

Supervision – is there a lack of good practice on how to supervise?

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Introduction

Within the process safety triumvirate of plant, process and people, an Operator's checking of the first two elements is by assurance and audit, with additional verification by an independent, competent body offshore. These aspects are typically detailed in the Operator's Safety and Environmental Management System. The third aspect of people is all about employing the right people and ensuring that they have the right competency gained through experience and training. This competency can be tested in a formal environment, but for the day-to-day maintenance and operational work carried out, which has the potential to either directly, or indirectly lead to major hazards, it is less clear what checking should be completed. Supervision is clearly an important means to identify shortcomings, but, as regulators, we have consistently found that it is difficult for Operators to provide an adequate demonstration that supervision activities are carried out effectively. While effective supervision is a key part of the overall system of managing major accident hazards, it is less clear what constitutes good supervision: it should involve more than simply "man-marking". It is very clear, however, if supervision does not involve regular interaction with intervention, as necessary, there is little benefit to the process.

What is Supervision?

ISO 45001:2018 Occupational health and safety management systems is based on the Plan – Do - Check - Act cycle of continuous improvement. Continuous improvement is dependent on the quality of active and reactive monitoring conducted during the "Check" phase. Checking includes Performance Monitoring and *BS ISO 45002*¹ outlines that this is about asking two questions:

- a) is the safety and environmental management system (and its procedures) working properly?
- b) are the controls in place preventing incidents?

ISO 45001 recommends that supervisors and managers are involved in a range of tasks to assess how well risks are being controlled. Monitoring needs to be timely – the requirement is to check what is happening in the business at that moment, rather than at some point in the past. Monitoring activities can be routine competence checks; task completion; and planned function checks for key pieces of equipment. For sites with major accident hazards, focus on performance measures for critical activities or plant includes:

- Safety-critical tasks.
- Operational performance of safety-critical devices, e.g. relief valves.

In the Human Factors and Supervision section of their webpage, the UK Health & Safety Executive (HSE) takes this further:

"Supervision is an important Performance Influencing Factor that is believed to have contributed to a number of major accidents (Texas City, 2005; Texaco Milford Haven, 1994; Hickson and Welch, 1992). Problems can emerge because of poorly defined responsibilities, heavy workloads, inadequate resources, or as a result of removing supervisory roles altogether."

¹ BS ISO 45002 - Occupational health and safety management — General guidelines for the implementation of ISO 45001:2018

“Other key supervisory functions include planning and allocating work, making decisions, monitoring performance and compliance, providing leadership and building teamwork, and ensuring workforce involvement. Crucially, supervisors can have a significant, positive impact on a range of local performance influencing factors (compliance with procedures, training and competence, safety-critical communication, staffing levels and workload, shift work and fatigue, organisational culture etc.) The traditional ‘supervisor’ represents a crucial, final link between planning a job and its execution.”

The UK HSE’s offshore inspection guide for the *Inspection of Safety Critical Element Management and Verification* gives the requirement that:

“The duty holder has a system for checking the adequacy of maintenance work, e.g. spot checks. Frequency/depth should be based on safety criticality of plant items.”

Based on the findings of our incident investigations where inadequate supervision has contributed to the development of incidents, it is the CRU’s view that the occurrence of some of these incidents may have been prevented if adequate supervision had been in place. CRU has observed that where supervision is noted as being implemented, it is difficult for Operators to provide the necessary evidence-based demonstration to assure its effectiveness. It is also clear that the role of supervisors is to monitor the actions of others, but there is little or no guidance on how this should be done.

The North Sea Offshore Authorities Forum carried out a multi-nation audit on supervision in 2007-2009², Some of the relevant key observations were:

“There is generally no system in place to assess the effectiveness of work site supervision. The majority of the companies are only focusing on time spent at the work site and not on the relevant supervisory aspects during a work site visit.”

“In general companies have no description of the Supervision Process in their management system.”

From the CRU experience, some of the observations found by the NSOAF are still relevant today.

For safety critical tasks, Operators have developed detailed procedures for carrying out the tasks, However, they struggle to demonstrate to the regulator how effective supervision is carried out. When questioned on supervision, Operators often state, “we employ competent staff” and, whilst this needs to be the case, the demonstration is lacking in how day-to-day compliance with the “people” part of process safety is assured.

Good Supervision

In a risk-based regime, priority for monitoring is likely to be given to those tasks that have either been identified as safety critical, or those which involve the maintenance or monitoring of safety and environmental critical elements. To monitor effectively, the CRU considers that supervisors should, at a minimum, sample tasks impacting safety & environmental critical elements (SECEs) to provide a level of assurance that:

² Multi-National Audit ‘Supervision’ 2007-2009 available at <https://www.hse.gov.uk/offshore/auditreport.htm>

- The task has been completed as prescribed in work instructions/procedures.
- The task has not been modified without being appropriately assessed.
- The task is being carried a defined competent team.
- The task is conducted on the correct equipment.

It is not suggested that every activity on safety critical tasks is monitored each time it is performed – this is inefficient and would lead to a decline in morale and trust amongst the workforce – rather that appropriate sampling checks be conducted to assure supervisors of the ongoing competence of the Operator and to provide assurance of compliance with relevant standards and procedures.

To do this effectively, supervisors should have knowledge of the specific hazards, procedures, controls and arrangements for which they are responsible.

Regulatory Approach to the Operator and Owners

It is the CRU's view that effective supervision is a key part of the system of managing major accident hazards. It appears that, in general in the oil and gas industry, supervision is usually carried out in an informal manner and that guidance on how Operators should carry out supervision and what constitutes good supervision is not well developed. The CRU is aware from other national regulators of the ongoing development of further guidance in relation to this topic.

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