

## **Responder Safety - Evolving Safety Systems, Processes, and Behaviours in an International Oil Spill Response Cooperative**

Declan O'Driscoll

Oil Spill Response Limited, Lower William Street, Southampton, United Kingdom, SO14 5QE

### **Abstract**

Oil Spill Response Limited (OSRL) is a United Kingdom based industry cooperative for emergency oil spill response and preparedness. The company provides emergency surface and subsurface response to oil spills on a global basis.

The nature of emergency oil spill response requires responders to understand and deal quickly with the safety risks arising from working in new and unfamiliar surroundings. The risks derive from the physical nature of the incident, the geographical locations, the local weather conditions as well as working with new colleagues and organisations.

OSRL was originally established in the United Kingdom in 1985 and now employs 265 people in 9 countries. This growth has been the result of mergers with response cooperatives in the United States and Singapore and the introduction of a new subsea well capping services division.

A common understanding and alignment on safety in an organisation with a range of nationalities and cultures as well as local compliance requirements is critical to safeguarding

employees. To ensure this, OSRL began a programme to review safety management systems, processes and procedures as well as employee behaviours. An Operations Excellence Management System, known as ‘The Blueprint’, was introduced to provide structure and control in corporate documentation as well as providing better navigation to employees in locating specific procedures.

The introduction of the Blueprint prompted a major overhaul of OSRL’s core safety procedures, in particular, risk management. While the basic principles of risk assessment were similar, there was a difference across the company in how risk assessments were prepared, approved and presented.

The International Association of Oil & Gas Producers (IOGP) Life Saving Rules were introduced. The Rules provide clear guidance on how to prevent accidents known to have caused industry fatalities in the past. OSRL also undertook a review, with employee participation, of the company’s values that led to a new corporate ‘Values Compass’ with safety at the centre.

Employees are encouraged to take personal ownership of their own safety and that of colleagues. Awareness is promoted by setting formal objectives, linked to remuneration, on hazard identification and behavioural safety observations. This paper will show the strategies and initiatives applied to develop a framework of rules, processes and behaviour to support and protect OSRL responders from the range of safety risks encountered when responding to an oil spill.

**Oil Spill Response Limited (OSRL)**

OSRL is a United Kingdom based industry cooperative for emergency oil spill response and preparedness. The company, which was established in 1985, provides emergency surface and subsurface response to oil spills on a global basis. OSRL's global footprint has expanded significantly since 1985, through an Alliance, and later merger with East Asia Response (EARL) in 2000, a merger with Clean Caribbean and Americas Associates (CCA) in 2013 and the introduction of Subsea Well Services (SWIS), also in 2013. OSRL is owned by 39 national and international oil and gas companies. Membership of OSRL represents over two thirds of global oil production.

The company, which is headquartered in Southampton, United Kingdom, is managed through 3 regions Europe Middle East Africa (EMEA), Asia Pacific (APAC) and Americas (AMER) with bases and offices in a total of 12 locations across the globe. OSRL currently employs 275 people globally.

OSRL is led by an Executive Team (ET) reporting to a Chief Executive Officer who in turns reports to a Board of Directors. The Board is comprised of 3 Executive Directors and 12 Non-Executive Directors. The Board is responsible to the shareholders for the strategy and governance of OSRL.

Health, Safety, Environment and Quality (HSEQ) in OSRL is organised through a HSEQ Director, who is part of the Executive Team and a Board member. The HSEQ Director

is responsible for ensuring that OSRL has a proactive HSEQ culture and an integrated HSEQ management system in place to protect the wellbeing and safety of employees, contractors and visitors. The HSEQ Director is supported by a Regional HSEQ Advisor in the each of the 3 regions. The Advisors provide subject matter expertise on HSEQ matters to management and staff within their regions. The Regional Advisors, in turn, are supported by Duty Safety Officers (DSO's). The DSO's, who have formal safety qualifications provide day to day safety supervision and advice on OSRL's bases.

### **Oil Spills and Safety**

Oil spills by their nature present a wide range of hazards and risks with personnel often working in new and unfamiliar circumstances. Responders are usually on their own or with a small number of colleagues and must quickly adapt to the new working environment. Safety processes and cultures can vary significantly, and responders may be asked to undertake activities that they consider unsafe. To ensure their wellbeing and safety in a response, it is essential that responders can assess risks, know what is acceptable or not, and how to communicate this effectively.

### **The Blueprint**

In late 2015, OSRL undertook a study on how to improve the safety management systems, the processes and procedures and, importantly, the culture and ownership of safety in the company. There were 3 areas of concern:

- 1) The HSEQ management system was focused more towards compliance, primarily, through the ISO 9001, 14001 and OHSAS 18001 certification standards. The system was not optimal in terms of navigation to find procedures. There was a lack of clarity and consistency in the way procedures were presented.
- 2) Personal ownership of safety was poor and there was a very weak link between safety and corporate values. The visibility on safety in the bases also needed to be improved.
- 3) The mergers with EARL and CCA brought different approaches to safety and the different heritage management systems and practices had not been effectively integrated. The regional structure sometimes led to different interpretations of the same rules.

In trying to determine the best way forward, OSRL looked first at the International Association of Oil & Gas Producers (IOGP) recommended Operating Management Systems Framework (OMS). The framework is designed to control risk and deliver high performance in the oil and gas industry. An OMS is based on 4 key management principles - leadership, risk management, continuous improvement and implementation. These principles are complemented by 10 elements that provide the framework for the different operations or activities undertaken by the organisation.

OSRL also looked at how our members structured their operations from a HSEQ perspective. Many members have in place Operations Excellence Management Systems (OEMS) based on the IOGP OMS. Typically, these systems have sections that cover:

- Leadership & Organisation
- Risk Management
- Operations & Management of Change
- Emergency Response
- Incident Investigation
- Assurance & Continuous Improvement

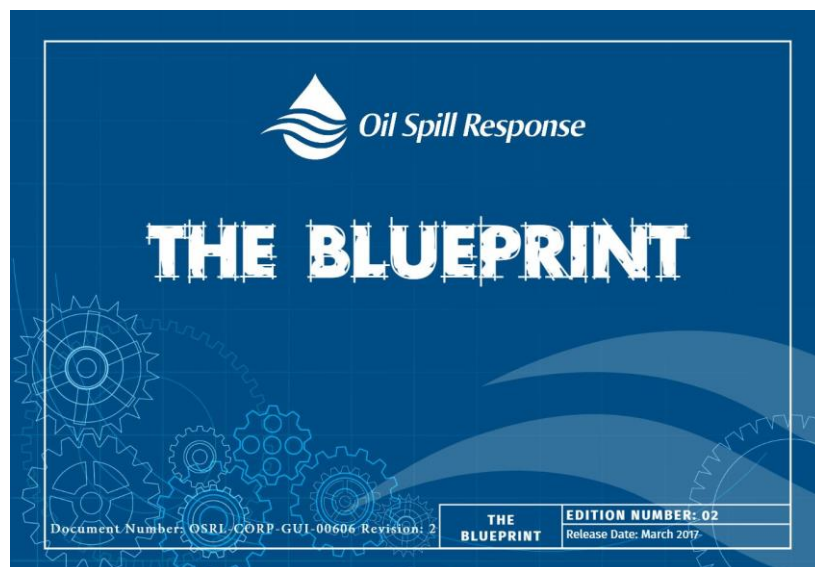
OSRL was looking for a management system that was fit for purpose for the range of operations and activities required for OSRL to achieve its global response and preparedness role. This included ensuring effective navigation and signposting of corporate processes and procedures, understanding and managing our risks more effectively and supporting a more proactive safety culture within the organisation.

The OEMS framework was helpful in 2 aspects. The elements concept allowed OSRL to develop a set of high level ‘buckets’ that reflected our key activities and where the requirements and expectations for each activity could be detailed. The Plan Do Check Act (PDCA) approach supports continuous improvement and a more involved and proactive approach to HSEQ.

OSRL's OEMS, known as the 'Blueprint' was launched in May 2017. The name was chosen partly to have an easy and memorable reference to a HSEQ management system and partly to reflect the nature of a Blueprint and its origin as the foundation drawings of an architectural and construction projects. The design of the paper copies of the Blueprint followed the blue lines and white background of a blueprint.

The Blueprint has 11 elements:

- Leadership & Organisation
- Membership & Industry
- People
- Risk & Emergency Management
- Health, Safety, Security & Environment
- Service Delivery
- Business Support
- Management of Change
- Business Performance Management & reporting
- Audit, Assurance & Improvement
- Data & Information Management



*Figure 1: Cover page of the Blueprint*

Each element contains an introduction of 3-4 short paragraphs on the left-hand page that gives the OSRL context for the element, a description of what the element is about and an aspiration statement of what the element is trying to achieve. On the right-hand page, each element has a list of 5 – 10 expectations on how OSRL personnel are advised to implement the different procedures and process that make up the element. There is also a summary of the main processes and procedures for that activity.

The Blueprint format has also been followed for online storage and retrieval of documents. The documents can be easily accessed through OSRL's intranet either in the bases or remotely in the field. Each procedure has a Senior Manager or ET Director as the document owner and whose permission is required before changes are made. Significant changes to a



procedure require a Management of Change process which evaluates the impact of the change and how that change will be socialised.

### **Corporate Values**

In 2014, OSRL carried out an Employee Trust Index Survey by the Great Place to Work. Their corporate mission is to help organisations create high performing workplaces where employees feel trusted and valued. The survey consists of 60 core statements that provide an insight into the employees' experience and opportunities for organisations to improve trust and engagement. The Great Place to Work assert that employees in high trust high engagement organisations will be much more willing and proactive in their roles.

The 2014 survey was the first by OSRL. Overall, OSRL achieved a very positive trust index score of 65% but fell behind in certain categories. One of these categories was Values & Ethics which scored 54%. A focus group was established to better understand the reasons behind the score and identify appropriate actions to improve.

The corporate values of OSRL in 2014 were safety, people, service, openness and honesty, innovation and change, team work and fun. In 2015, the focus group undertook an in-house survey to assess employee's awareness of OSRL's corporate values and whether these values resonated with them. The survey found that employees were not aware of the values, that their promotion was passive, did not reflect recent major developments in OSRL and that the specific values of trust and integrity were missing. The survey feedback was that the values

should be aligned to OSRL's corporate mission, encouraging employees to do their best and be clear and easy to remember.

The focus group concluded that the values should be re-considered. The focus group also recommended an updated set of values, namely, safety, respect, integrity, excellence and collaboration. A competition was held to develop a tagline for each of the proposed values. OSRL has a very diverse employee background and tag lines would assist with the understanding of each value. For safety, the agreed tagline was 'no one gets hurt'. The focus group also recommended that the 5 values be presented as a 'Compass Rose' to provide guidance and orientation on the values to OSRL employees. The safety value is positioned at the core of the Compass Rose.

The OSRL Board approved the recommendations and a promotion campaign, including town halls, CEO video, posters etc. to launch the updated values was initiated in the first half of 2016. The first page of the Blueprint includes a statement on the OSRL values with the Compass Rose.



*Figure 2: Values Compass poster*

### **Life Saving Rules**

In 2013, OSRL introduced the IOGP Life-Saving Rules. Research by IOGP showed that many oil and gas work place accidents might have been prevented by following one of IOGP's Life-Saving Rules. The Rules provide clear actions to prevent fatalities during higher risk activities, for instance, ensure safe systems of work and use of PPE. The Rules are intended to apply at any work location or scenario and give advice to workers on how to protect themselves. The actions are written to be few, clear, simple and focused at the task level.

Figures from IOGP, used in the OSRL roll-out, explained that adherence to the Rules might have prevented 80% of industry's 65 fatalities in 2011. The Life-Saving Rules were widely adopted across industry and generally customised to each organisation's own operations and circumstances, and sometimes with the organisation's own header or acronym. The number of Rules adopted by different companies ranges from 9 to 15.

OSRL's version of the Life-Saving Rules covered 11 rules and was published as a small booklet that could be carried by employees at work or when travelling to remote work locations. Each page detailed a specific rule with 4 - 10 actions to be taken to ensure compliance. The Rules were also displayed prominently at all OSRL bases including in some bases as a wall mural. The booklet also reinforced the responsibility and authority of OSRL employees, contractors and visitors to intervene and stop any unsafe action they observe.

The benefit of the Life-Saving Rules to OSRL employees is twofold. The Rules provide clarity to employees on what is acceptable standard of behaviour in the workplace and what is not. It has been made clear to employees that the Rules are non-negotiable and that breaches of the Rules would be considered as a performance issue and managed through OSRL's disciplinary system. Contractors breaching the Rules would be removed from the workplace. In practice, OSRL has not incurred many breaches of the Rules, most cases were inadvertent, and the unsafe activity stopped once attention was raised.

The second benefit is to provide support to employees working on response locations where, in certain circumstances, they may be asked to undertake activities that OSRL would

consider unsafe but might be acceptable locally. The Life-Saving Rules, backed by industry, provide support to employees when they need to say no to such requests.

One of the drawbacks of each organisation customising the Live-Saving Rules to their own activities is there is a lack of standardisation across the industry. This can be confusing for contractors or other personnel who visit workplaces belonging to different companies as part of their job. In 2019, IOGP relaunched the Life-Saving Rules noting that in the period 2008 – 2017, 376 people lost their lives in fatal incidents that might have been prevented by following one of the IOGP Life-Saving Rules. OSRL, in introducing the updated Life-Saving Rules, has made a conscious decision to stay with the IOGP branding and communication materials to support industry standardisation of the Rules.

## **Procedures**

OSRL had in place a comprehensive suite of HSEQ procedures covering all aspects of operations including risk management, safe systems of work and occupational health.

The introduction of the Blueprint provided an opportunity to review these procedures in terms of good practice, clarity and global application. The procedures were primarily based on heritage OSRL's Southampton operations, referred to United Kingdom law and had not been updated to take into account the international growth of OSRL following the mergers with EARL and CCA. As procedures were reviewed and updated, they were formatted to follow the PDCA approach. The responsibilities of each level of the organisation from the Executive

Team to the employee were detailed. The objective was again to improve navigation and clarity.

Risk management was prioritised for review. Several risk assessment and management processes existed, with inconsistencies between them resulting in an unequal assessment of risk across OSRL. The processes for risk assessment and management were not always consistently applied or documented and, as OSRL expanded, this meant that maintaining a clear oversight of risk had become more difficult.

A new risk management process was developed that would apply across OSRL to manage risks, whether corporate, project or operational in origin. In the first step, the risk is described and categorised, the preventative barriers and controls listed (what can be done to prevent the risk event occurring), the mitigations processes are also listed (what will be done to minimise the impact if the risk event occurs).

The risk is then evaluated for severity and probability using an established set of descriptors. The evaluated risk is presented on a standard alphanumeric 5 x 5 risk matrix heat map. The heat map has 4 levels of risk (low, medium, high and very high) with each level having a proportional authorisation level (low – person undertaking the activity to very high – Chief Executive Officer). This approach has given a more streamlined and consistent measurement of risk assessment and approval. In 2016, a series of risk management workshops were held across OSRL by individual functions to assess the risks relevant to their activities. The benefit of establishing functional risk registers was to devolve the ownership and

management of risk deeper into the company. Risks in the high and very high categories were then transferred to a corporate risk register for regular review by the Executive Team.

OSRL maintains a HSEQ database known as the ‘Safety Organiser’ which is used to generate and store operational risk assessments. The database has circa 25 generic risk assessments with pre-populated hazards and controls based on OSRL’s prior operational experience. These generic risk assessments are used to develop task or site-specific risk assessments. A Toolbox Risk Information Card (TRIC) is used to summarise the most important hazards and controls immediately prior to the task taking place.

The image shows a 'Toolbox Risk Identification Card' (TRIC) form. It is divided into several sections:

- SECTION 1: DESCRIPTION OF TASKS**: Includes fields for Location, Task (highlighting the task and the main steps to carry out the task), Worksite overview inc weather, Task Supervisor, Permit to work no., TRIC completed by, Supporting documents (e.g. SDS, OWI's etc), Date and time, Emergency telephone number, and Risk Assessment No's.
- SECTION 2: HAZARD IDENTIFICATION**: A table with columns for 'Yes' and 'No' to identify hazards. The table lists various hazards such as 'The use of PPE required?', 'Potential slip/trip/fall?', 'Equipment or component under pressure?', etc.
- SECTION 3: SIGNIFICANT HAZARD IDENTIFICATION**: A table for identifying significant hazards.
- SECTION 4: MANAGING EMERGENCIES**: A section for identifying and managing emergencies.
- SECTION 5: RISK MANAGEMENT**: A table for managing risks, with columns for 'Yes' and 'No'.

Additional features include a 'SIGN OFF' section at the top right, a 'TOOLBOX RISK Identification Card' title, and a 'TRIC to be kept on file for a minimum of 12 months' note.

Figure 3: Toolbox Risk Identification Card

In 2017, the Safety Organiser was revamped to improve quality of the risk assessments generated and to make the system more user friendly. Key changes included:

- A standardised output format for global use including showing identified hazards and controls, as well as the 5x5 heat map
- Pre-population for severity probability for known hazards based on OSRL experience
- Inclusion of environmental hazards
- A switch to team-based risk assessments
- Linkages to related document such as OWI's or method statements
- More frequent reviews of higher risk activities
- Risk authorisation devolved to the most appropriate level in OSRL

The upgrade to Safety Organiser and roll-out of the new features was accompanied by a company wide refresher training on risk assessments. A key message of the training was to undertake risk assessments as early in the planning process as possible. It had been noted that by delaying the risk assessment until all the pertinent information was available had to led to frustration when additional controls were requested by the risk assessment authoriser.

Also, in 2017 the Incident Notification & Investigation procedure was reviewed. Challenges at the time included uncertainty about what constituted an incident, when and to whom an incident should be reported to. These factors led to delays in establishing formal



investigations into incidents and near misses. The number of personnel with formal incident investigation training was also limited.

A formal definition of an incident was agreed, a reporting process and time frame established according to 3 tier criteria – minor (first aid), significant (medical treatment case) and severe (lost time injury). The methodology to be used for investigation was agreed as the Ishikawa Diagram for all incidents with Tap Root as an option for the investigation of incidents classified as severe. Criteria for appointing the incident investigator was also established to ensure an open and fair investigation. Names are not given in the report to avoid the association of individuals to an incident.

One of the aims of the revamped procedure was to try and get a wider understanding of the root causes of an incident by looking at the people, process, cultural and organisational factors behind the incident. Historically, incident investigations had focused on the individual(s) involved, often leading to disciplinary proceedings. This focus had the effect of a reduced scope of investigation and a reluctance by employees to report incidents. The new approach has led to a greater range of factors behind incidents to be identified, thereby providing opportunity to resolve underlying causes.

There has also been a noticeable increase in incident reporting reflecting greater employee confidence in the procedure. Also, to improve transparency, a summary of every incident investigated is made available on the company intranet.

## **Training**

OSRL invests significantly in the knowledge and skills development of its employees. Safety training is provided for all employees. All new employees go through a mandatory induction which includes an awareness of OSRL safe working systems and their application including how to use the Safety Organiser. All employees go through hazard awareness and risk assessment training. For non-technical staff, this is a ½ day course, but technical employees undertake a formal certified training course. Technical staff receive specific safety training including working at height, manual handling, permit to work and safe lifting operations.

An important safety initiative by OSRL was the introduction of the Duty Safety Officer (DSO) role in 2011. The role was intended to provide day to day advice and supervision on safety related matters on OSRL's bases. In practice the role is very focused on permit to work, supervision of contractors on site and ensuring that risk assessments are undertaken correctly. The role is open to all employees with 3 years' work experience including 1 year with OSRL. All employees who wish to undertake the role must sit either the United Kingdom national or international NEBOSH Certificate in Occupational Health and Safety. NEBOSH is a global organisation which provides training leading to health, safety and environmental qualifications. The certificate course, which takes about 100 hours of study to complete, consists of 3 elements, a module on the legal framework behind safety, a module on identifying and controlling common workplace hazards and a practical assessment on hazard identification in a workplace. While OSRL employees typically undertake the role of DSO for 2-4 years, the

knowledge and experience remain with them as they move on to other career positions in OSRL. Overall, the DSO initiative has deepened the knowledge and practice of safety in OSRL.

### **Behavioural Safety**

In 2017 and 2018, OSRL ran a series of behavioural safety workshops across the company. The aim of the workshops was to influence individual behaviours and enable a continuous improvement in safety performance. The workshops specifically aimed at influencing behaviours with a view to:

- reduce risk taking
- follow the rules
- do it right way

The workshops which were ½ day in duration were organised in sessions of 6 - 10 people and were facilitated by employees of 5 years plus experience. The workshops were designed to be interactive and encourage questions and comments by all attending. The workshops had 6 modules:

- legal and moral framework behinds safety and the importance of individual duty of care
- personal safety and how an individual can become distracted at work
- refreshing what risks and hazards are and what the accident triangle is
- how the different attitudes and influence of people can impact safety

- the different types of safety culture that can exist in an organisation
- the myth of common sense and why ‘thinking before acting’ is important when it comes to safety

The workshops helped to continue the process of engaging employees on safety and how they as individuals can contribute to a developing and proactive safety culture.

### **Performance Monitoring**

OSRL monitors both lagging and leading indicators. The last Lost Time Incident was in January 2017 when a responder incurred 1 day’s medical leave during a spill response in Singapore. Non lost time incidents are 2 - 4 a year. All incidents and near misses are investigated in line with the Incident Notification and Investigation procedure. Safety performance is reviewed on a regular basis by the Executive Team and Board and is also reported to shareholders twice yearly.

To encourage greater awareness of hazards and personal ownership of safety, all employees have, as part of their annual performance management contract, an objective to identify and record 6 unsafe situations or safe/unsafe behavioural observations. Most reports and observations are focused on housekeeping issues on OSRL’s bases. The objective has had a mixed reception from employees with concern that the objective is focused on numbers achieved rather than the underlying intrinsic value of the report or observation. However, since

the introduction in 2014, the quality of observations has continued to improve, has identified several safety issues and has also helped to keep safety at the forefront of employee's attention.

## **Engagement**

OSRL engages on safety with employees through a range of methods including town halls, safety blogs, departmental HSEQ meetings, posters and videos but 3 initiatives are worthy of note.

In 2010, OSRL initiated a Global Safety Stand Down for the first time. The initiative followed several near misses at the Southampton and Singapore bases and was intended to suspend company activities in the bases for a short period of time to raise and discuss both global and local safety issues. The format and content have evolved over the years, but the aim remains to suspend work for a short period (normally 2 hours to ½ day) to focus on current HSEQ issues. Initially the sessions were led by OSRL leadership but with time this has evolved to more employee led interactive sessions, often with external speakers. Recent stand downs have explored mental health issues, which has been very well received by employees.

In 2017, OSRL initiated a Global Safety Award to give recognition to outstanding safety behaviours demonstrated by an individual employee. OSRL in each region will either on a monthly or quarterly basis issue a safety award. The winner of these awards is normally chosen by the Regional HSEQ Advisor. The aim behind the global award was to encourage

employees to nominate a colleague who, in their view, exhibited role model safety behaviour. The award is launched in April and the winner announced at December town halls across the company. The nomination process has worked well with each 4-6 employees being nominated.

A more recent engagement initiative has been the introduction of an OSRL Safety Handbook. The objective was to present the key aspects of OSRL's HSEQ management system in a clear and simplified format for use on a day to day basis. The design rationale focused on 3 points; 1) 'less is more', the handbook had to be easily carried by a person working on or off a base, so the content had to be only the most important points 2) the language used had to be clear and concise, in effect, to be capable of being understood by a young person and 3) the most important information presented at the front where it will be read first. The OSRL Safety Handbook was launched in early 2018. The Handbook contains the updated IOGP Live-Saving Rules followed by essential information on OSRL's risk assessment, safe system of work and incident notification and investigation procedures. This information is presented under the 3 headers of what it is, how do we do it and why is it important.

## **Conclusion**

The role of the professional oil spill responder by its nature requires the responder to work in a range of response scenarios whether due to the geographical location, the climate or prevailing weather conditions, the organisations and people involved or the specifics of the oil spill. This creates a set of unique safety challenges in terms of hazard and risk that must be addressed at the time. From an industry perspective, it is important that the safety and wellbeing

of the responders is prioritised and secured regardless of the pressures created by an environmental incident.

Ensuring the safety and wellbeing of responders requires a broad framework of systems, processes and behaviours, each playing a complementary and interlinked role. Industry Life-Saving Rules provide clear guidance on actions to take to avoid known risks. An Operations Excellence Management System provides the structure to arrange the information required to operate safely, and corporate values with a focus on safety empowers employees to make their own safety, and that of their colleagues, the priority.

## References

IOGP Operating Management Systems Framework: <https://www.iogp.org/oil-and-gas-safety/managementsystems/>

IOGP Life Saving Rules: <https://www.iogp.org/life-savingrules/>

OSRL Safety Handbook: <https://www.oilspillresponse.com/about-osrl/hseq/>