

A EUROPEAN-WIDE STANDARD FOR SAFETY PERFORMANCE IN AN OFFSHORE DRILLING COMPANY

1. Organisations involved

Noble Corporation

Figure 1: Employee working on-site



2. Description of the case

2.1. Introduction

“Safety is a paradigm of the organisation and must not be compromised.”

Noble is a leading offshore drilling contractor for the oil and gas industry. It uses its subsidiaries to engage in contract drilling services with a fleet of 62 offshore drilling units located worldwide, inclusive of those in the Middle East, India, the United States of America (US), the Gulf of Mexico, Mexico, the North Sea, Brazil, and West Africa.

Over the last ten years Noble has used a safety management system to engage in good practice. This is essential as each rig can have between 80-120 individuals on board, who in turn, work for several different employers. Despite the existence of varying employers on-site, all employees report to the Offshore Installation Manager (OIM), who is responsible for safety and health on the rig. He is ultimately in charge and his command prevails above all else. However, all employees are required to contribute to the safe maintenance of their environment, according to the guidance of Noble. As such, all employees are required to attend safety meetings and participate in all safety activities, regardless of who is their employer.

One feature of the oil drilling industry is its strongly hierarchical organisational structure, especially in those companies based in the US. However, in Europe, the group culture that exists in organisations has more influence on how change processes, which work to their advantage. The organisations within the oil drilling industry are lean in nature also as the majority of employees are on-site for twenty-four hours a day, and this translates to a logical choice of focusing on leaders to improve on safety and health.

2.2. Aims

Noble's aims are:

- To ensure that all rigs maintain a safe, competent and productive workforce.
- To not have any accidents or dangerous incidents on-site.
- To maintain high performance and productivity levels, without harm to the environment; such as spills.
- To be the preferred choice of clients.

2.3. What was done, and how?

Due to the structure of the organisation, the majority of new employees who are recruited as offshore personnel (95%) start work at the lowest levels of the organisation, and are considered as 'roustabouts and roughnecks'. A roustabout is a labourer who generally does temporary or unskilled work. The term has traditionally been used to refer to travelling-circus workers or to workers on oil rigs. It is used regardless of their education levels and ensures that the knowledge required in the industry and for the specific jobs, is gained through experience while on the job. This method of learning is essential to facilitate the connection between the formal systems and the day-to-day

CASE STUDIES

activities. The slightest deviation from set processes and procedures (e.g. high pressures, heavy weights) could cause fatalities.

Employees stay at entry-level positions until they are competent to move to the next level. For example, employees will have been in the company for five to six years improving on their competencies, before they could be promoted to the post of driller, which is a supervisory position. Other senior positions would involve the attainment of more competencies; and promotion would only occur after being on staff for ten to twelve years. For some of the competency elements there is a six-month grace period. This gives the employee the opportunity to demonstrate improvements on these elements. It is only when the required competency is met that the employee receives the salary for any new position to which he has been promoted.

Management commitment and support has been gained for this Competency Assurance System; and this commitment is outlined in the Corporate Safety Policy Statement, which promotes continuous new training within the Noble Safety Programme and requests that all employees actively participate in the Programme.

Training

This competency system is inherent within Noble, and in its leadership programmes. Overall, Noble uses a variety of leadership courses as detailed below:

- **Noble Supervisor Competency Assurance System.** Noble Europe uses a competence assurance system to ensure that all of its supervisors have skills that are incorporated into a competency profile. Noble notes that the purpose of its Competency Assurance System is to provide the highest level of training for each discipline, and to ensure that employees are competent for any position they may hold, regardless of whether these are semi-skilled or skilled. These defined skills are embedded in each position in Noble and verified and assessed from external sources, such as the Scottish Qualification Authorities. The candidates for supervisor positions attain core competence by:
 - Maintaining a Competence Assessment Portfolio with element sheets for each unit of competence.
 - Collecting documentary evidence on the rig, under the appropriate guidance from their immediate supervisor.
 - Allowing the designated reviewer / supervisor to review the portfolio.
 - Forwarding the portfolio to the Training & Development Supervisor for A1 assessment¹. The portfolio will then be sent to the V1 internal verifier for verification of the assessment process, who, along with the A1 assessor, will only sign off on the portfolio when satisfied that the required standards have been attained.

The Training & Development Supervisor will retain the evidence portfolio for six months if needed, for possible external verification.

¹ A1: Assess Candidate Using a Range of Methods; V1: Conduct Internal Quality Assurance of the Assessment Process. (Qualifications and Curriculum Authority, 2004, Evaluation of assessor and verifier awards (A1, A2, V1), http://www.ofqual.gov.uk/files/8240_Evaluation-assessor-ve.pdf)

CASE STUDIES

- **Five-day Health and Safety Environment (HSE) awareness course.** This is an introductory course, which focuses on the offshore environment, and can be considered as a 'Green Hand'² course, held in Aberdeen, Scotland.
 - This course aims to provide delegates (new starters) with a general knowledge and understanding of the operations, lifestyle, hazards and safety practices that are associated with working offshore.
 - The five-day programme includes modules on manual handling, control of substances hazardous to health (COSHH) and working at height.
- **Safety Leadership Workshop (SLW).** These safety leadership workshops have been held since 1998. They were developed specifically for rig-based supervisory and non-supervisory crews, and emphasises communication, decision-making, training, coaching and counselling. The following areas are included within the workshops:
 - Leadership skills
 - Health, Safety, Environment and Quality (HSEQ) Management System
 - Personality assessments
 - Risk management
 - Liability insurance and claims
 - Observation skills
 - Stress management
 - Behaviour based safety
 - Appraisal and coaching
 - Industrial relations

Further, on an annual basis, the training and development group schedules courses for specific groups with respect to development and leadership, in each of these safety plays an important role. These may focus on risk management or may target the entire rig community.

In addition, each Rig Manager has access to the electronic training records of employees assigned to his rig. This facilitates easy checking of the skills and competencies that are available and those that need to be developed.

Employee engagement

All employees are actively involved in health and safety issues through twice daily meetings. During these meetings, which occur in the morning and in the evening, any work-related issue can be discussed and a special focus is given to aspects related to HSE.

² A green hand is a new starter to the industry. (OPITO, 2008, OPITO Approved Standard. Offshore Drilling Industry Green Hand Training Standard, p. 4, http://www.opito.com/international/library/industry_training_standards/offshore_drilling_industry_green_hand_standard.pdf)

CASE STUDIES

Further involvement is done through safety representatives and worker representatives on rigs. Employees elect the worker representatives by a secret ballot. The continued involvement of trade unions is a special challenge on drilling rigs in general, since the rigs are moved to different locations and thus different countries every three months. This flexibility leads to special requirements regarding the communication with different trade unions being in charge depending on the location the rig is placed.

Exposures to Harm

The organisation implemented a workplace mapping and management system in order to identify the potential harm exposures for each possible task that could be done by employees. Twenty-six potential harm exposure types have been defined. These vary from *poor supervision*, *stress at work*, *pressure till*, *noise*, *working at heights* and *electricity*. See Figure 2.

Figure 2: Checking exposures



On starting a new job, an employee completes a job card that involves assessing the job activities against the 26 harm exposures. Although the employee may already be familiar with at least ten of these exposures, the process of assessing them again ensures that he is seeing them with 'fresh eyes'.

The system measures the exposures qualitatively, by keeping a count of the number of times that these exposures cause concerns for employees.

This evaluative process has introduced extensive levels of improvements to reduce harm exposures. Some of these changes were only procedural, but others have involved multimillion projects, such as the provision of machines to reduce manual handling. As such, the data on exposures are used to generate new designs, to re-engineer exposures, and even to design a new derrick (drilling tower) or a new Galley.

The same management systems are used in each North Sea country in which the company has resources.

CASE STUDIES

Employee Focus

As the same management systems for safety are used across countries, the employees are aware of the programmes that are in place when working on a different rig. Also, to encourage a well-being approach, the organisation ensures that healthy options are placed on menus in its canteen/restaurants.

Toolbox talks³ are held when required and used to improve on performance, by re-iterating procedures, policies and the necessary standards that should be adhered.

The company promotes the concept of sharing knowledge, as it believes if employees know what to do, why to do it and how to do it, then they will do it. Knowledge is shared through:

- Regular meetings
- Awareness programmes
 - Safety meetings
 - Campaigns (promoted through posters, flyers)
 - One-day courses for specific issues that are repeated until all employees attend
- Conferences
- Circulated periodicals
- In-house magazine

On a yearly basis employees engage in safety leadership workshops and, when needed employees receive off-site briefings, inclusive of workshops where they engage in working better together training. This can be project related or have a more general approach to safety and health.

Behaviour change is crucial for the process and it is acknowledged that behaviour is long-term in nature, rather than a quick process.

Diversity awareness training is provided as the environment of a rig is unique and encompasses a multicultural aspect as well. This is essential as workers spend two to three weeks together twenty-four hours a day, within 12-hour shifts.

Check Programme

One programme that was implemented to influence the employees' behaviour *on the spot* prior to the work is called "check". Prior to each task, the employee does a personal mini assessment, and asks the three crucial questions, "What job am I going to do next?" "How could I get hurt?" "What will I do to prevent getting hurt?" A card, which the employee fills in, supports the system, and as well, the questions are embroidered on each left overall sleeve. See Figure 3.

³ A 'toolbox talk' is a short presentation to the workforce on a single aspect of health and safety. Health and Safety Executive (HSE) - <http://www.hse.gov.uk/construction/resources/toolboxtalks.htm>

CASE STUDIES

This mini assessment takes the employees out of their routine and gives them time to think and ensures that they are better prepared for each specific task, before they start. It is integral to the task and cannot be ignored or done at a later time.

Figure 3: Reminder of checks to do before each task



Compliance with Standards and Legislation

In addition to complying with relevant legislation depending on the countries in which Noble operates the company is also accredited against the following internationally recognised management standards as outlined below. These encourage good leadership by putting in place thorough management systems that are audited on a regular basis, both internally and externally against the standards.

- ISO 9001 - the standard that ensures a Quality Management Systems (QMS). Noble works to ensure that its business performance standards, and all levels of its organisation comply with ISO 9001.
- ISO 14001 - the standard for Environmental Management Systems (EMS). By adhering to this standard, Noble is committed to preserving and protecting the environment through pollution prevention, continuous improvement, and collaborating with government agencies to develop and adhere to legal requirements for environmental protection. This is achieved by making sure that all drilling units and locations meet highest international standards and are reviewed by a third party every six months.
- OHSAS 18001 - the standard for Occupational Health and Safety (OHS) Management Systems. With this system, Noble aims to consistently identify and control its safety and health risks, reduce the potential for accidents, foster legislative compliance and improve overall performance.

CASE STUDIES

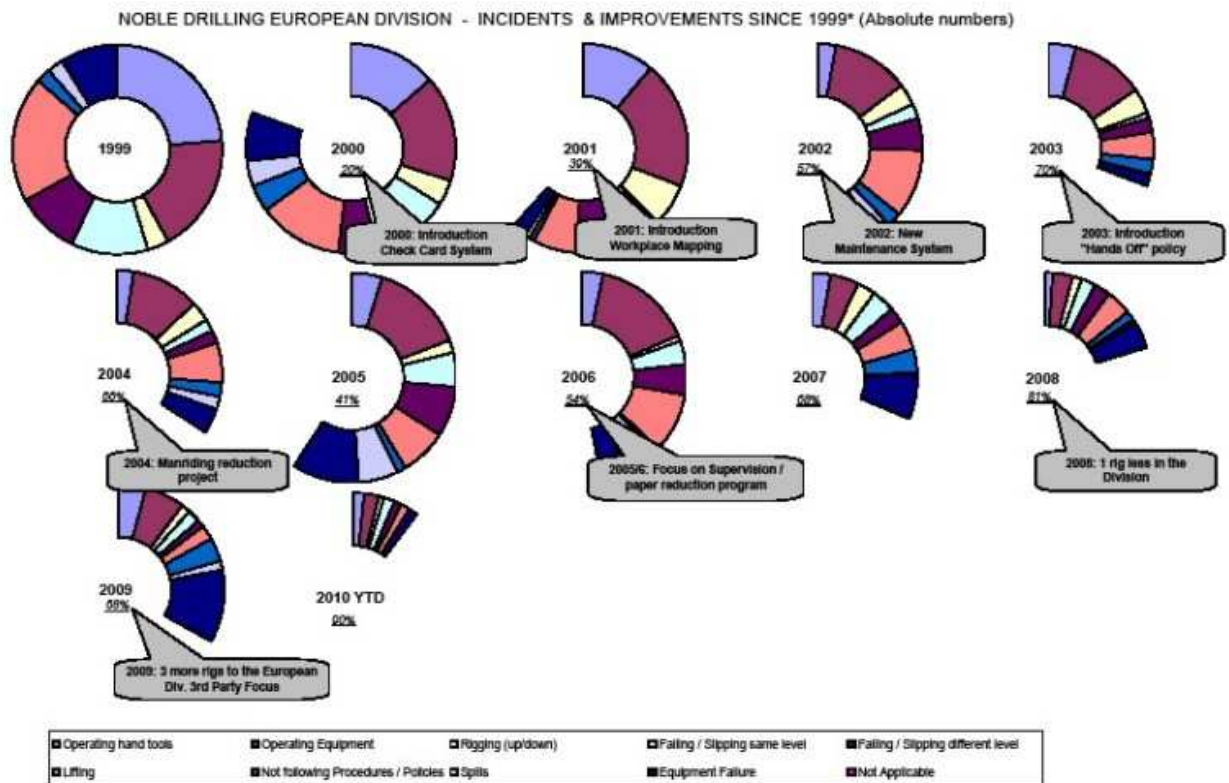
Three safety engineers visit the rigs every six weeks, to make sure the standards are met and maintained. They guide the employees in what they do. In addition, each rig has its own Safety Training Supervisor (STS), who is dedicated to safety training to ensure employees gain the required safety experience. The STS assists employees with permits and explains how tasks should be done and followed through, and provides a coaching element to safety on the rig. By these actions, employees improve their skills by the interaction with other employees, operators, third-party service personnel and regulatory authorities.

2.4. What was achieved?

Since the introduction of SLW in Noble in 1998, its total recordable incident rate has been reduced by 71 per cent and its lost time incident (LTI) rate by 83 per cent. The data show:

- A reduction in accidents and incidents in Europe. Out of 11 drilling units in operation, it has been two years when no lost time incidents have occurred.
- When the exposure system was introduced, it reduced exposures by 35%, in the first three months.
- Other improvements are shown in Figure 4 and Table 1.

Figure 4: Incidents and improvements in Noble Drilling European Division since 1999



* 1999 = 100% (± 280 incidents / accidents); Mobiles only

Table 1: Performance ratings by rigs and year

Year	Number of Rigs	Performance (%)
2007	9	68
2008	8	81
2009	11	68

2.5. Success factors

The management is committed to maintaining a healthy and productive workforce. They ensure that the employees are well trained, and that an adequate level of communication is maintained. Onshore management visits the offshore installations regularly, and there is a good level of communication between all organisational levels. This communication ensures that employees' motivation to work safe is stimulated.

One of the most successful programmes is the "check" personal mini assessment. At the present time, 500,000 cards are filled in on a yearly basis in Noble's EU division.

Noble's ultimate aim is to ensure that employees, even after forty years of working, are not worn out and are safe and in good health when at work, but also when not at work.

2.6. Further information

Gert-Jan Windhorst

Mediator NMI

HSE/Q Manager

Noble Drilling

Parallelweg 96

1948 MN, Beverwijk

The Netherlands

Office Phone: +31 251 264 540 / +44 1224 401 612

Mobile Phone: +31 653 808 725

e-mail: Gwindhorst@noblecorp.com

2.7. Transferability

This process is easily transferred to other companies and across countries. This is because it involves direct interaction between supervisors and on-site workers, and this relationship can be promoted and developed in other organisations, even within small and medium-sized enterprises (SMEs). SMEs could look at engaging with employees and providing them with relevant information. Also, the “check” system is inexpensive, is simple and ensures the employee thinks about the task before he/she starts, rather than during or at the end of the task.

However, it is useful to remember that the environment on a rig is unique as the workers live and work together for several weeks at a time and have to rely heavily on each other for safety and well-being. As such, this element might reduce the impact of the process if it is transferred directly. Each organisation should assess how best to implement such a system by taking account of its own culture and climate.

3. References, resources:

- Certificate of Accreditation (2009-2014) – Competence Assurance Accreditation Program – The International Association of Drilling Contractors.
- Certificate of Accreditation (2006-2010) – Safety Leadership Training – The International Association of Drilling Contractors.
- Falck Onsite – OPITO approved Offshore Industry Green Hand Training with Banksman & Slings Certificate – 5 days.
- Noble Sustainability Report for 2008 – <http://www.noblecorp.com/Docs/SR2008.pdf>
- Noble Corporation 2009 Annual Report – http://www.noblecorp.com/Docs/AR09/NE_AR09.pdf
- Noble – Standard Operating Procedure (SOP-607) – Training Course Administration – Offshore.
- Noble – Standard Operating Procedure (SOP-609) – Competence Assurance Administration Onshore.
- The Robert W. Campbell Award, International Award for Business Excellence through Safety, Health & Environmental Management – The Noble Way to HSE Excellence, submitted by Noble Corporation, 2004, http://www.campbellaward.org/images/uploads/RWC04_NOBLE_Text_for_REFpp.pdf