

# PART 1 - REQUIREMENTS

## 1.1 HSE IN OIL SPILL RESPONSE OPERATIONS

HSE must be an integral part of all oil spill response work. An oil spill response operation is a measure to mitigate environmental impact as a result of an oil spill. A fundamental principle of incident management is that the action taken in connection with oil spill response exercises and operations does not cause harm to life and health.

The main objectives of the HSE work during oil spill response operations and exercises are in order of priority:

- No harm to human life and health
- The clean-up operation must not cause further damage to the environment
- Equipment and material must not be damaged

The primary means of achieving these HSE objectives are:

- Correct prioritising between oil spill response tasks and risk-prevention measures
- Compliance with HSE requirements
- Open dialogue between all personnel involved
- Conduct on-going risk assessments
- Take care of each other

This requires that the operation management establishes the necessary guidelines that assign responsibilities and ensure efficient follow-up and control of the risk factors in the workplace, including:

- Providing good information and training to personnel involved
- Identifying, assessing and reducing risk factors associated with activities during the operation
- Establishing a real-time reporting system
- Checking and following-up HSE during all phases of the operation
- Following-up that all personnel have the necessary knowledge and skills to perform their duties



## 1.2 HSE requirements

The requirements set in this document form the basis for systematic HSE work during oil spill response. The requirements have been based on regulatory requirements and the liability of the operation management.

These requirements constitute a minimum in connection with oil spill response and apply to coastal preparedness and vessels. Operating companies, municipalities (IUAs) and the Norwegian Coastal Administration (NCA) may have additional requirements over and above these.

### 1.2.1 General requirements

General requirements to be followed during every operation:

1. All personnel involved must comply with the HSE requirements in this document and requirements issued by management personnel pursuant to laws and regulations and must also implement the HSE measures the individual is accountable for.
2. All personnel involved must have received an introduction to HSE based on the HSE manual.
3. Information regarding relevant laws and regulations, internal requirements and instructions must be available to all participating parties.
4. Risk assessments must be made and documented before the work starts in the shoreline area and on-board vessels.
5. The operation order must assign responsibility for HSE in workplaces with multiple employers and define how these should cooperate and share tasks.
6. Safety delegates must be appointed for the work and they must be familiar with their duties.
7. The need for personal protective equipment must be identified through product safety data sheets and risk assessment.
8. The necessary personal protective equipment must be provided and used.
9. There must be product safety data sheets for all chemicals relevant to the operation and these must be available to everyone involved.
10. A plan for emergency measures in the event of illness / injury to personnel must be prepared before the work starts.

## 1.2.2 Requirements for management

### Special requirements for the operations management

The operations management has primary responsibility for HSE during the operation, and must, among other things:

1. Allocate the necessary time and resources for the operation to be conducted safely.
2. Establish an HSE system for the operation, where, among other things, HSE objectives and measures are described. This must be shown in the action plan.
3. Ensure that an overall risk assessment is made.
4. Ensure that the HSE work is followed-up through safety inspections, a real-time non-conformance and improvement system and focus on HSE during all phases of the operation.
5. Notify the relevant authorities in the event of accidents.

### Requirements for management personnel on all levels

Taking care of HSE is a management responsibility that applies to all levels.

1. All supervisors must be familiar with the laws and regulations applicable to their work, and the requirements with associated guidelines given in this document.
2. HSE objectives and measures must continue in operation and oil spill response orders.
3. Risk must be continuously assessed and documented.
4. The necessary personal protective equipment must be available and in good working condition.

## 1.2.3 Requirements for protection of personnel

Response personnel must not be exposed to unnecessary risk or hazardous working conditions.

1. Personnel must be allowed adequate rest so that they can perform their tasks in a safe manner.
2. Special measures must be considered when working in poor visibility and / or extreme weather conditions. As a general rule, no work should be carried out in the dark.
3. If it is likely that response personnel may be exposed to an extreme situation (e.g. victims floating in the sea), extra measures must be taken.

## 1.2.4 Risk assessment requirements

Risk assessments carried out to ensure the safety of the response personnel.

1. A risk assessment must be made before the work starts and this must be documented.
2. Information must be obtained regarding the type of oil and its properties.
3. A toolbox talk must be held before and after each work operation.
4. A Job Safety Analysis (JSA) must be conducted for activities where the risk is considered to be high.

## 1.2.5 Advance depot requirements

The advance depot must be able to serve several functions. Therefore, there will be additional HSE requirements that must be met.

1. Facilities and space must be arranged to provide a meeting place, catering and place for the response management and crews to rest.
2. A cleaning station must be established for response personnel and material. Waste from this activity will be managed in accordance with the waste management plan.
3. A depot must be established for receiving, handling and onward transport of the contaminated masses.
4. To prevent secondary contamination, there must be designated and signposted clean and unclean areas.
5. HSE information must be available and visible.
6. First aid equipment and fire extinguishers must be readily available.

## 1.2.6 Requirements for the oil spill responders

1. A risk assessment and toolbox talk must be conducted and documented.
2. An undesirable incident (RUH) / non-conformance report form must be available.
3. The oil spill response area must be divided into a clean and unclean zone, which is marked and if necessary sealed off.
4. Contaminated masses must be handled in accordance with the waste management plan.

## 1.2.7 Reporting requirements

Experiences made must be used to prevent accidents and improve safety.

1. All injuries, near misses and hazardous situations must be reported to the immediate superior.
2. All participating units must report HSE non-conformance and proposed improvements. The HSE status must be reported daily in the status reports.
3. Serious injuries to personnel who participate in the oil spill response must be reported immediately to the relevant authority, as well as through internal reporting systems.

## 1.2.8 Communication requirements

Communication is an important part of the response personnel's safety.

1. A communication plan must be developed for the whole operations organisation.
2. The necessary training must be given in use of communication equipment and procedures.
3. It must be possible for all individuals to reach their immediate superior at all times and in all locations via the communication system.
4. The communication equipment must be function tested before the work starts.

## PART 2 - GUIDE

1. Management and organisation .....	2
1.1 Management personnel's responsibilities .....	3
1.1.1 Operations management.....	3
1.1.2 Management personnel on all levels .....	4
2. Organisation of the HSE work .....	5
2.1 Organisation of the operation.....	5
2.2 HSE training .....	6
2.3 Information on relevant laws and regulations .....	6
2.4 HSE and safety inspections .....	7
2.5 Risk assessments.....	8
2.5.1 Job Safety Analysis (JSA).....	9
2.5.2 Toolbox talk.....	10
2.5.3 The properties of the oil / emulsion .....	11
2.5.4 Hazardous areas.....	12
2.5.5 Work on-board vessels.....	12
2.6 Protection of personnel.....	13
2.6.1 Occupational health and safety precautions.....	13
2.6.2 Chemicals and product safety data sheets.....	13
2.6.3 Personal protective equipment.....	14
2.7 Advance depot and clean-up site .....	16
2.7.1 Waste management .....	17
2.8 Reporting .....	18
2.8.1 Reporting undesirable incidents (RUH) and proposed improvements .....	18
2.8.2 Reporting procedure.....	18
2.8.3 Reporting serious incidents .....	19
2.9 Communication.....	20
2.9.1 Evaluation of the exercise / operation .....	20
2.10 Preparedness in case of personal accident /injury.....	21
2.10.1 Notification.....	22
2.10.2 Typical injuries / events during oil spill response operations .....	22
2.11 Employment contracts .....	23
2.12 Appendices.....	24

## 1. MANAGEMENT AND ORGANISATION

An operations management team must be established with HSE responsibility in accordance with the descriptions in Section 2. The principal company is the organisation responsible for the operation. The principal company is also responsible for implementing the requisite HSE procedures to safeguard the work in a proper manner and also to ensure that this is followed-up, among other things, through safety inspections. This should be made known to all those participating in the operation.

Overall objectives and HSE requirements during the operation must be described in the mobilisation order for the operation prepared by the incident commander. The safety delegate system is to be set up according to the scope of the operation. This means, among other things, that a coordinating safety delegate is appointed and that everyone participating in the operation is informed of this.

Establishment of an operations organisation requires personnel that have good knowledge and understanding of the HSE work. Therefore, all supervisors must be familiar with the laws and regulations that apply within their field, and also the requirements and associated guidelines given in this document.

It must be arranged so that personnel can perform their tasks safely. It is also important to continuously check, evaluate and improve the activities to prevent any hazardous situations from occurring.



A few important key elements of the HSE work are:

- Training in fundamental HSE principles
- Overview of requirements in laws, regulations and operation-specific instructions
- HSE as a part of the overall operation objectives
- Risk identification – risk assessment – taking action
- Establish and follow-up reporting system
- Identification of hazardous chemicals
- Access to relevant product safety data sheets
- Ensure the requisite and adequate personal protective equipment
- Check, evaluate and improve
- Ensure a good flow of information – communication

## 1.1 The management's responsibilities

### 1.1.1 Incident management

The incident management (Operator/Principal Company) has overall responsibility for HSE. This applies during all phases of an operation, whether this is out at sea or on the coast and shoreline. HSE objectives and measures must be described in the mobilisation order for the operation with attachments. At the start of an operation, an HSE plan must be prepared that is specific to the operation. This can be enclosed with the mobilisation order for the operation.

It is the responsibility of the incident commander to ensure that all personnel have received HSE training and also that all relevant laws, regulations, instructions and product safety data sheets are available to all participants.

The incident management is also responsible, among other things, for ensuring that there are plans for:

- Preparedness measures in case of accidents
- Waste management
- Sampling
- HSE
- Communication
- Cleaning vessels
- System for reporting accidents (RUH)/non-conformance handling

The incident management is also responsible for ensuring that risk assessments are prepared for each operation. They must also ensure that safety delegates are appointed and that HSE inspections are planned and implemented in cooperation with the safety delegates / Working Environment Committee to ensure that the HSE work is followed-up as planned.

*Refer to Appendix A for the HSE plan template*



### 1.1.2 Management on all levels

Participants in an operation, who have the task of supervising other personnel, must ensure that health and safety are taken into consideration during planning and execution of the tasks that belong to their area of responsibility.

Supervisors on all levels of the organisation have HSE responsibility within their area. A shared responsibility means, among other things, being familiar with the contents of the HSE manual and also the laws and regulations and operation-specific instructions that apply to their area.

Supervisors must ensure that everyone participating in oil spill response operations has received an introduction to HSE during oil spill response operations, based on the applicable laws and regulations, and also the requirements described in the HSE manual. Furthermore, they are responsible for ensuring that the response personnel have the necessary personal protective equipment and that they are given the necessary breaks.



Before the operation commences, risk factors associated with the pending work must be identified and assessed. If necessary, risk-mitigating measures must be implemented, i.e. if the risk level is considered to be high. Under any circumstance, the minimum personal protective equipment must be used so that bare skin is not exposed to oil.

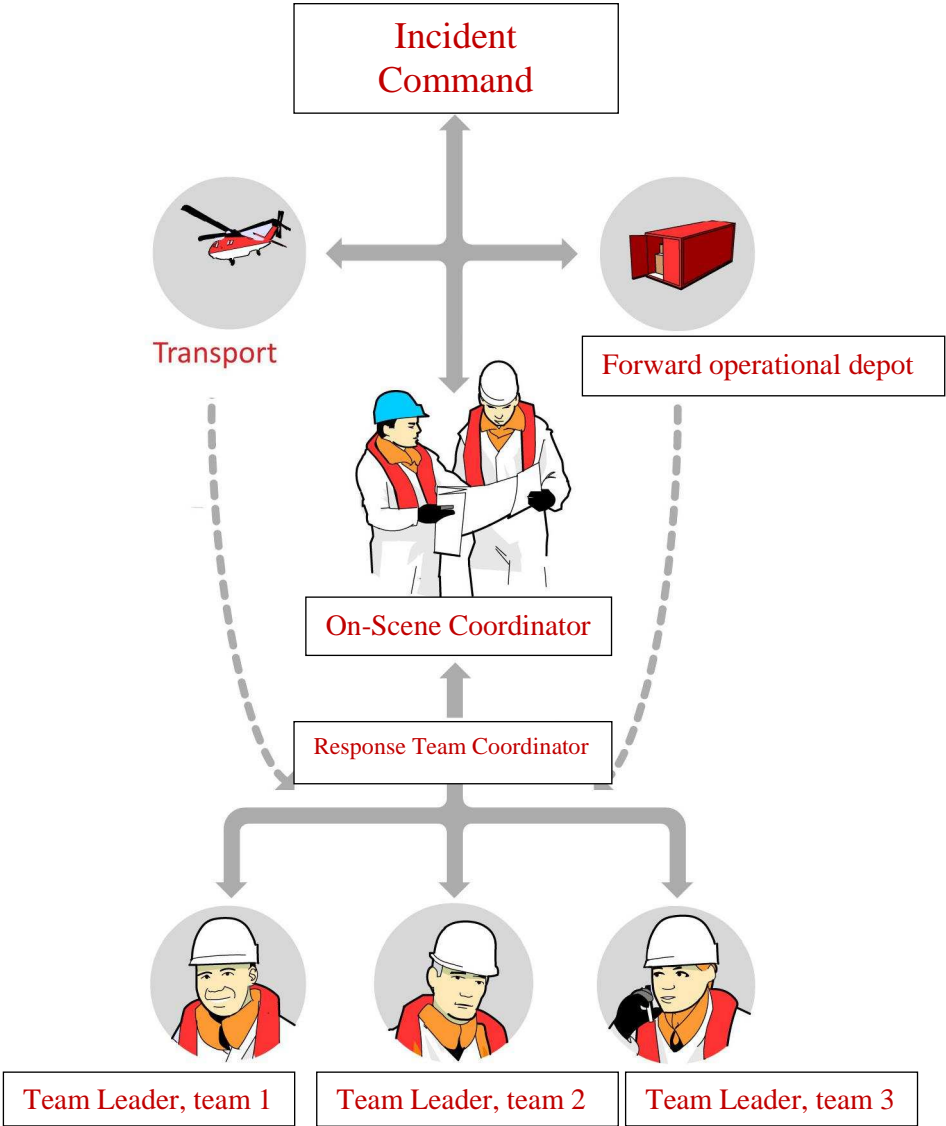
Serious injuries to personnel who participate in the oil spill response operation must be reported immediately to the relevant authority. All participating units must report the HSE status and non-conformance in their routine reports.

The HSE work must be traceable and therefore must be documented.

## 2. ORGANISATION OF THE HSE WORK

### 2.1 Organisation of the operation

An oil spill response operation can be organised as described in the figure below.



## 2.2 HSE training

Everyone who participates in an operation must have training in fundamental HSE principles. As a minimum requirement, everyone must have completed an introduction to HSE during oil spill response operations based on applicable laws and regulations, and also the requirements described in this manual.

No one must be assigned work that they do not have the qualifications, skills, personal protective equipment or adequately safe equipment to be able to carry out safely and properly. It is especially important to ensure this during major and long operations where external personnel and volunteers are hired in.

Each participant in the operation is entitled to be informed in an easy to understand way of the risk associated with the work and how to proceed in order to avoid risk. It must be informed which work instructions apply and training must be given to understand it and the consequences if these are not followed.

### Each person is responsible for:

- following the HSE requirements and work instructions
- assisting in implementation of risk assessments and JSA
- ensuring own safety
- taking care of colleagues and notifying if hazardous situations arise
- using the prescribed personal protective equipment and lifejacket
- receiving and if necessary requesting training in HSE and use of equipment
- familiarising themselves and using the HSE manual for oil spill response operations
- reporting injuries, near misses and hazardous situations

## 2.3 Information about relevant laws and regulations

Relevant laws and regulations regarding HSE, which apply to personnel working in the operations organisation, must be available. Access through the Internet is an acceptable solution, but other solutions must be established for personnel who work in the field and who do not have internet access. Examples of places this must be available are NOFO's operations management, IUAs' incident management, standby vessel and advance depot or meeting places for response personnel on the coast and shoreline.

Information about which regulations that apply to HSE during oil spill response may be found in the introduction in the HSE manual.

## 2.4 HSE and safety inspections

During operations, the management must follow-up that the HSE work is carried out as planned. This may include inspections, safety inspections, meetings and or reports. A plan must be prepared for implementation of safety inspections. This must state the frequency and focus areas of the safety inspections. A form with a safety inspection checklist must be enclosed as an attachment to the plan (Appendix B).



*Photo: The Norwegian Labour Inspection Authority at an inspection in connection with the MV "Server" incident*

During oil spill response operations it may be useful to inform the Norwegian Labour Inspection Authority of the operations as regards organisation and how HSE is followed-up. The Norwegian Labour Inspection Authority may decide on its own initiative to conduct an audit on the operation. During an audit, the Norwegian Labour Inspectorate may request:

- Overall HSE plan and risk assessment
- Employer 's liability
- Employment contracts (date the work commenced and ended)
- Training
- Risk assessments
- RUH and non-conformance reporting
- Product safety data sheets for type of oil
- Resilience of the personal protective equipment
- HSE on all levels

## 2.5 Risk assessments

It is important to have focus on the fact that this is an operation to clean /rehabilitate the environment. All participants must take time to think and no one must be exposed to unnecessary risk. Personnel safety comes before environmental considerations in every situation.

At the start of an oil spill response operation, the operations management team and other subordinate units must assess the risk picture. What are the risk factors – what are the hazards in the situation in question? Are there special circumstances which mean that the response personnel are especially exposed, e.g. weather, temperature, etc.? Information about the type of oil and its properties must be obtained immediately and communicated to all participants in the operation.

In cases where the work to be carried out may involve a special risk to life or health, written instructions must be prepared describing how the work is to be carried out and what safety measures are to be taken.

The following conditions must as a minimum be described in the operation and consequent orders (mobilisation):

- Work routines; no. of hours before breaks, never work alone, communication, working in the dark and / or poor visibility, snow and ice, etc.
- Personal protective and safety equipment; use of equipment, access to supplementary equipment, etc.
- Occupational hygiene; clean / unclean area, assistance during work ("clean person"), etc.
- Communication; availability, rules, suitability, etc.
- Training; HSE, work methods, organisation, etc.

In addition to an overall risk assessment that must be made before the operation, continuous risk assessments must be made on all levels. [Appendix C](#), "Risk assessment checklist", may be used to assess risk in the various response areas.



### 2.5.1 Job safety analysis (JSA) and risk analysis

#### Job Safety Analysis

JSA is a systematic and step-by-step review of all risk factors. A JSA must be conducted prior to every task or operation so that measures can be taken to remove or control the identified risk elements.

Typical factors to be emphasised in assessment of use of a JSA are:

- Whether the work has been described in procedures or routines or requires departure from these
- Whether this type of work has previously resulted in undesirable incidents
- Whether the work is hazardous, complex or involves several disciplines / units
- Whether new equipment or methods are to be used
- Whether personnel who are involved in the work have experience with the work in question

#### Risk analysis

Risk analysis is systematic identification and categorising of risk to humans, the environment and assets.

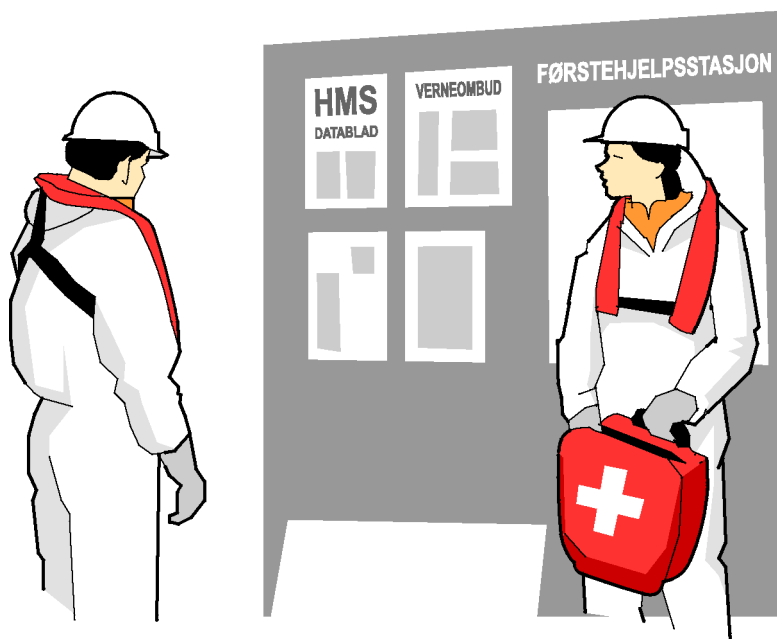
The aim is to establish a written record of what can go wrong and the degree of probability that it will happen with the grading of consequences. Furthermore, establish preventive measures with the person in charge of the operation and the deadline for implementation of risk-mitigating measures.

More information concerning use of JSA, form and risk analysis is available in [Appendix D and D1 in the HSE manual](#).

## 2.5.2 Toolbox talk

A Toolbox talk is to be held every day before work starts. The identified risk factors relevant to the area in question and the tasks to be executed should be reviewed at this briefing. Any undesirable incident reports (RUH) that have been submitted should also be reviewed.

- If local conditions (e.g. the weather) deem this necessary, an assessment must be made of whether it is safe to execute the planned work.
- When a need to implement risk-mitigating measures has been identified, it must be ensured that these are included as part of preparation of the oil spill response work.
- It must be ensured that all participants are familiar with the necessary equipment and applicable procedures. Time must also be allocated for feedback from response personnel and exchange of best practice between the various teams must be encouraged.
- Proposed points of improvement must be written down and followed-up by the management. The contents of the toolbox talk must be written down and posted on the bulletin board for information.
- Inform about safety delegates, personal protective equipment, first aid station, fire fighting equipment and hygiene.
- Use and follow-up of RUH (incident reports).



### 2.5.3 The properties of the oil / emulsion

It is very important that the oil from the spill is analysed as soon as possible. Until the results from the analysis are available, it must be assumed that the oil may be toxic. Bare skin must never be exposed to the oil and it should be taken into account that personnel have the necessary supply of fresh air during the clean-up work.

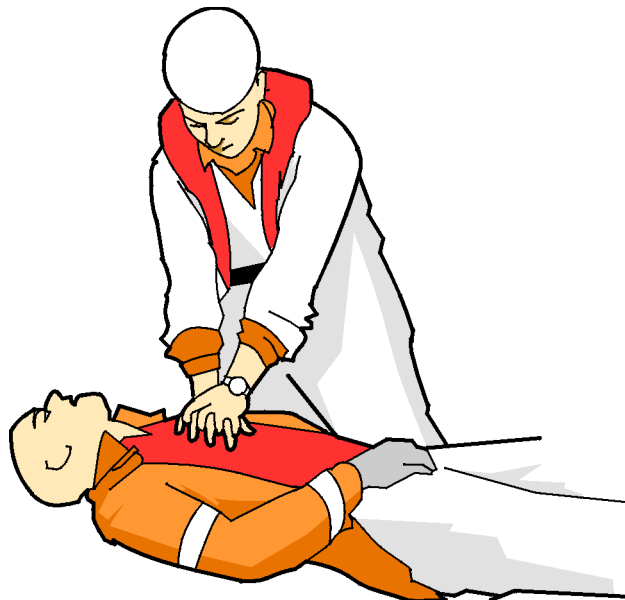
The analysis may involve, but is not limited to the following:

- Fire
- Explosion
- Toxicity
- Health risk class
- Personal protective equipment requirements

It is important to have answers to questions, such as:

- What harmful substances does the oil contain?
- Is gas a problem?
- What happens when the oil is exposed to external influences, such as hot water, etc.?

The results of the analyses are sent to the operations management, who are responsible for passing these on to the executing units as soon as possible. When it is clear which type of oil is concerned, product safety data sheets must be distributed. The data sheets will provide instructions for the most important personal HSE measures. A copy of the product safety data sheet for bunkers oil IF 30-380 and crude oil has been enclosed with this document as an example. Appendix E.



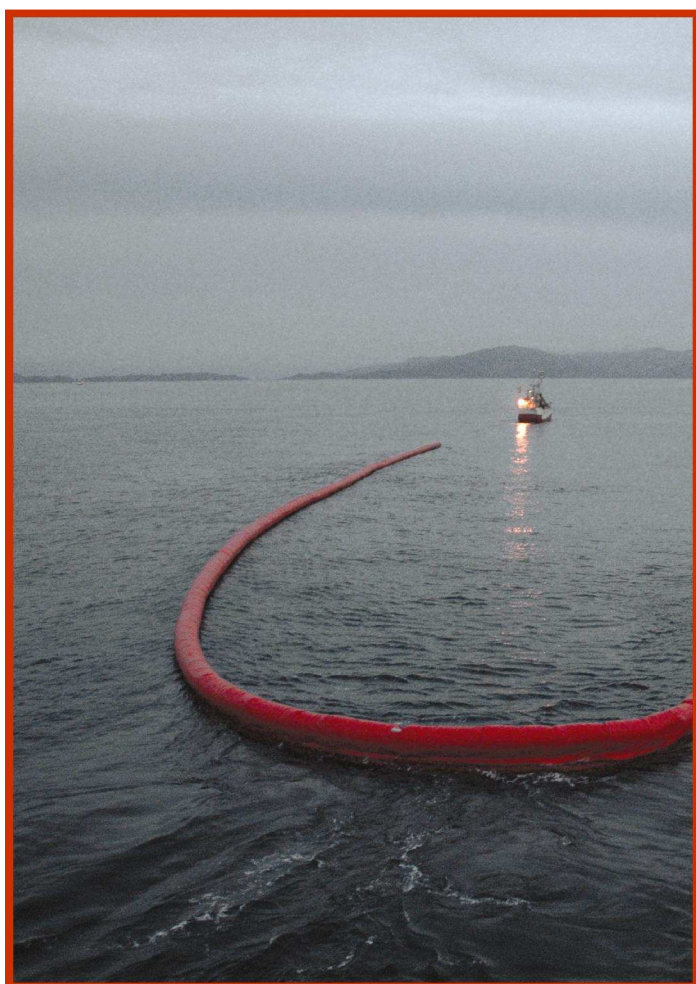


## 2.5.4 Hazardous areas

Hazardous areas are especially relevant around the source of true oil spill. Personnel working in these areas must be especially aware of this. Measurements of the atmosphere around the oil / emulsion must be taken regularly. All electrical equipment must be intrinsically safe. If evaporation of the oil / emulsion creates a fire / explosion hazard, all personnel must be withdrawn from the area immediately. When the oil has been on the sea for a few hours, the risk of explosion is usually over.

The spill source may be close to an installation or a grounded vessel. Gas measuring instruments are found, among other things on-board NOFO's vessels and on some of the Coast Guard's vessels. When working on the shoreline, the local fire service may also assist with gas measurement.

*There is separate legislation for flammable goods and explosives, which is enforced by the Directorate for Civil Protection and Emergency Planning, see [www.dsb.no](http://www.dsb.no).*



## 2.5.5 Work on-board vessels

Under the Norwegian Seamens' Act, special instructions apply to work carried out on-board a vessel.

Response personnel at sea must follow the safety instructions of the vessel, in addition to the requirements set forth in this folder.

The ship's captain is responsible for the safety on-board by ensuring that the work is properly organised. Response personnel on-board must familiarise themselves with the hazards associated with the work and appropriate personal protective equipment must be available. The response personnel are responsible for implementation of the measures taken to prevent accidents and harm to health.

In Section 7 of the handbook, there is an overview of the precautions that apply to work on-board vessels.

## 2.6 Protection of personnel

### 2.6.1 Occupational health and safety precautions

A person may be exposed to oil / chemicals through their skin, inhalation and swallowing. Therefore, cleanliness is vital in order to avoid injury or damage to health. Personal protective equipment must be worn during the oil spill response operation in order to protect personnel from injury or possible harm to health.

The following facilities for personal hygiene must be available and used during the oil spill response operation:

- Cleaning station or hygienic wipes
- Clean water and soap
- Cream to protect the skin against oil / chemicals
- Mirror
- Toilet

Response personnel and management in the oil spill response operation have a responsibility to follow routines for cleaning work clothes and personal protective equipment.

### 2.6.2 Chemicals and product safety data sheets

Chemicals to be used in exercises or oil spill response operations must be assessed and approved in accordance with the regulatory requirements. Assessments of chemicals must include grading of the risk of damage to the environment and also an assessment of the working environment during use and handling.

When using chemicals during an oil spill response operation, the chemicals must be approved through the operations management's own guidelines, with the respective authority's permission. This will mainly take place through the action plan.

All businesses that use chemicals in their activities are obliged to assess substitution of harmful chemicals. Therefore, the operations management will continuously assess its use of chemicals and where possible reduce the risk by changing to less harmful alternatives (The Norwegian Labour Inspection Authority and the Norwegian Climate and Pollution Agency with the Chemical regulations and also the duty to find substitute chemicals).

Product safety data sheets for all chemicals used in the operation must be available to everyone working with the chemicals. The information in the safety data sheets must be used to implement preventive measures, which ensure that no one is exposed to unnecessary risk.

In connection with an operation, the following product safety data sheets and analyses must be enclosed in the folder:

- Safety data sheets for harmful chemicals used in the operation
- Safety data sheets for the relevant oil that has been discharged



### 2.6.3 Personal protective equipment

The operations management must ensure that satisfactory personal protective equipment is available to the response personnel.

The personal protective equipment must be designed in accordance with the applicable regulations and must be appropriate as regards the activities to be carried out.

A plan should be drawn up for and additional equipment should be purchased both for daily consumables (gloves, coveralls, etc.) and replacement of life-jackets, boots, thermal suits, etc.

All personnel must use the required and approved personal protective equipment, such as:

- Rainwear (oil resistant)
- Gloves with high cuffs (oil resistant)
- Hardhat with chin strap
- Safety boots
- Flotation suit or life-jacket (should be equipped with light and reflective tape)
- The following criteria apply when using a life-jacket/safety vest:
  - 150N – Inflatable safety vests. Coastal waters and offshore, together with clothes to protect against bad weather. Not suitable when using heavy-duty tools or equipment.
  - 275N – Inflatable safety vests. Offshore, shipping and industry under extreme weather conditions. May be worn together with heavy-duty safety clothing, most survival suits and safety harness.
- The following criteria apply when using a flotation suit:
  - EN 533 – These flotation suits are especially suitable for operations in rough climate / environment.
- Safety glasses/ visor when working on deck on-board an OR vessel, and also when spreading bark, hydro-jetting, unknown type of oil, etc.
- Respiratory protection equipment when the type of oil is unknown
- Dust mask when spreading bark, etc.

Risk assessment and JSA will identify special need for personal protective equipment.





*Photo: Ready for transport in small vessel during the "Server operation"*

Under point 8 "Exposure control and personal protective equipment" of the product safety data sheet, there is a recommendation regarding the type of personal protective equipment that should be used. Also refer to the work specification for the equipment in question to be used. Note that some personal protective equipment has a limited lifetime, e.g. rubber gloves. Uncertainty regarding the lifetime of the equipment means that the equipment must be replaced more frequently. Gloves used with oil are especially vulnerable and must be checked regularly.

Documentation of the personal protective equipment's range of uses must be available.

## 2.7 Advance depot and clean-up site

An advance depot should be located as close to the response area as possible. The area should be suitable as regards the necessary infrastructure for transport to and from the area.

The advance depot must serve several functions, such as:

- Meeting place, catering and shelter for the operations management and response personnel
- Cleaning station for the response crews and materials
- Receipt and storage of equipment required at the clean-up site
- System for handling contaminated mass

Therefore, the advance depot must meet several HSE requirements.

To ensure the safety of the response personnel and to avoid secondary contamination, both the depot and the clean-up site must be divided into a "clean" and "unclean" zone. The depot will be separated from the unclean zone using sluices.

Before the work starts at the clean-up site, the risk must be assessed and a toolbox talk must have been held and documented. When required, a JSA review must be conducted with participation from the response personnel.

An "RUH" form must be available at the depot and the clean-up site (Appendix F).

Contaminated mass from the clean-up site must be handled in accordance with the waste management plan.



*Photo from the advance depot at Austrheim during the "Server operation"*

### 2.7.1 Waste management

The risk associated with storing chemicals and especially storage of several in the same place must be included in the overall risk assessment. Only the equivalent of the required daily volume of chemicals should be stored at the clean-up site. Sufficient time should be allocated for cleaning-up at the end of each working day.

It is important that an interim storage depot for waste is planned carefully to avoid secondary contamination. Covering, spreading bark and other remedies should be used to prevent further contamination.

The waste management plan for the operation will include, among other things, how oil recovered from beaches and the sea must be handled. This also applies to intermediate storage and transport to a depot for disposal of the waste. A plan must be prepared for cleaning vessels and equipment that have been soiled with oil. For an example of a waste management plan, refer to [Appendix G](#).



*Photo: A lot of the waste must be taken away in big bags*

## 2.8 Reporting

### 2.8.1 Reporting undesirable incidents (RUH) and proposed improvements

During all operations it is important to establish routines to ensure that accidents, near misses, non-conformance and proposed improvements are reported. All reported incidents must be dealt with at the lowest possible level, but the management uses the total experiences to improve the systems.

The following incidents must be reported:

- Personal injury/death
- Fire
- Oil / gas leak that does not come from the source of the oil spill response operation
- Chemical spills
- Damage to property
- Near misses
- Hazardous situations
- Damage to equipment
- General proposed improvements

### 2.8.2 Reporting procedure

1. All personnel are responsible for reporting to his or her immediate superior if he or she has witnessed or has been involved in an undesirable incident, or if he or she sees the need for improvements in the workplace.
2. As a general rule, reported incidents must be dealt with at the lowest possible level. The supervisor must ensure that the incident is investigated and reported on the enclosed RUH form, refer to [Appendix F](#). If the responsible organisation (operator, shipping company, base / consultant, etc.) has their own form with the same contents, this may be used.
3. In case of minor personal injuries, medical personnel must be contacted and the necessary first aid given. In case of serious personal injury, the Norwegian Labour Inspection Authority's form must be used, refer to [Appendix H](#). Refer otherwise to section 1.9 Preparedness measures in case of accidents.
4. If practically possible, filling out the report and further handling must take place immediately and no later than the end of the working day.
5. The principal company must ensure that the reports are registered in an HSE / quality assurance system.
6. All incidents and proposed improvements must be investigated, analysed or assessed by the IUA management / captain or by the principal company. In case of incidents where special action has been identified, it must be clear who will ensure further action and a deadline for implementation.
7. Relevant reports must be presented in the daily toolbox talks.

### 2.8.3 Reporting serious incidents

Operations management (NCA or NOFO/operating company) is responsible for reporting immediately serious injuries to personnel who participate in the oil spill response operation to the relevant authority. Below is a notification table for various degrees of injury / illness.

The operations management will:

- During government operations be the Norwegian Coastal Administration
- During operations where the offshore industry is responsible be the Operating Company

Notification in case of injury / illness	First aid	Medical treatment	Absence
Principal company and employer	X	X	X
The Norwegian Maritime Directorate in case on an incident on-board a vessel		X	X
The National Health Administration /Norwegian Board of Health		X	X
The police		X	X
The Norwegian Labour Inspection Authority in case of incidents on the coast / land		X	X
Local hospital /doctor		X	X

Figure 4.2 Notification and reporting responsibility in case of accidents

An incident report is to be prepared and submitted to the operations management. The report must at least contain the following information:

- Description of the course of events
- The situation at the scene when the incident occurred
- Description of the personal injury
- Description of the direct cause of the incident
- Measures taken to secure the scene
- Who was notified (police, Norwegian Labour Inspection Authority, next-of-kin, etc.)

Serious personal injuries must be investigated to identify the underlying causes of the incident and measures to prevent a recurrence.

If a serious personal injury occurs, the scene must be secured until the police reopen it and the operations management gives permission to continue work.

Experience from reporting must be used to prevent accidents.



## 2.9 Communication

Communication is an important part of the safety of personnel working on the shoreline and on-board vessels.

A communication plan must be prepared in accordance with the emergency response plans used by the various parties, whether this is the IUAs, operating company or NCA. The communication equipment must have been tested for use in the respective area (coverage, transmitter strength, etc.).

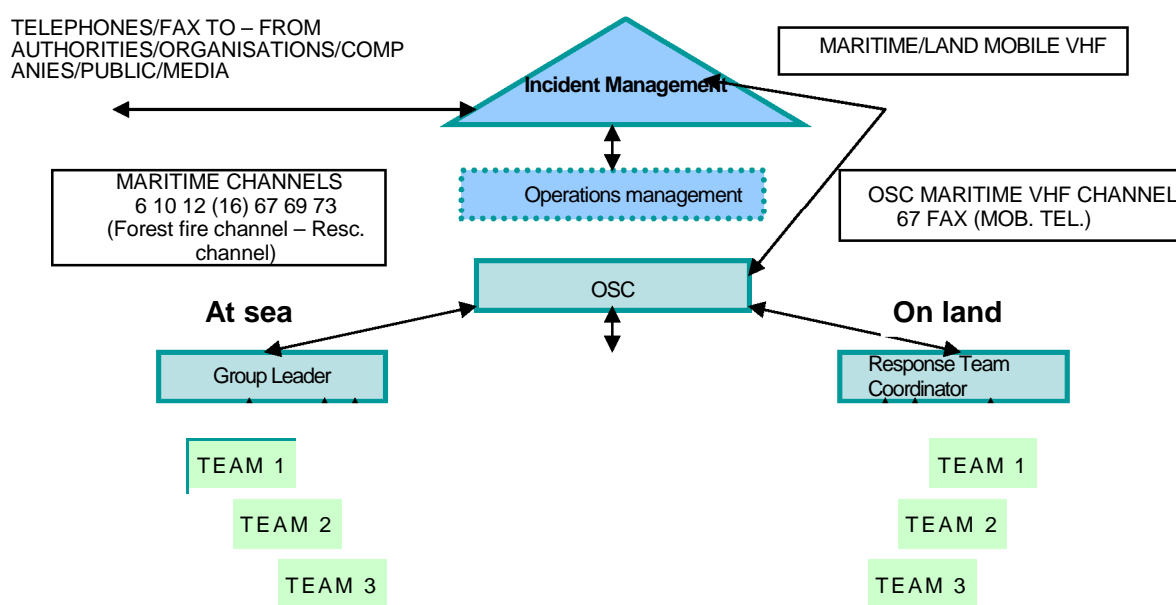


Figure 4.1. Schematics of the communication plan

Personnel who will be using the communication equipment must have received the necessary training in use of the radio equipment and the communication plan. It must be possible to reach the immediate superior through the communication network at all times.

### 2.9.1 Evaluation of the exercise / operation

Each operation must be evaluated as regards what went well and what, if anything, requires improvement. The evaluation must include all parts of the exercise / operation and as many of those who participated as possible must be allowed to submit their experiences and points of view.

The exercise / operations manager will ensure that the evaluation has been made, that a memo of the results is written, and also that any improvements will be registered in the responsible organisations' HSE / quality assurance system.

## 2.10 Preparedness in case of an accident / personal injury

The incident command must have a plan for emergency measures in case of accidents. Emergency measures means herein access to immediate first aid on the scene, pre-notified health service, agreement with fire and rescue service, etc.

The local health authorities must be informed of the activities taking place in connection with the oil spill response operation. It must be clarified whether the operation requires extra medical measures and who will be in charge of these.

Extra medical measures may include:

- A defibrillator
- Stretcher
- Neck and fracture brace
- First aid personnel

First aid equipment must be available to all teams, and there must be personnel who are qualified to use this equipment. The first aid unit follows the Norwegian Labour Inspection Authority's guidelines and must contain, among other things:

- Eye wash bottles
- Sterile pads
- First aid tape
- Adhesive plaster
- Gauze bandage
- Burn bandage
- Wound aid dressing
- Disinfectant compress
- Arm-sling
- Mouth-to-mouth mask
- Scissors
- First aid folder
- Etc.



### 2.10.1 Notification

Personal injury with the need for medical assistance that occurs on land or near shore must be notified directly from the scene of the incident to the local pre-hospital emergency response service (AMK) and then to team leader. The team leader will notify the operations management immediately and verify that the local AMK has been notified. Personal injury requiring medical assistance that occurs on-board a vessel must be reported directly from the vessel's captain to the Main Rescue Coordination Centre and OSC Sea. OSC Sea notifies the operations management immediately and verifies that the Main Rescue Coordination Centre has received the notification.

The police will notify the next-of-kin. Emergency numbers:

**110 FIRE**

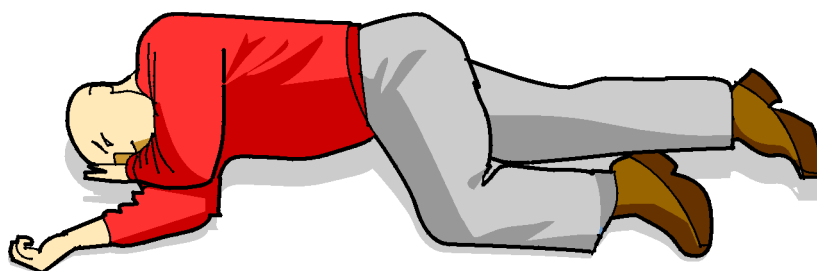
**112 POLICE**

**113 AMBULANCE**

### 2.10.2 Typical injuries / events during oil spill response operations

During oil spill operations, response personnel may be exposed to many different types of threats and hazards. Typical accidents that may arise in connection with oil spill response are:

- Poisoning due to exposure to oil residue and vapour
- Falling into the sea that may result in drowning / near drowning
- Fall that results in fracture or sprain
- Hypothermia /frostbite
- Burns
- Crushing injuries



Response personnel should be aware of the risk of exposure. All substances may be harmful to the body if the concentration is high enough. Some substances are harmful even in small quantities and therefore are called toxins. The risk of injury depends on the type of exposure, dose and duration and also the properties of the oil.

The most common symptoms of injuries / poisoning caused by exposure are described in the handbook. How to give life-saving first aid is also described in the handbook.

### 2.10.3 Psychological factors

Situations may arise in connection with oil spill response operations where a search for missing persons is still on-going. It is important that the response personnel are informed about what they can expect to encounter and are prepared for this. Action should be taken if personnel find themselves in such a situation so that they can receive professional support.

Oil spill response can be mentally as well as physically challenging. Therefore, psychological support should be available through, among others, municipal crisis teams. These may provide assistance during acute incidents, but also in connection with future follow-up.

## 2.11 Employment contracts

Response personnel for the shoreline are normally employed in the municipality in which they work. Salary is received from the municipalities, who also take care of insurance and registration for any benefits. Employees with an employment contract in the municipality will be insured through the insurance scheme that all municipal employees have. Other insurance arrangements apply for contracted resources where the operating company is incident manager, among other things, that the response personnel must not have lower coverage than 40G.

Formal employment contracts must be entered into when employing temporary personnel in connection with an oil spill response operation. The start and end of employment must be stated in the employment contract.

The following forms are enclosed as appendices in the folder:

- Employment contract (Appendix I)
- HSE receipt form (Appendix J)

It should be arranged so that (temporary employees) participants in oil spill response operations receive a medical check before and after taking part in the operation.

## 2.12 Appendices

A Example of HSE plan from the "Server" operation

B Safety inspection checklist

C Risk assessment checklist

D NOFO's Job Safety Analysis guidelines (JSA), and also JSA form and checklist,

D1 Risk analysis procedure

E Product safety data sheet for bunkers oil IF 30 – IF 380

E Product safety data sheet for crude oil

F Undesirable incident (RUH) report form

G Example of waste management plan from the "Server" operation

H The Norwegian Labour Inspection Authority's form for reporting occupational accidents

I Employment contract

J Local HSE instructions with receipt form

K Job descriptions – coast and shoreline

Checklist – safety preparations (to be carried out by the Response Team Coordinator, Team Leader)	Status	Comments
Procedures/checklists for the activity are known		Work procedures and checklists reviewed
Trained personnel (HSE, work equipment)		Training in use of equipment, personal protective equipment, HSE routines and instructions
Approved personal protective equipment available and ready for use		
Work method, special conditions for use of additional personal protective equipment (e.g. bark blowing)		Bark – Use of special personal protective equipment
Emergency measures in case of an accident / fire		Boat, local health service, first aid equipment, fire protection equipment
Chemicals approved and labelled, Product safety data sheets read and available		
Inspection of lifting equipment carried out?		Certified and approved
Communication and equipment in place?		VHF/UHF, mobile phone, satellite telephone
Have risk assessments been made?		
Has a JSA been conducted?		
Have personnel received a toolbox talk?		
Is first aid equipment available?		
Should the area(s) be blocked off?		

## What is a risk assessment?

No one must be exposed to unnecessary risk. Personnel safety goes before environmental considerations in every situation.

A risk assessment is a thorough review of what may cause an injury or accident, damage to the environment or to material or equipment, so that it can be assessed whether adequate precautions have been taken or whether more should be done in the way of prevention.

The Working Environment Act requires that all businesses must identify risks in the workplace. The employer is responsible for carrying out this risk assessment.

A risk assessment does not need to be complex. The scope of risk assessment will vary with the size of the workplace and the kind of work carried out.

Three simple questions are the core of the risk assessment:

**What can go wrong?**

**What can we do to prevent this?**

**What can we do to reduce the consequences if this happens?**

In the form we have filled out an example of the risk factors that may be subject to a risk assessment. Use this as a basis for your own risk assessment, but remember that this is not a complete list.

