Summary
This Inspection Guide (IG) sets out the Energy Division - Offshore approach to the inspection of the management of competency of wells personnel engaged in oil or gas well operations either offshore on the UK Continental Shelf or onshore in Great Britain.

The Guide provides a question set to be used as a basis for a wells personnel competency management system inspection. This has been developed from a background of HSE and industry guidance on Competency Management Systems.

The guide provides the basis to assess any risk gap as defined by HSE’s Enforcement Management Model, and hence the Duty Holder’s Performance Score which will feed into the intervention planning process.

Introduction
Competence is a very broad subject area that may span the length and breadth of an organisation, and the competency requirements for personnel involved in well engineering and operations activities will be different dependent upon the organisation’s activities, the job position, the tasks to be undertaken and the associated risks. The work activities and tasks carried by different organisations will be different dependent upon their roles as mobile and fixed installation drilling rig duty holders, or as well operators, or as third party service providers.
Major hazard organisations require competent staff that have the necessary skills, knowledge and experience to undertake critical tasks in such a way as to prevent a major accident or minimise the consequences to people and the environment, should one occur.

‘Competence’ means the ability to undertake responsibilities and perform activities to a recognised standard on a regular basis. Competency is a combination of practical and thinking skills, experience and knowledge, and may include a willingness to undertake work activities in accordance with agreed standards, rules and procedures. Competency depends on the context and the environment in which the activity is performed, and on the working culture of the organisation.

‘Competence Management’ means the arrangements to control, in a logical and integrated manner, a cycle of activities within the organisation that will assure, and develop, competent performance. The aim is to ensure that individuals are clear about the performance that is expected of them, that they have received appropriate training, development and assessment, and that they maintain, or develop, their competence over time.

**Action**

The aim of this Inspection Guide (IG) is to provide information and guidance to offshore inspectors to support the delivery of consistent and effective competence assessments of offshore wells personnel. It does this by highlighting key areas essential to an effective competence assessment process, so that these can be covered during inspections, providing a framework for inspectors to judge compliance, assign performance ratings, and decide what enforcement action to take should they find legislative breaches. In doing so, it complements HSE’s Enforcement Policy Statement (EPS) and Enforcement Management Model (EMM).

Inspectors undertaking a Wells Competency Management System inspection will need to be familiar with the Oil and Gas UK Guidelines on competency for Wells Personnel.

A set of model responses is provided along with a questionnaire (see Appendix 1). These provide the interpretive standard against which the Enforcement Management Model (EMM) risk-gap should be assessed and hence the Duty Holder’s performance Score in relation to wells personnel competency management.

The questions were developed from the EI Research Report: Human Factors Performance Indicators for the Energy and Related Process Industries and the survey questionnaire commissioned by the OSPRAG Technical Review Group.

Success criteria (fundamental requirements) are listed under the inspection topics (see appendix 2); these cover the key issues that inspectors should
consider when carrying-out inspections against each core intervention issue. In some instances, not all of the success criteria will apply so inspectors should make a judgement regarding which of these are relevant in each case. If the relevant success criteria cannot be met, inspectors should assess how serious the consequences of failure to comply could be. This will inform their decision making in terms of the performance ratings that they assign and the enforcement action they take (if any) based on the findings of the inspection.

BACKGROUND
The Oil Spill Prevention & Response Advisory Group (OSPRAG) was set up in the UK in response to the Macondo incident in the Gulf of Mexico in April 2010. The recommendations by OSPRAG’s Technical Review Group were accepted by Oil and Gas UK and led to the publication of Guidelines on Competency for Wells Personnel by Oil and Gas UK.

The OSPRAG Technical Review Group published the following recommendations on competence assessment:

*There is a high degree of variation in how Competency Management Systems (CMS) are structured across all organisations and their focus on safety critical well integrity issues. We recommend that all CMS ensure that they effectively address the following minimum criteria within their systems:*

- **Leadership and Supervisory Competencies** should be established and assessed for a minimum of the following positions:

<table>
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<tr>
<th>Location</th>
<th>Position</th>
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<tbody>
<tr>
<td><strong>Offshore</strong></td>
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<tr>
<td>OIM</td>
<td>Well Service Supervisor</td>
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<tr>
<td>Company Man</td>
<td>Well Test Supervisor</td>
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<tr>
<td>Toolpusher</td>
<td>Coil Tubing Supervisor</td>
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<tr>
<td>Drilling Supervisor</td>
<td>E-line Supervisor</td>
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<tr>
<td>Driller</td>
<td>Slick Line Supervisor</td>
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<tr>
<td>Assistant Driller</td>
<td>Completions Supervisor</td>
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<tr>
<td>Derrickman</td>
<td>Subsea Engineer</td>
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<td>Mud Logger</td>
<td>BOP/LLMRP Engineer</td>
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<tr>
<td>Drilling Fluids Engineer</td>
<td>Well Integrity Engineer</td>
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<tr>
<td>Cementer</td>
<td>Production Supervisor</td>
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<tr>
<td><strong>Onshore</strong></td>
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<tr>
<td>Drilling Manager</td>
<td>Senior Completion Engineer</td>
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<tr>
<td>Drilling Superintendent</td>
<td>Completions Engineer</td>
</tr>
<tr>
<td>Senior Drilling Engineer</td>
<td>Petroleum Engineer</td>
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<tr>
<td>Drilling Engineer</td>
<td>Rig Manager</td>
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<tr>
<td><strong>Geology and Geophysics</strong></td>
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<tr>
<td>Operations Geologist</td>
<td>Reservoir Engineer</td>
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<tr>
<td>Development Geologist</td>
<td>Subsurface Lead/Manager</td>
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** Position or Role titles will vary across organisations
It should be recognised that appraisal systems alone do not constitute an effective competency assessment and CMS should clearly demonstrate competency is assessed.

Competency assessments for all positions listed above should demonstrate a level of independence for the role.

CMS should have a detailed audit at least every 3 years.

Additional competencies should be developed and assessed for all positions listed above when working on challenging or high risk wells.

CMS should detail how competencies for all contract staff used for positions listed above are selected and assessed.

**Oil and Gas UK Guidance**

The Well Life Cycle Practices Forum produced guidance on competency for wells personnel for Oil and Gas UK. They were written by the Competency, Behaviours and Human Factors workgroup which included representatives from operator companies, well management companies, OPITO and RGU.

The guidance is relevant to;

- all UKCS offshore installation duty holders, and
- all employers of personnel working on wells and well operations in the UK.

The work-group has also produced example competency profiles for selected well personnel roles, and established key risk areas and skill elements defined as generic skills that are applicable throughout the well life cycle and key risk areas of the well life cycle where other, more specific skills are applicable.

Different roles are involved in these risk areas at different stages of the life cycle, and also depending on the nature of the well.

**IADC Competence Assurance Accreditation Programme**

The International Association of Drilling Contractors (IADC) runs an accreditation system for drilling and service companies, which provides accreditation of companies Competence Assurance Program to assure these programs meet accepted practices to develop and ensure the skills of their personnel. Accreditation focuses on policy and procedures documentation, identification of job positions and definition of competencies, the assessment system, records system and quality assurance system.

IADC has developed with industry a series of Knowledge, Skills and Abilities (KSA) competency templates for rig based personnel to provide a means by which workers can demonstrate their capabilities.

IADC announced in 2012 a project to develop enhanced competency guidelines for rig personnel, based on the changing rig and drilling technologies and changing job roles. These enhanced templates are due for
publishing in 2014, covering virtually all rig positions, with a priority on safety critical positions with well control responsibilities.

In addition to drilling contractors, some major service companies e.g. Baker Hughes Inc., Halliburton Energy Services Inc have obtained IADC accreditation for their Competency Assurance Programmes.

**Team Competence**
Well operations are usually team based activities rather than individuals working in isolation. Assuring an appropriate mix of competencies at an individual level may be used to assess the competency of the team. A risk and task based approach will facilitate efficient gap analysis for team competency assessment.

Oil and Gas UK competency guidelines require all roles with a supervisory or project management element should be assessed for leadership and supervisory competency.

**Contract and Third Party Contract Personnel**
Oil and Gas UK competency guidelines require the competency of contract staff in the team to be assured. Contract staff should be assessed prior to hiring, at the start of the contract and during operations. This can be done by:

- including contract staff in the employer’s or well operator’s CMS on a temporary basis; or
- the company supplying the personnel operating its own CMS; or
- individuals demonstrating their personal competency.

In addition, the main duty holders (offshore installation owners, operators, and well operators), need to assure themselves that all personnel, including third party contractor personnel involved in well operations, are competent for the proposed work. Oil and Gas UK guidelines require an audit prior to the start of operations to assure themselves that the contractors have suitable policies, procedures, and management controls (including competency assurance for their employees) in place.

**Human and Organisational Factors in Well Control**
The North Sea Offshore Authorities Forum (NSOAF) have carried out a multinational audit during 2013 to look at how offshore operators and drilling contractors in the North Sea are incorporating the wide range of necessary human and organisational factors into their well control systems.

The audit results supported the view that industry was providing key well control personnel with clear and comprehensive ranges of relevant information, and with adequate designs of displays, control panels, alarm and data systems. Although there were some rigs where practices needed improvement, overall the control panel and associated engineering system aspects from the audit were good.
Similarly, those aspects linked to how drilling personnel would be able to make the right judgement and the decisions on well control issues were good. Encouragingly, the audit received strong assurance on the driller’s authority to shut in wells when necessary. However, there was a broader range of performance here, and hence the need for those at the lower end to emulate the more advanced operators and drilling contractors, particularly in the wider use of scenario based training.

The audit, however, identified a particular issue caused by the general shortage of experienced drilling personnel – the high activity level of the industry has contributed to accelerated promotions to key drilling positions, and there was widespread acknowledgement that this caused difficulty in securing adequate competence assurance programmes.

To ensure that the drilling operation is safe and successful, the drilling crew must continuously monitor displays and other information, and make decisions on how they perceive and interpret that information. This ‘situation awareness’ of how circumstances are at the time and how they might develop in the future is a crucial element. Such activities take place within a complex relationship of client and contractors, both onshore and offshore, and with an intermeshing of different procedures, objectives, and technical monitoring arrangements. The relationship between all the people and organisations involved must be clear so that everyone knows and understands their role and can deliver their contribution competently.

The Human Factors findings of the audit included all personnel involved in the drilling process reported to be trained to International Well Control Forum (IWCF) standards and in possession of a Well Control Certificate (at least to supervisor level). Well control drills were undertaken and documented.

The drilling contractors reported having training and competency matrices in place, including job descriptions with continuous evaluation and competency assurance and on-the-job (OJT) training books for selected drilling activities. **One drilling contractor had a bespoke Competency Assurance system (CMS) in place where personnel were assessed on actual performance by competent assessors. However, because of the general shortage of experienced drilling personnel, it was acknowledged that personnel were often being promoted into positions early on in their training and development. This caused some organisations difficulties in keeping planned competency assurance programmes for drill crews fully effective.**

There was some variation in the type of drill training undertaken, ranging from Task and IWCF-focused to Scenario-based training. The audit identified a welcome improvement from solely ‘routine’ training towards the latter approach, which is designed to prepare crew for the range of information and decisions they will face. The wider involvement of 3rd parties in that learning approach was also acknowledged as an improvement.
’Drill Well on Paper’ (DWOP) exercises were considered an excellent way for identifying unfamiliar elements in the well programme and hence exploring the offshore crew competence. Any gaps could be addressed, for example by bespoke onshore courses or adding experienced supervisors to the offshore crew to support learning offshore until it was clear that the crew had the required competence. It was acknowledged, though, that there was a need to extend scenarios to later phases and further handling of a loss of well control situation.

Organisational Factors addressed the safety management systems within the drilling contractor where issues were highlighted. Drilling operations and well intervention were usually under the direct control of the drilling contractor but there was close involvement with the client who often maintained overall responsibility for installation safety. Although all audited companies had bridging documents in place, the content and quality of these documents varied.

There was often a lack of GAP analysis of the systems/ standards used by the drilling contractor and client/operator, and this reflected a lack of attention at the contract stage to manuals and compliance. It was notable, in some examples, that training (and presumably competence) was not included in these arrangements.

LEGAL REQUIREMENTS
There is a general duty under Regulation 13 of the Offshore Installations and Wells (Design and construction, etc) Regulations 1996 for the well operator to:

ensure that a well is so designed, modified, commissioned, constructed, equipped, operated, maintained, suspended and abandoned that:

a) so far as is reasonably practicable, there can be no unplanned escape of fluids from the well; and
b) risks to the health and safety of persons from it or anything in it, or in strata, to which it is connected, are as low as reasonably practicable.

This general duty is supplemented by further Regulations, including Regulation 21, Information, instruction, training and supervision which requires:

In the case of a drilling, well intervention or workover operation to be carried out on a well:

a) from an installation, the duty holder, and
b) otherwise than from an installation, the well operator,

shall ensure that the operation is not carried out, unless it is carried on in circumstances where the persons carrying out the operation:

a) have received such information, instruction and training; and
b) are being so supervised, that the risk to health and safety from such operation is reduced to the lowest level that is reasonably practicable.

The Regulation seeks to promote competence in those carrying out well operations by ensuring that they receive appropriate training (including on-the-job training), initial and refresher, information and appropriate supervision. It requires the installation duty holder or well operator (when the well is being worked on other than from an installation) to ensure all staff are capable of carrying out the tasks allocated to them.

Duty holders can discharge their duties for personnel and third parties, other than their own by checking that specialist contractors carrying out operations have suitable policies, procedures and management controls for the operations foreseen.

**Organisation**

**Targeting**
Inspections should be carried-out in accordance with ED duty holder intervention plans.

**Timing**
Inspectors should undertake wells competence inspections as part of the agreed ED Offshore Intervention Plan; when intelligence indicates intervention is necessary, or as part of an investigation following an incident.

**Resources**
Resource for the undertaking of wells competence interventions will be agreed as part of the ED Offshore Work Plan or by agreement between discipline specialist team-leaders and inspection management team-leaders, as appropriate.

**Recording & Reporting**
The duty holder performance ratings should be entered on the Inspection Rating Form (IRF) tab of the relevant installation Intervention Plan Service Order. Findings should be recorded in the normal post inspection report and letter.

**References**
- Oil and Gas UK – Guidelines on Competency for Wells Personnel;
- Oil and Gas UK - Example of Competency Profiles for Wells Personnel;
- The Offshore Installations and Wells (Design and Construction, etc.) Regulations 1996; Regulations 13 and 21;
- Developing and Maintaining Staff Competence. Office of Rail Regulation;
• Inspection of Competence Management Systems at COMAH Establishments, COMAH Competent Authority; and

Contacts
ED Offshore: ED 1.6 specialist inspectors

Appendices
Appendix 1 Inspection Guidance
Appendix 2 Performance Rating
Appendix I: Inspection Guidance

The need for a Wells Personnel Competency Management System inspection using this guide will be defined by the Energy Division – Offshore intervention planning process.

Personnel to be interviewed should include at least the custodian of the CMS, an onshore user such as the Rig Manager, and an offshore user such as the OIM.

The inspection will be carried out using the question set below.

Inspectors undertaking a Wells Competency Management System inspection will need to be familiar with the Oil and Gas UK Guidelines on competency for Wells Personnel.

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<thead>
<tr>
<th>Question</th>
<th>Model Answer</th>
<th>Response</th>
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<tr>
<td><strong>1. General – CMS Cycle</strong></td>
<td><strong>Describe your system, processes and procedures for the management of workforce competence</strong></td>
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<td>There should be:</td>
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<td>• A clearly identified process owner and clear accountabilities for well technical authorities and line management;</td>
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<td></td>
<td>• The process and responsibilities for defining and maintaining competency standards for well activities should be described;</td>
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<td>• The process and responsibilities should be clearly set out for assessment of wells personnel and their individual competencies;</td>
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<td>• The process and responsibilities should be clearly set out for assessment of wells teams and their collective competency;</td>
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<td>• The process and responsibilities should be clearly set out for the management of assessed shortfalls in competency and for competency development of individuals and teams; and</td>
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<td>• The process and responsibilities should be specifically set out for the management of contract staff.</td>
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<td><strong>Is this system integrated with other management systems and, if so how?</strong></td>
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<td>• The CMS is an integral part of any management system and can be demonstrated to be specifically tailored to manage the competencies of that organisation’s work activities and associated</td>
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<td>Question</td>
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| safety risks.                                                           | References:  
  - Oil & Gas UK Guidelines on competency for wells personnel & Example competency profiles for well personnel;  
  - IADC Competence Assurance Accreditation Program & Knowledge, Skill and Abilities (KSA) competency guidelines.                                                                                  |          |
| What industry guidelines for competence management systems are being used? | Describe the processes in place for recruitment, selection, training, and assessment of staff, including the selection criteria used, training methods used, and how competence is assessed (where and by whom?)  
  - The CMS should link into other sections of the management system and link to the recruitment process, ie job descriptions, the selection criteria and process of selection and training requirements. |          |
| Who is included in the competency system, how frequently are they assessed? | A minimum list of positions to be included in the wells competency management system, is provided for both onshore and offshore positions in the OSPRAG recommendations and the Oil & Gas UK Guidelines on competency for wells personnel (see Background).  
  - The CMS should cover all new employees and contract staff who start after the system is in place.  
  - Existing staff and employees should be assessed as soon as practicable and competency and training for individuals started after assessment.  
  - A maximum period between the formal competency assessments conducted between an individual and their assessor and should be defined. |          |
<p>| How much time and resource is being used to administer the competency system, per person, per year? | The organisation should demonstrate that the CMS is continuously reviewed to determine the efficiency of the system, accuracy of decisions being made, employees, contract staff, supervisors, have sufficient time to carry out the requirements of the system, and the CMS is not distracting people from their primary responsibilities. |          |</p>
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<th>Question</th>
<th>Model Answer</th>
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| How is the system administered?                                          | • Formal training and assessment records should be maintained.  
• Usually an electronic system of tracking and maintaining individual performance against an approved list of job or task related competencies is maintained.                                                                                                                                  |          |
| 2. CMS Cycle Phase 1 & 2: Establish Requirements and Design CMS         | **Who has the authority to establish and approve performance standards within the system?**  
• Accountabilities for implementing and managing the CMS should be assigned.  
• The process and responsibilities for defining and maintaining competency standards for wells activities by the organisation should be described.  
• This may be a role for the wells technical authorities for a well operator.  

**How are these standards measured for effectiveness and how are the results managed?**  
• An approved list of job or task based approved competency standards and a process for reviewing and revising competencies should be available with assigned responsibilities for each element of the process.  
• Competency standards should be reviewed at periodic intervals or whenever there is a change in the wells activities.  

**If there are changes to the performance standards, how are they communicated and measured for effectiveness?**  
• Competence standards should be available to staff such that they are able to refer to them and understand how they relate to their activities.  

3. CMS Cycle Phase 1 & 2: Establish Requirements and Design CMS           | **Have safety critical roles been defined and have safety critical competence requirements been mapped against these safety critical roles?**  
• Oil & Gas UK Guidelines Table 1 provides a table of the minimum positions within offshore and onshore well’s organisations for competency assessment and states Leadership and Supervisory competencies should be established and assessed for all these positions.  
• The training and development needs of recruits must be established and different levels of competence identified and clearly defined for different parts of the job.  
• Additional competencies should be developed or assessed for all positions.  

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<tr>
<td>Please identify any additional roles that have been added to the Oil and Gas UK list of minimum recommended positions. Please confirm, which of these additional roles are considered safety critical.</td>
<td>Note: The list will vary depending upon the various companies eg Drilling Contractor – MODUs or Drilling Contractor – Platform Well operators etc.</td>
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</table>
| Are attitudes, behaviours and leadership performance standards applied to all staff assigned to well control, planning, design, examination, verification and operational activities. If so, how is it accomplished? | • Critical competencies should be identified for all positions and have been described in Key Risk Areas and Skill Elements in Oil & Gas UK Guidelines.  
• These cover the lifecycle of the well including well design, operations planning, operations execution, workover and intervention planning and execution, production well integrity and long term integrity. Ref.: Oil and Gas UK Guidelines Table 2. |          |
| 4. CMS Cycle Phase 3: Implement CMS                                                                                 |                                                                                                                                                                                                             |          |
| In addition to technical competence does your system address behavioural competence?                             | • Critical competencies have been identified as ‘technical’ and ‘leadership and supervisory’.  
• Typical examples of leadership and supervision skill elements have been provided in Oil & Gas UK guidance providing example competency profiles for well personnel. |          |
| Is team competence evaluated to ensure the right people are in the right place at the right time to conduct both routine tasks and safety critical activities? | • Well operations are usually team based activities rather than individuals working alone.  
• A gap analysis for team competence is a good starting point for assessment of the competency of a team.  
• Offshore installation owners or operators, and well operators need to assure themselves that all personnel in well operations are competent for the proposed project. |          |
work. They should ensure themselves, by audit prior to the start of operations, that the contractors have suitable policies, procedures and management controls in place.

5. CMS Cycle Phase 3: Implement CMS

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<th>Model Answer</th>
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| What training methods are used?                                          | • Various training methods may include PC based desk top training; computer based training techniques, on the job training, the use of simulators etc.  
  • In-house and external training modules may be used.                    |          |
| What learning objectives are in place, and are they supported by suitable modes of training eg simulators? | • The most effective CMS are specifically tailored to manage the competencies required for that particular organisation's work activities and associated safety risks and provide a comprehensive picture of job requirements allowing a training needs analysis to provide targeted and effective training interventions and a framework for on going coaching and feed back. |          |
| What methods are used to assess trainees and how is it ensured these methods are suitable? | • Assessment techniques can vary from;  
  o direct methods of observation, products of work and questioning;  
  o indirect methods of witness testimony, professional discussions, candidate statements and simulation;  
  o Trade tests.  
  • It is important to establish if trainees are assessed by suitable means and whether structured refresher training is conducted for recognised safety critical or infrequent safety related tasks in well operations.  
  • Team exercises and simulations may be used for developing team competency, ranging from desk top exercises to the use of simulators. |          |
| How is it ensured the assessment is carried out by an individual competent to evaluate the trainee? | • Assessors must have a good understanding of the concepts and principles of competency based assessment.  
  • Assessors may be qualified through various schemes, eg OPITO’s competency assessor award or NVQs, however some organisations may prefer in-house training. |          |
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| The assessor should be technically competent in the area being assessed. Some companies use supervisors or line managers whilst others use dedicated assessors. | How is the competency of contract staff assessed? | The competency of contract staff within the organisation must be assured. Contract staff should be assessed prior to hiring, at the start of the contract and during operations. This may be done by:  
- Including contract staff in a well operators or employers CMS on a temporary basis;  
- The company supplying the personnel having a competency assurance system, or  
- Individuals demonstrating their personal competency. |
| The main duty holders, offshore installation owners or operators, and well operators, need to assure themselves that all personnel involved in well operations are competent for the proposed work.  
They should do this by checking that the contractors have suitable policies, procedures and management controls (including competency assurance for their employees) in place. This should be audited prior to start of operations.  
This would include, in particular, offshore positions such as:  
- Mud logger, Drilling fluids engineer, Cementer, Well Service supervisor, Well Test supervisor, Coiled tubing supervisor, E-line and Electric line Supervisors. | How is the competency of third party services staff assessed? | |
| 6. CMS Cycle Phase 4: Maintain and Develop Competence | How is training validated? | The duty holder or employer must be able to demonstrate that activities to be carried out and the training and development requirements have been defined e.g. by Training Needs Analysis, and that arrangements are in place to be able to develop and train each individual and assess their competence via defined methods.  
There should be a system in place for ongoing monitoring of competency by |
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<tr>
<td>suitably competent supervisors, and internal mentors and coaches to assist in the competency process.</td>
<td>• Some key roles e.g. the Well Examiner or Drilling Manager may rely on some form of External/ Internal Review.</td>
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<td>How is it determined whether the training has delivered what it was supposed to deliver?</td>
<td>• There should be in place a system of ongoing monitoring for competency including assessors and supervisors. • The CMS should define the maximum period between the formal competency assessments between an individual and their assessor.</td>
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<td>Are suitable training records maintained and how are they used?</td>
<td>• A suitable system of maintaining training records for internal and external training, on the job training and computer based training modules must be in place. • These records must be available for the ongoing development and training of personnel to ensure personnel progress from a status of ‘not yet competent’ to fully competent.</td>
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<td>7. CMS Cycle Phase 4: Maintain and Develop Competence</td>
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<td>How do you ensure that only workers who are deemed as ‘competent’ are assigned to safety critical tasks?</td>
<td>• The duty holder/employer must be able to demonstrate that arrangements are in place to ensure personnel (including contractor personnel) only carry out activities for which they have been assessed competent, This must ensure that people ‘not yet competent’ cannot be ‘jumped’ into senior roles due to a lack of experienced or competent personnel. • The duty holder/employer must be able to demonstrate that managers are aware of the range of activities their personnel and contractors are currently competent to carry out.</td>
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<td>What triggers are in place to ensure that competence requirements are re-evaluated and any necessary training provided following changes to process, procedures, and conditions, eg HPHT</td>
<td>• This is a part of the management of change process and the duty holder/employer should demonstrate that there is guidance in place which includes re-assessment of competencies with installation of new equipment, higher risk well conditions, etc.</td>
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<td>Question</td>
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<td>How are assessment records maintained?</td>
<td>- There should be arrangements in place for the maintenance of competency assessment records, education and training records, certificates of competence, trade tests etc. and records of aptitude and significant event logs.</td>
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| How is the competency of contract staff maintained? | - Contract staff should continue to be assessed during operations.  
- For contract or employee personnel arrangements should be in place to monitor performance and if necessary have arrangements in place to restore competence or when found to be necessary removal from the workplace. | |
| How is the ongoing competency of third party services staff assured? | - Arrangements should be in place with the third-party service provider to ensure competence of third-party services staff is maintained by the service provider  
- Where necessary, arrangements should be in place to restore competence, or, if necessary removal from persons from the work place. | |

8. CMS Cycle Phase 4: Maintain and Develop Competence

<table>
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<tr>
<th>Question</th>
<th>Model Answer</th>
<th>Response</th>
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</table>
| Is structured refresher training conducted for safety critical and infrequent safety related tasks? | - Competence criteria should be relevant to the specific job or task and clearly linked to the major accident hazard on site and reflect on site risks.  
- Major accident hazard for well operations relate to loss of containment, hydrocarbon release, blow out and explosion.  
- Refresher training in well control, and well control techniques is standard in the industry. It is normal practice when drilling HPHT wells to provide additional training using simulation techniques, desktop exercises etc. | |
<p>| How are 'not yet competent' assessments managed and how many have been made in the last 12 months? | - The duty holder/employer must demonstrate that he has the ability to manage those 'not yet competent’, and to make a decision on the suitability of the person for further training and development, and if so, to provide further training development to gain sufficient experience prior to another assessment. | |</p>
<table>
<thead>
<tr>
<th>Question</th>
<th>Model Answer</th>
<th>Response</th>
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<tbody>
<tr>
<td>A record of competence should be kept and the duty holder/employee able to demonstrate sufficient opportunity for the person to consolidate any training given.</td>
<td>- Assessment of wells teams and their collective competency and the process for assessment should be clearly set out plus the process and management responsibilities for the assessed shortfalls in competency and the competency development of individuals within the team. - Gap analysis techniques based on a risk and task based approach may be used. - Crew Resource Management (CRM) has been used to cover non-technical aspects of competency by some drilling contractors.</td>
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<tr>
<td>How is ‘team competency’ evaluated to ensure that the correct people are in place to conduct safety critical activities?</td>
<td>- The duty holder/employee must be able to demonstrate that those involved in the operation of the competency system (including recruiters, trainers and assessors) have the combination of professional competencies (related to their role) and occupational competencies (related to knowledge, skill, experience, etc) which are clearly identified.</td>
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<tr>
<td>What systems are in place to establish and maintain ‘trainer’ and ‘assessor’ competency?</td>
<td>- Management responsibilities for those operating the CMS should be clearly defined and allocated and the training and development needs of the managers established. - Managers required to carry out competency assessment should be suitably trained and periodically re-assessed as part of the CMS procedures.</td>
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<tr>
<td>What systems are in place to establish and maintain managers' competencies?</td>
<td>- Refresher training and personnel briefings should be in place with feedback sessions to help identify the need for and be able to deliver additional and refresher training and check for use of appropriate performance standards, methods of assessment and consistent use of procedures and work instructions developed for the CMS.</td>
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</table>

9. CMS Cycle Phase 4: Maintain and Develop Competence

10. CMS Cycle Phase 5: Monitor, Verify and Review CMS
<table>
<thead>
<tr>
<th>Question</th>
<th>Model Answer</th>
<th>Response</th>
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</table>
| Is the competence management system subject to continuous top level management review Who is involved, how is the review conducted and how often? | • Oil & Gas UK guidelines state the CMS should be under continuous internal quality assurance.  
• It is important that senior management endorse and drive the CMS. A sense of ownership of the system is important, particularly for those carrying out key roles within the system.  
• Quality assurance of assessment decisions is the key to the integrity of a competency management system and may include the sampling of assessor’s judgments to determine whether a decision is valid by a designated internal verifier; conducting exercises with assessors for consistency in assessors decisions. Check for how well the system works under stressed conditions, eg shortage of skilled, competent personnel to fill safety critical roles. |          |
| Does a credible third party audit the competence management system? If so, provide details of the third party and how frequently they audit the system | • Oil & Gas UK guidelines recommend the CMS be audited every 3 years.  
• Competent personnel should carry out the audit. They may be company personnel but they should not be part of the well operations team nor personnel responsible for management of the CMS.  
• HSE guidance would recommend the audit be undertaken by an Auditor external to the company, but familiar with systems for competence assurance.  
• Audit of the CMS should look at the system as a whole, sampling and checking performance and compliance over the entire scope of the CMS against the procedures and the latest regulatory guidance. |          |
Appendix 2: Performance Assessment

The EMM Risk Gap should be judged on the basis of the responses to the inspection questionnaire and hence the Duty Holder’s Performance Score according to:

<table>
<thead>
<tr>
<th>EMM RISK GAP</th>
<th>EXTREME</th>
<th>SUBSTANTIAL</th>
<th>MODERATE</th>
<th>NOMINAL</th>
<th>NONE</th>
<th>NONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOPIC PERFORMANCE SCORE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>50</td>
<td>40</td>
<td>30</td>
<td>20</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Unacceptable</td>
<td>Very Poor</td>
<td>Poor</td>
<td>Broadly Compliant</td>
<td>Fully Compliant</td>
<td>Exemplary</td>
<td></td>
</tr>
</tbody>
</table>

- Unacceptably far below relevant minimum legal requirements.
- Most success criteria are not met.
- Degree of non-compliance extreme and widespread.
- Failure to recognise issues, their significance, and to demonstrate adequate commitment to take remedial action.

- Substantially below the relevant minimum legal requirements.
- Several success criteria are not fully met.
- Degree of non-compliance significant.
- Limited recognition of the essential relevant components of effective health and safety management, but demonstrate commitment to take remedial action.

- Significantly below the relevant minimum legal requirements.
- Meets most of the relevant minimum legal requirements.
- Degree of non-compliance minor and easily remedied.
- Management recognise essential relevant components of effective health and safety management, and commitment to improve standards.

- Meets the relevant minimum legal requirements.
- All success criteria are fully met.
- Management competent and able to demonstrate adequate identification of the principal risks, implementation of the necessary control measures, confirmation that these are used effectively; and subject to review.

- Exceeds the relevant minimum legal requirements.
- All success criteria are fully met.
- Management competent, enthusiastic, and proactive in devising and implementing effective safety management system to ‘good practice’ or above standard. Actively seek to further improve standards.

|-------------------------------------|----------------------------------|-------------------------------|-------------------------------|---------------------------|-------|-------|

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