety in the **working environment** taking into account all relevant factors
- g) the **improvements** you identify are consistent with the company health and safety policy, meet standards set by legal requirements and represent good practice
- h) clear records are kept which conform to company requirements

Knowledge requirements

You need to know and understand

Legal

1. key aspects of legislation applicable to the workplace under your supervision

Safe use of electricity

2. nature and dangers of electricity, importance of earthing, first aid implications, precautions in relation to high voltage supply and when to involve a specialist electrical engineer
3. how to deal with overhead or buried cables, battery charging procedures, and testing of portable electrical equipment

Safe use of fixed plant

4. nature and frequency of statutory inspections (pressure vessels, air receivers, hoists and lifting equipment)
5. principles, maintenance, limitations and advantages of fixed and other guarding techniques
6. types of interlock systems

Safe use of mobile plant

7. need for vehicle rules, safe vehicles, safe workplace and safe practices
8. competence assessment techniques for drivers

Safety in Complex or hazardous processes

9. hazards related to excavation and tipping if in use on the site

10. hazards related to blasting and use of explosives if in use on the site
11. hazards related to common physical operations in processes (e.g. feeding, crushing, grinding, screening, mixing, materials transfer, heat-treatment operations in relation to the site)
12. techniques for storage, transfer, handling and use of explosive, flammable, toxic, corrosive and irritant materials in relation to the site

Fire prevention and precaution

13. types, use, maintenance and siting of fire-fighting equipment, types of fires, effects of smoke and toxic fumes, use of extinguishers and evacuation procedures

Miscellaneous

14. instructions, rules and schemes in relation to the site
15. permit to work systems in relation to the site
16. contractors: rules of entry and conditions of work
17. operation and application of various types of personal protective equipment for foot, body, head, eye, ear, skin, respiratory protection and maintenance of personal protective equipment schemes
18. practical aspects of manual handling
19. practical aspects of dust control
20. practical aspects of noise control
21. safe use of compressed air
22. safe use of abrasive wheels
23. safe use of bottled gas (oxygen, acetylene, LPG)
24. communication, involvement and motivation
25. benefits of improved health and safety performance
26. how to identify hazards and risks
27. making and implementing plans
28. health and safety efficiency in terms of the parts of the process under your control
29. how to interpret patterns and trends relating to occurrences in the workplace
30. the organisations record keeping requirements

Unit 2 Recommend and support improvements to health and safety in extractive industries sites

Element 2.2 Recommend changes to improve health and safety

The National Standard

This section provides criteria to assess whether you recommend changes to improve health and safety to the National Standard of competence. It also lists the knowledge and understanding that are essential for effective performance.

Performance criteria

You must ensure that

- a) you correctly identify factors within the workplace which may affect the health and safety **improvement**
- b) you confirm subordinates understanding of the health and safety **improvement** at appropriate intervals
- c) you encourage **appropriate people** to give their active support for the health and safety **improvement**
- d) you make a clear case for the proposed **improvement** and support your case with sound evidence
- e) you make suggestions for methods of implementation taking account of contributions and feedback from **appropriate people**
- f) your suggestions take into account the effects of normal, abnormal and emergency situations
- g) clear records are kept which conform to company requirements

Knowledge requirements

You need to know and understand

Legal

1. key aspects of legislation applicable to the workplace under your supervision

Safe use of electricity

2. nature and dangers of electricity, importance of earthing, first aid implications, precautions in relation to high voltage supply and when to involve a specialist electrical engineer
3. how to deal with overhead or buried cables, battery charging procedures, and testing of portable electrical equipment

Safe use of fixed plant

4. nature and frequency of statutory inspections (pressure vessels, air receivers, hoists and lifting equipment)
5. principles, maintenance, limitations and advantages of fixed and other guarding techniques
6. types of interlock systems

Safe use of mobile plant

7. need for vehicle rules, safe vehicles, safe workplace and safe practices
8. competence assessment techniques for drivers

Safety in Complex or hazardous processes

9. hazards related to excavation and tipping if in use on the site
10. hazards related to blasting and use of explosives if in use on the site
11. hazards related to common physical operations in processes (e.g. feeding, crushing, grinding, screening, mixing, materials transfer, heat-treatment operations in relation to the site)

12. techniques for storage, transfer, handling and use of explosive, flammable, toxic, corrosive and irritant materials in relation to the site

Fire prevention and precaution

13. types, use, maintenance and siting of fire-fighting equipment, types of fires, effects of smoke and toxic fumes, use of extinguishers and evacuation procedures

Miscellaneous

14. instructions, rules and schemes in relation to the site
15. permit to work systems in relation to the site
16. contractors: rules of entry and conditions of work
17. operation and application of various types of personal protective equipment for foot, body, head, eye, ear, skin, respiratory protection and maintenance of personal protective equipment schemes
18. practical aspects of manual handling
19. practical aspects of dust control
20. practical aspects of noise control
21. safe use of compressed air
22. safe use of abrasive wheels
23. safe use of bottled gas (oxygen, acetylene, LPG)
24. communication involvement and motivation
25. benefits of improved health and safety performance
26. how to identify hazards and risks
27. making and implementing plans
28. health and safety efficiency in terms of the parts of the process under your control
29. how to interpret patterns and trends relating to occurrences in the workplace
30. the organisations record keeping requirements

Unit 2 Recommend and support improvements to health and safety in extractive industries sites

Element 2.3 Support the implementation and evaluation of health and safety improvements

The National Standard

This section provides criteria to assess whether you support the implementation and evaluation of health and safety improvements to the National Standard of competence. It also lists the knowledge and understanding that are essential for effective performance.

Performance criteria

You must ensure that

- a) you effectively use the resources provided to enable the **improvement** to be implemented in the workplace
- b) you assist implementation of the health and safety **improvement** in line with agreed plans
- c) the health and safety **improvement** is implemented in such a way that **appropriate people** are able to contribute to the process effectively
- d) implications of the **improvement** are passed to those affected and their understanding confirmed
- e) you monitor and evaluate progress of implementation of the **improvement** and make recommendations for corrective action if required
- f) you assist with assessment of the **improvement** after implementation and compare the results against the original expectations
- g) you confirm your subordinates understanding of, and commitment to the **improvement** at appropriate intervals
- h) clear records are kept which conform to company requirements

Knowledge requirements

You need to know and understand

Legal

1. key aspects of legislation applicable to the workplace under your supervision

Safe use of electricity

2. nature and dangers of electricity, importance of earthing, first aid implications, precautions in relation to high voltage supply and when to involve a specialist electrical engineer
3. how to deal with overhead or buried cables, battery charging procedures, and testing of portable electrical equipment

Safe use of fixed plant

4. nature and frequency of statutory inspections (pressure vessels, air receivers, hoists and lifting equipment)
5. principles, maintenance, limitations and advantages of fixed and other guarding techniques
6. types of interlock systems

Safe use of mobile plant

7. need for vehicle rules, safe vehicles, safe workplace and safe practices
8. competence assessment techniques for drivers

Safety in Complex or hazardous processes

9. hazards related to excavation and tipping if in use on the site
10. hazards related to blasting and use of explosives if in use on the site
11. hazards related to common physical operations in processes (e.g. feeding, crushing, grinding, screening, mixing, materials transfer, heat-treatment operations in relation to the site)
12. techniques for storage, transfer, handling and use of explosive, flammable, toxic, corrosive and irritant materials in relation to the site

Fire prevention and precaution

13. types, use, maintenance and siting of fire-fighting equipment, types of fires, effects of smoke and toxic fumes, use of extinguishers and evacuation procedures

Miscellaneous

14. instructions, rules and schemes in relation to the site
15. permit to work systems in relation to the site
16. contractors: rules of entry and conditions of work
17. operation and application of various types of personal protective equipment for foot, body, head, eye, ear, skin, respiratory protection and maintenance of personal protective equipment schemes
18. practical aspects of manual handling
19. practical aspects of dust control
20. practical aspects of noise control
21. safe use of compressed air
22. safe use of abrasive wheels
23. safe use of bottled gas (oxygen, acetylene, LPG)
24. communication, involvement and motivation
25. how to use resources efficiently
26. benefits of improved health and safety performance
27. health and safety efficiency in terms of the parts of the process under your control
28. the organisations record keeping requirements

Unit 3 Recommend and support environmental improvements in extractive industries sites

Unit Summary

Overview

This unit is about recommending and supporting environmental improvements in the operations of an extractive industries site/s. Improvements may relate to changes in systems that help environmental management or they may relate to actual improvements to the workplace.

This unit is for you if you are:

- A supervisor with responsibility for a section or sections of an operational site working under the direction of a manager

This unit contains three elements

- 3.1 Identify environmental improvements
- 3.2 Recommend environmental improvements
- 3.3 Support the implementation and evaluation of environmental improvements

Performance requirement

In performing effectively in this unit you will need to demonstrate that you do the following

In order to *identify environmental improvements* you will need to critically examine the workplace yourself for opportunities. It is vitally important that you also involve others working in the area under your control and encourage them to make suggestions for environmental improvements. If after evaluation it is not possible to act on a suggestion then you will provide an explanation. As a part of this process you need to ensure that staff are provided with information about environmental matters in the workplace.

In order to *recommend environmental improvements* you need to look at any trends or developments within the workplace that may affect the proposed improvement. You need to recommend plans that take into account contributions and feedback from all those concerned and your plans will take into account the effects of normal, abnormal and emergency situations.

In order to *support the implementation and evaluation of environmental improvements* you will ensure that you efficiently use the resources provided for the implementation of the improvement and allow all concerned to contribute to the process effectively. You will assist with the implementation of the approved environmental improvement in line with agreed objectives and plans. After implementation you will monitor the improvement, recommending corrective action, if necessary to ensure achievement of objectives. You will ensure that all staff for whom you are responsible and who are affected by the improvement are committed to the improvement programme at all times. After implementation you will need to compare the outcome of the improvement with the original expectation specified in the recommendations. You will keep records of environmental improvements.

Knowledge and understanding

To perform effectively in this unit you need to have a knowledge and understanding in the areas of:

- benefits of improved environmental performance
- how to identify aspects and risks
- making and implementing plans
- communication, involvement and motivation
- environmental performance in terms of the parts of the process under your control
- interpretation of patterns and trends
- record keeping
- operational aspects of the area of the site under your control with regard to environmental matters
- relevant environmental legislation for the area of the site under your control

Unit 3 Recommend and support environmental improvements in extractive industries sites

Element 3.1 Identify environmental improvements

The National Standard

This section provides criteria to assess whether you identify environmental improvements to the National Standard of competence. It also lists the knowledge and understanding that are essential for effective performance.

Performance criteria

You must ensure that

- a) you give accurate information about environmental matters relating to the **workplace to appropriate people**
- b) you encourage suggestions for environmental **improvement** in the **workplace** from **appropriate people**
- c) where it is not possible to act on a suggestion, you promptly provide clear and relevant reasons to those concerned
- d) your evaluation of suggestions takes into account all relevant **information** concerning the work activity
- e) you take the opportunity to examine the workplace and assess opportunities for environmental **improvement**
- f) you identify environmental **improvements** in the **workplace** taking into account all relevant factors
- g) the **improvements** you identify are consistent with the company environmental policy, meet standards set by legal requirements and represent good practice
- h) clear records are kept which conform to company requirements

Knowledge requirements

You need to know and understand

1. key aspects of environmental legislation applicable to the workplace under your supervision
2. how the company environmental policy relates to the workplace
3. how planning consents and conditions relate to the parts of the workplace under your supervision
4. practical aspects of environmental management and audit systems e.g. ISO14001
5. practical aspects of good water management
6. techniques for water quality improvement
7. techniques for air quality improvement
8. practical aspects relating to control of environmentally hazardous substances
9. practical aspects of waste management
10. principles of waste reduction and recycling techniques
11. principles of good housekeeping
12. material management systems
13. organisational and statutory requirements in respect of record keeping
14. communication involvement and motivation
15. benefits of improved environmental performance
16. how to identify aspects and risks
17. making and implementing plans

Unit 3 Recommend and support environmental improvements in extractive industries sites

Element 3.2 Recommend environmental improvements

The National Standard

This section provides criteria to assess whether you recommend environmental improvements to the National Standard of competence. It also lists the knowledge and understanding that are essential for effective performance.

Performance criteria

You must ensure that

- a) you correctly identify factors within the workplace which may affect the environmental **improvement**
- b) you confirm subordinates understanding of the environmental **improvement** at appropriate intervals
- c) you encourage **appropriate people** to give their active support for the environmental **improvement**
- d) you make a clear case for the proposed **improvement** and support your case with sound evidence
- e) you make suggestions for methods of implementation taking account of contributions and feedback from **appropriate people**
- f) your suggestions take into account the effects of normal, abnormal and emergency situations
- g) clear records are kept which conform to company requirements

Knowledge requirements

You need to know and understand

1. key aspects of environmental legislation applicable to the workplace under your supervision
2. how the company environmental policy relates to the workplace
3. how planning consents and conditions relate to the parts of the workplace under the candidates control
4. practical aspects of environmental management and audit systems e.g. ISO14001
5. practical aspects of good water management
6. techniques for water quality improvement
7. techniques for air quality improvement
8. practical aspects relating to control of environmentally hazardous substances
9. practical aspects of waste management
10. principles of waste reduction and recycling techniques
11. principles of good housekeeping
12. material management systems
13. communication, involvement and motivation
14. organisational and statutory requirements in respect of record keeping
15. benefits of improved environmental performance
16. how to identify aspects and risks
17. making and implementing plans

Unit 3 Recommend and support environmental improvements in extractive industries sites

Element 3.3 Support the implementation and evaluation of environmental improvements

The National Standard

This section provides criteria to assess whether you support the implementation and evaluation of environmental improvements to the National Standard of competence. It also lists the knowledge and understanding that are essential for effective performance.

Performance criteria

You must ensure that

- a) you effectively use the resources provided to enable the **improvement** to be implemented in the workplace
- b) you assist implementation of the environmental **improvement** in line with agreed plans
- c) the environmental **improvement** is implemented in such a way that **appropriate people** are able to contribute to the process effectively
- d) implications of the **improvement** are passed to those affected and their understanding confirmed
- e) you monitor and evaluate progress of implementation of the **improvement** and make recommendations for corrective action if required
- f) you assist with assessment of the improvement after implementation and compare the results against the original recommendations
- g) you confirm your subordinates understanding of, and commitment to the improvement at appropriate intervals
- h) clear records are kept which conform to company requirements

Knowledge requirements

You need to know and understand

1. key aspects of environmental legislation applicable to the workplace under your supervision
2. how the company environmental policy relates to the workplace
3. how to use resources efficiently
4. how planning consents and conditions relate to the parts of the workplace under your supervision
5. practical aspects of environmental management and audit systems e.g. ISO14001
6. practical aspects of good water management
7. techniques for water quality improvement
8. techniques for air quality improvement
9. practical aspects relating to control of environmentally hazardous substances
10. practical aspects of waste management
11. principles of waste reduction and recycling techniques
12. principles of good housekeeping
13. material management systems
14. communication, involvement and motivation
15. organisational and statutory requirements in respect of record keeping
16. benefits of improved environmental performance

Unit 4 Identify health and safety hazards, environmental aspects and risks in extractive industries sites

Unit Summary

Overview

This unit is about the identification of hazards and risks for health and safety and the identification of environmental aspects and possible impacts in extractive industries operational sites. The process of hazard/aspect identification and risk assessment is continuous, therefore supervisors should be on the look-out for hazards/aspects at all times but especially when changes occur in the workplace.

This unit is for you if you are:

- A supervisor with responsibility for a section or sections of an operational site working under the direction of a manager

This unit contains two elements

4.1 *Identify health and safety hazards and reduce risks*

4.2 *Identify environmental aspects and reduce risks*

Performance requirement

In performing effectively in this unit you will need to demonstrate that you do the following:

In order to *Identify health and safety hazards and reduce risks* you need to identify hazards and those people who may be at risk from the hazard. After assessing the risk you would report any hazards which constitute a high risk to the responsible person and deal with low level risks when it is your responsibility to do so. It is important that you encourage suggestions from subordinates and pass these on, along with your own views, to the manager responsible. These suggestions may relate also to training matters. It is likely that you will need to liaise closely and seek assistance from your manager or a specialist health and safety manager.

In order to *Identify environmental aspects and reduce risks* you need to identify environmental aspects. After assessing the risk you would report any aspects that constitute a high risk, to the responsible person and deal with low level risks when it is your responsibility to do so. It is important that you encourage suggestions from subordinates and pass these on, along with your own views, to the manager responsible. These suggestions may relate also to training matters. It is likely that you will need to liaise closely and seek assistance from your manager or a specialist environmental manager.

Knowledge and understanding

To perform effectively in this unit you need to have a knowledge and understanding in the areas of

- interview and questioning techniques
- communication, involvement and motivation
- workplace practices and procedures
- health, safety and environmental efficiency in terms of the area of the site under your control
- how to identify hazards and evaluate risks
- how to identify aspects and evaluate environmental risks
- record keeping
- identification of training needs
- relevant health, safety and environmental legislation for the area of the site under your control
- benefits of improved health, safety and environmental performance
- health, safety and environmental definitions

Unit 4 Identify health and safety hazards, environmental aspects and risks in extractive industries sites

Element 4.1 Identify health and safety hazards and reduce risks

The National Standard

This section provides criteria to assess whether you Identify health and safety hazards and reduce risks to the National Standard of competence. It also lists the knowledge and understanding that are essential for effective performance.

Performance criteria

You must ensure that

- a) **hazards** in the workplace and their existing controls are identified
- b) **people who are at risk** from **hazards** are identified
- c) you assess the level of risk arising from the **hazard**
- d) advice is sought from managers or specialists in risk assessment when appropriate
- e) you report **hazards** which constitute a high risk immediately to the responsible person(s)
- f) you deal with **hazards** which constitute a low risk in accordance with organisational and operational procedures
- g) you encourage suggestions from your subordinates for reducing risks to health and safety
- h) you give suggestions to control or reduce risks to health and safety to the responsible person(s)
- i) you make recommendations for training where necessary
- j) clear records are kept which conform to company requirements

Knowledge requirements

You need to know and understand

1. definitions of hazard, risk, accident, danger, accident rate, frequency and severity.
2. workplace monitoring and hazard identification methods, e.g. formal and informal health and safety inspections, surveys and audits
3. basic procedures for carrying out health and safety risk assessment
4. key aspects of legislation applicable to the workplace under your control
5. the benefits of participation of persons at work
6. requirement of health and safety document with regard to risk assessment
7. in-house information in relation to internal accidents, incidents, near misses, cases of occupational illnesses
8. basic knowledge of the main types of occupational health risk – chemical (toxic, corrosive, dermatitic), physical (noise, dust, temperature, light, vibration, repetitive strain) and ergonomic
9. how the incorporation of commonly used protective devices and correct plant maintenance contribute to reduction of risks
10. safe working practices for yourself and those working under your direction and control to include all systems, procedures, equipment and materials in use
11. your scope and responsibility for dealing with hazards
12. your own limitations relating to hazards and risks and an awareness of the structure for reporting

13. health and safety induction schemes
14. communication, involvement and motivation
15. interview and questioning techniques
16. the organisations record keeping requirements

Unit 4 Identify health and safety hazards, environmental aspects and risks in extractive industries sites

Element 4.2 Identify environmental aspects and reduce risks

The National Standard

This section provides criteria to assess whether you identify environmental aspects and reduce risks to the National Standard of competence. It also lists the knowledge and understanding that are essential for effective performance.

Performance criteria

You must ensure that

- a) **environmental aspects** in the workplace and their existing controls are identified
- b) you **assess the level of risk** arising from the **environmental aspect**
- c) advice is sought from managers or specialists in environmental aspect evaluation when appropriate
- d) you report **environmental aspects** which constitute a high risk immediately to the responsible person(s)
- e) you deal with **environmental aspects** which constitute a low risk in accordance with organisational and operational procedures
- f) you encourage suggestions from your subordinates for reducing risks to the environment
- g) you give suggestions to control or reduce environmental risks to the responsible person(s)
- h) you make recommendations for training where necessary
- i) clear records are kept which conform to company requirements

Knowledge requirements

You need to know and understand

1. definitions of aspect, risk, impact, incident, danger, incident, incident rate, frequency, severity and pollution
2. workplace monitoring and aspect evaluation methods, e.g. formal and informal environmental inspections, surveys and audits
3. basic procedures for carrying out environmental risk assessment
4. key aspects of legislation applicable to the workplace under your supervision
5. basic knowledge of the main types of environmental impact – emissions to air, releases to water and contamination to ground
6. how the incorporation of commonly used protective devices and correct plant maintenance contribute to improved control and environmental reliability
7. environmental induction schemes
8. communication, involvement and communication
9. interview and questioning techniques
10. the organisations record keeping requirements
11. requirements of ISO 14001 in relation to environmental risk assessment

Unit 5 Create effective working relationships

Unit Summary

Overview

This unit is about creating and maintaining effective working relationships with your manager, team members and other colleagues within your organisation. It also involves minimising the potential for conflict and dealing with conflicts when they arise.

This unit is for you if you are a manager or supervisor with

- A tightly defined area of responsibility
- Some limited opportunity for taking decisions and managing budgets
- Responsibility for achieving specific results by using resources effectively, *and*
- Responsibility for allocating work to team members, colleagues or contractors.

This unit contains three elements

5.1 Gain the trust and support of colleagues and team members

5.2 Gain the trust and support of your manager

5.3 Minimise conflict in your team

In order to *gain the trust and support of your colleagues*, you need to consult with them on proposed activities, keep them informed about your work and offer them appropriate support when needed. You need to ensure you treat them with respect, keep your promises to them and discuss issues with them frankly and openly

In order to *gain the trust and support of your manager*, you need to keep him or her informed about your activities, plans and any problems, threats or opportunities which arise. You need to consult your manager for clarification on policies and ways of working which you are unsure about, and resolve any disagreements in a constructive way.

In order to *minimise conflict in your team*, you need to make clear to team members the standards of work and behaviour you expect. You need to be available to discuss and deal with problems as soon as they arise in ways which minimise disruption and bad feeling. In some cases it may be necessary to keep a careful record of conflict situations and how you resolved them.

This unit belongs to the Institute of Management suite of awards C4.

Unit 5 Create effective working relationships

Element 5.1 Gain the trust and support of colleagues and team members

Performance Criteria

You must ensure that:

- a) you consult with *colleagues and team members* about proposed activities at appropriate times and in a manner which encourages open, frank discussion
- b) you keep *colleagues and team members* informed about organisational plans and activities
- c) you honour the commitments you make to *colleagues and team members*
- d) you treat *colleagues and team members* in a manner which shows respect for individuals and the need for confidentiality
- e) you give *colleagues and team members* sufficient support for them to achieve their work objectives
- f) you discuss your evaluation of their work and behaviour directly with the *colleagues and team members* concerned

Knowledge Requirements

You need to know and understand:

Communication

- how to consult with colleagues in a way which encourages open and frank discussions
- how to select communication methods appropriate to the issues and contexts
- the importance of effective communication methods to productive working relationships
- the importance of discussing evaluations of output and behaviour at work promptly and directly with those concerned
- how to provide feedback in a way which will lead to a constructive outcome

Information handling

- the types of information concerning colleagues which you need to treat confidentiality, and procedures to follow

Organisational context

- the organisational plans and activities, emerging threats and opportunities, which are relevant to the work of colleagues and about which they need to be informed

Providing support

- the support colleagues may require to achieve their objectives and how to provide this support

Working relationships

- how people work in groups
- strategies and styles of working which encourage effective working relationships
- the importance of honouring commitments to colleagues
- the importance of showing respect for colleagues and how to do this

Unit 5 Create effective working relationships

Element 5.2 Gain the trust and support of your manager

Performance Criteria

You must ensure that:

- a) you give your **manager** timely and accurate reports on activities, progress, results and achievements
- b) you give your **manager** clear, accurate and timely information about emerging threats and opportunities
- c) you consult your **manager** about organisational policies and ways of working at appropriate times
- d) your **proposals** for action are clear and realistic
- e) you present your **proposals** for action to your **manager** at appropriate times
- f) where you have disagreements with your **manager**, you make constructive efforts to resolve these disagreements

Knowledge Requirements

You need to know and understand:

Communication

- the importance of keeping your manager informed of activities, progress, results and achievements and how to do this
- how to develop and present proposals in ways which are realistic, clear and likely to influence your manager positively

Organisational context

- the management structures, lines of accountability and control in your organisation
- the types of emerging threats and opportunities about which your manager needs to be informed
- the types of organisational policies and ways of working about which you need to consult with your manager and how to do this

Working relationships

- strategies and styles of working which encourage effective working relationships
- methods of handling disagreements with your manager in a constructive manner

UNIT 5 Create effective working relationships

Element 5.3 Minimise conflict in your team

Performance Criteria

You must ensure that:

- a) you inform **team members** of the standards of work and behaviour you expect, in a manner and at a level and pace appropriate to the individuals concerned
- b) you provide appropriate opportunities for **team members** to discuss **problems** which directly or indirectly affect their work
- c) you take action promptly to deal with conflict between **team members**
- d) you inform relevant people about conflicts outside your area of responsibility
- e) the way you resolve conflict minimises disruption to work and discord between **team members**
- f) records of conflicts and their outcomes are accurate and comply with requirements for confidentiality and other organisational policies

Knowledge Requirements

You need to know and understand:

Information handling

- the importance of maintaining accurate records of conflicts and their outcomes
- the information regarding conflicts which must be treated confidentially and the people who may and may not be involved

Organisational context

- the people to inform when conflicts are outside your area of responsibility
- the organisational requirements regarding the handling of conflict and its resolution

Working relationships

- situations, behaviour and interactions between people which encourage conflict
- how to minimise conflict between people at work
- the importance of keeping people regularly informed of expected standards of work and behaviour
- how to inform people of the standards and behaviour you expect of them
- the importance of giving people opportunities to discuss problems affecting their work and how to provide such opportunities
- how to identify potential conflict between individuals in your organisation
- types of conflict which may occur between people at work and action to take in response to these which will minimise disruption to work

Unit 6 **Lead the work of teams and individuals to achieve their objectives**

Unit Summary

Overview

This unit is about making best use of your team and its members so that they can achieve their objectives. It covers planning and assessing work, and providing feedback to team members.

This unit is for you if you are a manager or supervisor with

- A tightly defined area of responsibility
- Some limited opportunity for taking decisions and managing budgets
- Responsibility for achieving specific results by using resources effectively, *and*
- Responsibility for allocating work to team members, colleagues or contractors.

This unit contains three elements

6.1 Plan the work of teams and individuals

6.2 Assess the work of teams and individuals

6.3 Provide feedback to teams and individuals on their work

In order *to plan the work of teams and individuals*, you need to decide with your team how to plan work to achieve their objectives, taking into account team members' abilities and development needs. You need to make clear what is expected of people, check their understanding and update your plans in the light of progress and changes.

In order *to assess the work of teams and individuals*, you need to make it clear why you are assessing their work and get them to assess their own work wherever possible. You need to obtain sufficient, reliable information to be able to assess their work against clear, agreed criteria.

In order *to provide feedback to teams and individuals on their work*, you need to provide regular feedback based on objective assessments of their work. Your feedback should acknowledge achievements and provide constructive suggestions and encouragement for improving work. At all times you need to show respect for confidentiality and for the individuals concerned, and give them the chance to respond to the feedback and make their own suggestions about how they could improve their work in the future.

This unit belongs to the Institute of Management suite of awards C12.

Unit 6 **Lead the work of teams and individuals to achieve their objectives**

Element 6.1 **Plan the work of teams and individuals**

Performance Criteria

You must ensure that:

- a) you give opportunities to your **team members** to contribute to the planning and organisation of their work
- b) your **plans** are consistent with your team's objectives
- c) your **plans** cover all those personnel whose work you are responsible for
- d) your **plans** and schedules are realistic and achievable within **organisational constraints**
- e) your **plans** and the way you allocate work take full account of **team members'** abilities and development needs
- f) you explain to your **team members** your **plans** and their work activities in sufficient detail and at a level and pace appropriate to them
- g) you confirm your **team members'** understanding of your **plans** and their work activities at appropriate times
- h) you update your **plans** at regular intervals and take account of individual, team and organisational changes

Knowledge Requirements

You need to know and understand:

Communication

- the importance of effective communication when explaining work plans and allocations
- how to present work plans in a way that gains the support and commitment of those involved

Continuous improvement

- the importance of regularly reviewing work

Involvement and motivation

- the importance of providing your team members with the opportunity to contribute to the planning and organisation of their work

Organisational context

- the types of organisational constraints which influence your planning

Planning

- the importance of planning work activities to organisational effectiveness and your role and responsibilities in relation to this
- how to develop realistic and achievable work plans for teams and individuals both in the short and medium term
- the team's objectives and how your plans succeed in meeting these

Working relationships

- the difference between someone who is within your line management control and someone for whom you have functional responsibility, and the implications this difference may have for planning work

Unit 6 Lead the work of teams and individuals to achieve their objectives

Element 6.2 Assess the work of teams and individuals

Performance Criteria

You must ensure that:

- a) you explain the ***purpose*** of ***assessment*** clearly to all involved
- b) you give opportunities to team members to ***assess*** their own work
- c) your ***assessment*** of work takes place at times most likely to maintain and improve effective performance
- d) your ***assessments*** are based on sufficient, valid and reliable ***information***
- e) you make your ***assessments*** objectively against clear and agreed criteria

Knowledge Requirements

You need to know and understand:

Communication

- the importance of being clear yourself about the purpose of assessment and of communicating this effectively to those involved

Continuous Improvement

- the importance of assessing the ongoing work of teams and individuals and your role and responsibilities in relation to this

Information Handling

- how to gather and evaluate the information you need to assess the work of teams and individuals

Involvement and Motivation

- the importance of providing opportunities to your team members to assess their own work and how you can enable and encourage this involvement

Monitoring and Evaluation

- the range of purposes of work assessment, why work assessment may play a role in an organisation and how they apply to your own situation
- how to assess the work of teams and individuals, and processes in the workplace which can support such assessment
- the principles of fair and objective assessment of work and how to ensure this is achieved

Unit 6 Lead the work of teams and individuals to achieve their objectives

Element 6.3 Provide feedback to teams and individuals on their work

Performance Criteria

You must ensure that:

- a) You provide **feedback** to your team members in a **situation** and in a **form** and manner most likely to maintain and improve performance
- b) The **feedback** you give is clear and is based on an objective assessment of your team members work
- c) your **feedback** recognises team members' achievements and provides constructive suggestions and encouragement for improving their work
- d) the way you give **feedback** shows respect for the individuals involved
- e) you treat all **feedback** to individuals and teams confidentially
- f) you give opportunities to team members to respond to **feedback** and recommend how they could improve their work

Knowledge Requirements

You need to know and understand:

Communication

- the importance of good communication skills when providing feedback
- how to provide both positive and negative feedback to team members on their performance
- how to choose an appropriate time and a place to give feedback to teams and individuals
- how to provide feedback in a way which encourages your team members to feel that you respect them

Continuous Improvement

- the importance of providing clear and accurate feedback to your team members on their performance and your role and responsibilities in relation to this

Information Handling

- the principles of confidentiality when providing feedback – which people should receive which pieces of information

Involvement and Motivation

- how to motivate team members and gain their commitment by providing feedback
- the importance of being encouraging when providing feedback to team members and showing respect for those involved
- why it is important to provide constructive suggestions on how performance can be improved
- the importance of giving those involved the opportunity to provide suggestions on how to improve their work

Appendix A – Glossary of Terms

	Sites	
	<p>These National Occupational Standards cover all sites involved in the extraction, processing and storage of rocks, minerals and mineral products. These have been categorised into 9 groups [see below]. Awarding Bodies are recommended to endorse candidates' certificates on the reverse with the appropriate category below from which the majority candidate's evidence has been drawn. For the purpose of these National Occupational Standards, the groups are defined as follows:</p>	
1	Quarry – Hard Rock	A quarry is as defined within the Quarry Regulations 1999. A hard rock quarry is one where the use of explosives is essential for extraction purposes.
2	Quarry – Non-blasted Rock	Quarries where the use of explosive is not essential. This includes quarries to extract sands, gravels, clays, and all other rocks and minerals with the exception of coal.
3	Processing Operations within a quarry	<p>Processing operations covers any operation required to add value to the extracted rock or mineral. These operations can be considered as being in 10 groups:</p> <p>(a) Crushing/Screening/washing; (b) Drying; (c) Concrete/Mortar production; (d) Asphalt/coated materials production; (e) density/fluid separation (f) chemical separation; (g) forming; (h) heat treatment (i) packaging (j) splitting, sawing, shaping.</p> <p>The crushing/screening/washing would include dedicated plant established for the recycling of materials such as construction and demolition waste, slag, and glass to produce aggregates.</p>
4	Processing Operations outside a quarry	As 3 above but carried out at dedicated plant/site/s not covered by the Quarries Regulations 1999.
5	Open-cast Coal Mine	A surface working area for the extraction of coal.
6	Deep Mine – Coal	An underground area for the extraction of coal accessed by tunnels and/or shafts including its surface activities.
7	Deep Mine – Other than Coal	An underground area for the extraction of any rock or mineral with the exception of coal accessed by tunnels and/or shafts including its surface activities.
8	Wharf	A site established for the transfer of materials to or from water borne transport which may also include storage areas for those materials.
9	Depot	A site established for the transfer of materials to or from land-based transport which may also include storage areas for those materials.
	Contaminated Ground	An area within or around the site affected by any substance which could have the potential of having an adverse effect on that area of ground.