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Target Audience:
All FOD Inspectors
All SG Inspectors

COMPETENCE UNDER THE QUARRIES REGULATIONS 1999

This SIM outlines the issues to consider regarding the demonstration of competence as required under Regulation 9, and lists in an Appendix current national vocational qualifications which can provide the necessary competence assurance.

Addressing competence at quarry inspections contributes directly to the Workplace Inclusion, Diversity and Education programme, and indirectly to all other priority programmes. This SIM contributes to the HSC's Enforcement Strategic Enabling Programme.

BACKGROUND

- 1 Regulation 9 of the Quarries Regulations 1999 requires all those working at the quarry to be **competent**, whether or not they are employees of the quarry operator; and it requires that there are sufficient competent people on site to manage the quarry and supervise as necessary.
- 2 Lack of health and safety competence is an underlying cause revealed by investigations into accidents and poor standards in the quarry industry, where traditionally experience has been assumed to mean competence and there has been little investment in education to provide decision makers with underpinning knowledge to the necessary standards. Addressing competence in a structured way will have a dramatic effect on health and safety, in that the standards in the workplace will be improved and the accident rate reduced. Quarrying has the third highest fatal injury rate to employees of all industries in Britain, at 5.9 per 100,000 employees (compare construction at 4.6 per 100,000 workers; HSE statistics 2004-2005).
- 3 The requirement for competence is not restricted only to quarry managers and those who work on site, but all those in the management structure whose decisions affect quarry operations. This includes, for example, senior managers and human

resources personnel who need to be competent in their roles, since their actions and decisions have an effect on quarry operations.

COMPETENCE

4 Although requiring “**information, instruction, training and supervision**”, the Health and Safety at Work Act does not mention competence. Similarly, many subsequent health and safety regulations require “**information, instruction and training**” for those who might be affected by health and safety risks arising from work activity, but do not overtly require the measurement of competence to do the job. Competence should not be confused with academic qualifications or experience. There are no grandfather rights.

5 The Quarries Regulations 1999 are different both from more general health and safety regulations, and also from the previous Mines and Quarries Act. No one can work in a quarry unless they are competent (or they are under the supervision of a competent person), using a definition the same as in PUWER 1998, based on knowledge, experience, training and other qualities related to the job they are to do.

6 The Quarries Regulations also require the operator to **demonstrate** this competence (Regulation 7). This would apply not only to the quarry site but also to anyone in the management structure with influence over that site. Thus the Managing Director has to be competent, and be able to demonstrate that he is competent to undertake his duties so far as the quarry is concerned, as set out in the quarry health and safety document. The same applies to geologists, personnel managers, surveyors, engineers, area managers etc., including those who may be contractors.

HOW CAN COMPETENCE BE DEMONSTRATED?

7 Under QR99 formal professional qualifications are required for some specialist activities, for example geotechnical engineers must be either Chartered Engineers or Chartered Geologists with three years' relevant experience (QR regulation 2). For others, competence should be measured against the national occupational standards, in the relevant practical and/or managerial skills (regulation 9 and L118, “Health and Safety at Quarries”, guidance paragraph 74).

8 The Qualifications and Curriculum Authority (QCA) (working with the Scottish Qualifications Authority, and ACCAC in Wales) sets standards through the **National Qualifications Framework**. This identifies the level of responsibility and knowledge required for different job types; e.g. Level 3. **National Occupational Standards** developed by Sector Skills Councils identify the competencies needed for specific tasks (e.g. in Blasting Operations). **S/NVQs** (e.g. Shotfiring Level 3 NVQ) provide a means for the individual to demonstrate that s/he has this competence at the time of assessment.

9 The status of the National Occupational Standards for demonstrating competence can be compared to the status of a British or European Standard, which may be

used by an enforcing authority as the standard for other health and safety requirements, e.g. the nationally accepted standard of guarding for a troughed belt conveyor is to BS 7300. The National Occupational Standards can be used in court in a similar way.

10 The advantage of nationally recognised assessment systems such as the S/NVQ is that in obtaining the qualification, each person has had their knowledge and experience checked systematically in their working environment, any omissions identified and remedial actions taken. For the individual, their qualification is transferable between sites or employers, as the standard of achievement reached is clear. It can be built upon, as new skills are required for career development.

11 S/NVQs do not discriminate by educational past, for example a degree is not necessary as a pre-requisite to an NVQ Level 4 or 5. Those who achieve Level 4 or 5 are eligible to be members of the Institute of Quarrying.

12 An alternative nationally recognised system for the demonstration of competence is via the Engineering Council's staged membership scheme, which for the extractive industry is administered through the Institute of Materials, Minerals and Mining (IOM³). Achievement of Level 4 or 5 NVQ counts towards membership. Members can progress through the grades of Engineering Technician, Incorporated Engineer and Chartered Engineer, with an assessment of their competence against the Engineering Council's standards at each stage. Further information is available at www.iom3.org.

13 Further national systems may be developed in future which would also fulfil the requirements of the Quarries Regulations. However, only those outlined above have been identified to date.

14 The references to S/NVQs in L118, "Health and Safety at Quarries", have the status of guidance. In theory, therefore, a quarry operator could decide not to adopt S/NVQs but to implement some other means of demonstrating a competent workforce against the National Occupational Standards. This would however need to be as effective as the nationally recognised and industry-agreed S/NVQ system, and it would take a great investment in time and effort to develop an equivalent in-company scheme. Such a scheme would not have all the advantages of the S/NVQ system.

15 Appendix 1 is a list (current at June 2005) of the relevant NVQs accredited by EMP (formerly EPIC) Awarding Body Limited, the relevant awarding body for the quarry industry. Further information and updates are available from their website at www.epicawardingbody.com.

16 HSE's operational policy position is that by obtaining S/NVQs the workforce are able to show that they have reached a common understanding of their duties under the regulations. Legal advice has confirmed that this operational policy position is viable and proportional to the risks involved. This SIM updates and builds on SIM 03/2005/05, which is therefore withdrawn, in line with the legal advice.

ACTION BY INSPECTORS

17 The regulations require everyone in the quarry and in the management structure, on and off site, to be competent before work starts. The operator and workforce have to be able to demonstrate this competence **now**. The National Occupational Standards for health, safety and environmental management in the quarry industry were available when the Regulations came into force, and should be used as the benchmark. DAPS, mining engineering or quarrying degrees, MScs etc all provide good **underpinning knowledge**, but this knowledge is not evidence of competence.

18 However, the S/NVQs in Health, Safety and Environmental Management were only launched in 2002 and not all candidates registered on these schemes will yet have fully achieved them to date.

19 SIM 03/2003/55 required inspectors to “actively encourage” quarry operators to be able to demonstrate the competence of their workforce using the recognised national framework, and to develop and maintain their skills through CPD. It should now be the expectation that operators are able to do so. It is the QNJAC’s target that the industry will be fully competence assured by 2010.

20 Inspectors visiting quarries for inspections or investigations should ask what steps the operator is taking to demonstrate the competence of the workforce, including managers. Where there is evidence of poor health and safety standards on the site, inspectors should pursue enquiries into the competence of those involved.

21 Keeping records such as those suggested by the Institute of Quarrying and other professional bodies’ CPD schemes is a demonstration of commitment to the development and maintenance of competence. The EPIC voluntary code of practice for training mobile plant operators includes an example of assessed CPD for operators.

ENFORCEMENT CONSIDERATIONS

22 Formal enforcement (e.g. Improvement Notice) should be considered where, for example:

- (1) Those in charge of site operations (e.g. regulation 8(i) appointees) are unable to demonstrate their competence against national occupational standards, relevant to the risks they are supposed to manage.
- (2) The management structure does not reflect the operational reality on site or does not include all those who influence health and safety there.
- (3) The operator has no programme in place to address the requirements of regulation 9.
- (4) CPD is not being undertaken and recorded.

23 During incident investigations the issue of competence of those involved should always be pursued. Recent inspector experience demonstrates that at an early stage of the investigation, consideration must be given to the evidence which will be required in order to support a possible charge under Regulation 9. The Criminal Procedures and Investigations Act 1996 requires the enforcing authority to pursue all reasonable avenues of enquiry. Experience also suggests that early legal advice is beneficial.

24 In preparation of a case under QR regulation 9 the following matters will need to be proven:

- (1) National occupational standards are the recognised benchmark for competence.
- (2) All relevant industry stakeholders (including HSC/E) were consulted in the development of these standards.
- (3) Detailed evidence of which parts of the relevant standards have or have not been met will need to be gathered.

25 Documentary evidence which should be gathered is likely to include:

- (1) Job description
- (2) Personal training records
- (3) Competence assessments
- (4) CPD records
- (5) Records relating to previous employment and training in the industry

Through comparison of these with the relevant national occupational standards, inspectors will be able to identify gaps in training and experience. They will then be able to investigate those gaps and establish in evidence whether or not a person has suitable competence.

Assistance and expert evidence may be required, and advice should be sought from the Sector during the investigation.

INSPECTOR COMPETENCE

26 It is important to note that the requirement under regulation 9 applies to an inspector whilst working on a quarry site. Operators have every right to ask the inspector to demonstrate his/her competence. The inspector does not require the same competence as the quarry manager, but has to demonstrate his/her competence as an inspector working in the quarry industry.

27 Inspectors should be prepared to describe their training, relevant qualifications, NVQ achievement, and how they maintain their competence through CPD and

professional memberships such as the Institute of Quarrying, IOSH etc. It is incumbent upon Quarry Inspectors to be able to demonstrate their continuing competence within the framework of the regulation 9 requirements.

28 General inspectors involved with quarry work should understand and accept the limitations of their competence, particularly with regard to geotechnical stability and explosives use. They should not become too involved in these issues without requesting specialist assistance from the regional Quarry Inspector or sector. **This does not mean that these topics can or should be ignored** at quarry visits by general inspectors, since they are potentially the greatest hazards on site and are often poorly understood by the industry. For example, a general inspector could ask questions about the design, tip and excavation rules, machinery selection for working faces and stockpiles, or shotfiring rules, and compare these with the requirements of L118 and other relevant guidance.

29 The larger quarry operating companies are well aware of who the Quarry Inspectors are, and there will be the expectation for a general inspector to defer when appropriate, in the same way that we would seek to involve any other specialist inspector.

FURTHER INFORMATION

30 Specific enquiries should be directed to the Metals and Minerals Group, Manufacturing Sector, Cardiff.

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APPENDIX 1

EMP Awarding Body Limited has been set up by the Extractives and Minerals Processing Industries to make available National Vocational Qualifications (NVQs) and Scottish Vocational Qualifications (SVQs) specifically tailored to the needs of the industry.

The NVQs and SVQs currently available for the industry in Scotland, Northern Ireland, Wales and England are:

HEALTH SAFETY AND ENVIRONMENTAL MANAGEMENT IN THE EXTRACTIVE AND MINERALS PROCESSING INDUSTRIES, NVQ LEVEL 5

If you are a senior manager responsible for any operational site/s in the extractives industry and have responsibility for promoting and implementing health, safety and environmental systems and improvements, then this may well be the qualification for you.

HEALTH SAFETY AND ENVIRONMENTAL MANAGEMENT IN THE EXTRACTIVE AND MINERALS PROCESSING INDUSTRIES, NVQ LEVEL 4

This is designed for managers responsible for any operational site/s in the extractives industry with day to day responsibility for the management of the sites and focuses on controlling and improving health, safety and the environment.

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

For all supervisors responsible for any operational site/s in the extractives industry, highlighting their essential contribution to health, safety and environmental management and improvement.

SPECIALISED PLANT AND MACHINERY OPERATIONS, NVQ/SVQ LEVEL 2

The NVQ and SVQ at Level 2 for all drivers of heavy plant used in the industry to extract and transport materials on sites. Available for drivers of dumpers, loading shovels, excavators, dozers, telehandlers, lift trucks and all other specialist vehicles.

PROCESS OPERATIONS, NVQ/SVQ LEVEL 2

This is the NVQ and SVQ at Level 2 for all those who operate, asphalt plant, concrete and mortar plant, crushing and screening, washers, driers, separators, and all other specialised processing plant in the industry.

DRILLING OPERATIONS, NVQ/SVQ LEVEL 2

The NVQ and SVQ at Level 2 designed exclusively for those who drill holes for blasting.

SHOTFIRING OPERATIONS, NVQ/SVQ LEVEL 3

The NVQ and SVQ at Level 3 for shotfirers in quarries. Includes additional units for explosive supervisors, face profilers and blast designers.

CONSTRUCTION AND CIVIL ENGINEERING SERVICES (HIGHWAYS MAINTENANCE) GENERAL HIGHWAYS OPERATIONS, SVQ LEVEL 2

This SVQ is available to those who prepare and segregate areas for highway work, operate powered tools and machinery, excavate and re-instate pavement surfaces and structures.

CONSTRUCTION AND CIVIL ENGINEERING SERVICES (ROADBUILDING) , NVQ/SVQ LEVEL 2

The NVQ and SVQ at Level 2 for those involved in contracting and road construction.

Also available, in conjunction with PAA/VQSET

LABORATORY AND TECHNICAL ACTIVITIES (LATA), NVQ LEVELS 2, 3 AND 4
NVQs at Levels 2, 3, and 4, for laboratory technicians and managers in the industry.