

Progress made by the United Kingdom in developing a methodology for implementation of new planning and response requirements for HNS.

This paper identifies progress made by the United Kingdom in preparing an outline methodology for planning for and responding to Hazardous and Noxious incidents.

Summary

The current International Convention on Oil Pollution Preparedness Response & Co-operation, 1990 (OPRC) identifies, among other things, planning requirements for ports and harbours handling crude oil and refined petroleum products. The Protocol on Preparedness, Response and Co-operation to pollution incidents by Hazardous and Noxious Substances, 2000 (HNS Protocol) will extend this planning requirement to HNS. The HNS Protocol was formally adopted by States already party to the OPRC Convention at a Diplomatic Conference held at IMO headquarters in London in March 2000.

The United Kingdom is presently considering legislation to achieve the objectives stated in the HNS Protocol 2000. In order to facilitate accession to the Protocol and introducing relevant legislation, the United Kingdom has drafted a methodology for planning for and responding to HNS incidents. The framework identifies three levels of response according to the severity of the incident. The new three levels of HNS response are predominantly marine-based

In the United Kingdom there are currently approximately 200 ports and harbours with comprehensive oil spill contingency plans which have been approved by the Maritime and Coastguard Agency (MCA). This is a statutory requirement under the Statutory Instrument OPRC Regulations 1998.

The current regulations refer to the Oil Spill Contingency Plan Guidelines which emphasise the requirement for ports and harbours to use recognised accredited responders and accredited trainers. The Nautical Institute administer the training requirements and the UK Spill Trade Association administers the responder requirements.

Future arrangements must include the two accreditation schemes.

It will be necessary for the regulatory authority (MCA in the United Kingdom) to identify which ports and harbours will fit the criteria for HNS Protocol compliance and produce guidance for incorporating HNS into current response plans and response procedures.

The methodology has been submitted to the IMO OPRC Working Group and the Marine Pollution Consultative Technical Group, European Maritime Safety Agency (EMSA).

The paper proposes the measures that should be put into place by individual ports and harbours (depending on identified level of risk) and national authorities to provide support and advice as well as formulating and introducing a regulatory regime.

Together with the associated secondary legislation and existing arrangements in place with regards to SMEP plans currently in place on board ships the UK will be in a position to accede to the OPRC-HNS protocol.

Port and Harbour Contingency Planning Requirements for Responding to Hazardous and Noxious Substances (HNS) Spills from Ships

The current Oil Pollution Preparedness Response & Co-operation Convention (OPRC) with associated UK legislation dictates planning requirements for ports and harbours for responding to spills of crude oil and refined petroleum products. Currently there are approximately 200 ports and harbours with comprehensive oil spill contingency plans which have been approved by the MCA.

The OPRC-HNS protocol 2000 and associated UK legislation will extend this planning requirement to include pollution incidents by hazardous and noxious substances. The UK is presently considering legislation to achieve the objectives stated in the IMO OPRC-HNS protocol 2000. The following document outlines a possible approach.

Hazardous and Noxious Substances Response in the UK

A port or harbour which has to be OPRC-HNS compliant must have three levels of HNS Marine Response.

During discussions with UK ports and harbours it has become clear that many already have arrangements in place for dealing with spills of substances other than those covered in the OPRC Convention. The MCA is now undertaking a process of benchmarking best practice with regard to port HNS contingency planning and evaluating which ports will have to be OPRC-HNS compliant.

It also became clear that the United Kingdom's existing OPRC contingency arrangements are operating effectively and are fully understood by the ports and harbours. It was decided that OPRC-HNS contingency arrangements should be formulated to mirror the existing system so far as is practicable.

Tables 1 below indicates the existing UK OPRC response system for oil spillages and table 2 the proposed UK OPRC-HNS response system:

Table 1: OPRC Convention (1990)

| | |
|----------------------------|--|
| OPRC Convention TIER ONE | Small operational spill (local assistance) |
| OPRC Convention TIER TWO | Medium sized spill (regional assistance) |
| OPRC Convention TIER THREE | Large spill (national assistance, NCP) |

Table 2 OPRC-HNS Protocol (2000)

| | |
|-----------------------------|----------------------------------|
| HNS Marine Response Level 1 | Remote advice / Local assistance |
| HNS Marine Response Level 2 | Regional assistance |
| HNS Marine Response Level 3 | National assistance |

The three HNS response criteria which ports and harbours must comply with are detailed as follows;

HNS Marine Response Level 1 – Provision of Remote Advice & Local Assistance

Ports and harbours must ensure that appropriate advice is available for any HNS substance which is carried on ships that operate in their statutory port/harbour area.

The HNS industry including companies, consigners, producers, hauliers, cargo owners, operator's agents or managers must provide safety, health and environmental information and advice on their own products on being contacted by the Ports and Harbours and or Emergency Services at any time of the day or night on every day of the year.

This information must be readily available in clear, recognisable format for example as a Material Safety Data Sheet (MSDS) adequately linked to the marine IMDG codes. In addition this must be in a format that is readily communicated for example in a digital format.

The contingency plan must clearly detail the arrangements to facilitate that provision of remote advice and local assistance.

HNS Marine Response Level 2 - Provision of Regional Assistance

On occasions remote advice and local assistance may have to be supplemented by external practical assistance as required to compliment resources already on scene (including the local emergency services).

Ports and harbours must ensure that appropriate advice and assistance at the scene of an incident is available for any HNS substance which is carried on ships that operate in their port area of jurisdiction.

The HNS companies, consigners, producers, hauliers, cargo owners, operators, agents or managers must undertake to send enhanced resources to the scene to assess the incident's impact and provide detailed advice to the local Emergency Services (who may be already on scene) and ports/harbours.

The HNS companies, consigners, producers, hauliers, cargo owners, operators, agents or managers together with chemical waste disposal specialists should be available to make the situation safe, recover products and equipment and carry out any necessary clean up.

OPRC-HNS compliant ports and harbours must have arrangements in place for the call out and deployment of accredited HNS Marine Response Level 2 responders. Those responders must carry appropriate PPE and response equipment supplemented by the port resources. Deployment would usually be in situations where the vessel is alongside.

The contingency plan must clearly detail the call out arrangements and any contractual arrangements in place for HNS Marine Response Level 2 responders.

Where responder access is impracticable, for example where the incident has occurred away from the berth or at anchor in the statutory port area, it may be deemed necessary to mobilise one of 15 regional fire fighting teams (Marine Incident Response Group – MIRG) in order to stabilise the situation and to render the surrounding environment safe.

Call out of such resources is via the duty counter pollution and salvage officer (CPSO) of the MCA who will consult with Head of Counter Pollution and Response and or the Deputy Director of Operations, MCA. The normal cascade arrangements for notification of SOSREP will remain in place.

HNS Response Level 3 – Provision of National Assistance

On occasions where local and regional resources are overwhelmed by the scale of an incident then the MCA National HNS Response Team can be mobilised to complement resources already on scene (including the MIRG teams).

The primary function of the MCA National HNS Response Team is to assist in stabilising the situation and to render the surrounding environment safe. In addition, if the local and regional resources are unable to recover products and equipment and carry out any necessary clean up then MCA the National HNS team can be deployed for such activities as the MCA deems necessary.

Call out of such resources is via the duty CPSO of the MCA who will consult with appropriate senior officers in the MCA. The normal cascade arrangements for notification of SOSREP will remain in place.

Evaluation of Ports and Harbours

Port and Harbours currently categorised as an OPRC compliant facility will be requested to make a submission (on a predetermined proforma) based on but not limited to the following:

- Overall pollution risk assessment
- Annual turnover of port or harbour
- Vessels (type & size of ships using port or harbour)
- HNS cargoes (type and quantity) – referenced to IMO categorisation
- The nine IMO dangerous goods categories
- Environmental sensitivities

This will determine the requirement or otherwise of the port or harbour having to comply with the OPRC-HNS protocol 2000 and associated UK legislation. Current IMO categories will be used as follows:

IMO Chemical and Dangerous Goods evaluation

This will be achieved by meshing together four main classifications:

1. **IMO XYZ and other substances (MARPOL Annex II)**
2. **The 9 IMO dangerous goods categories (IMDG)**
3. **Bulk dry chemical substances classified as HNS (BC soon to be (IMBC) and**
4. **LPG / LNG cargoes (IGC Code)**

1. IMO XYZ and other substances

Category X

Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a **major** hazard to marine resources, and/or human health and, therefore, justify the prohibition of the discharge into the marine environment and/or atmosphere;

Category Y

Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a **hazard** to marine resources and/or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment;

Category Z

Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a **minor** hazard to marine resources and/or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment; and

Other Substances

Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present **no harm** to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning or deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.

2. The 9 IMO dangerous goods categories (IMDG)

Substances (including mixtures and solutions) and articles subject to the provisions of this Code are assigned to one of the classes 1-9 according to the hazard or the most predominant of the hazards they present. Some of these classes are subdivided into divisions. These classes or divisions are as listed below:

Class 1: Explosives

Division 1.1: substances and articles which have a mass explosion hazard

Division 1.2: substances and articles which have a projection hazard but not a mass explosion hazard

Division 1.3: substances and articles which have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard

Division 1.4: substances and articles which present no significant hazard

Division 1.5: very insensitive substances which have a mass explosion hazard

Division 1.6: extremely insensitive articles which do not have a mass explosion hazard

Class 2: Gases

Class 2.1: flammable gases

Class 2.2: non-flammable, non-toxic gases

Class 2.3: toxic gases

Class 3: Flammable liquids

Class 4: Flammable solids; substances liable to spontaneous combustion; substances which, in contact with water, emit flammable gases

Class 4.1: flammable solids, self-reactive substances and desensitized explosives

Class 4.2: substances liable to spontaneous combustion

Class 4.3: substances which, in contact with water, emit flammable gases

Class 5: Oxidizing substances and organic peroxides

Class 5.1: oxidizing substances

Class 5.2: organic peroxides

Class 6: Toxic and infectious substances

Class 6.1: toxic substances

Class 6.2: infectious substances

Class 7: Radioactive material

Class 8: Corrosive substances

Class 9: Miscellaneous dangerous substances and articles

3. Bulk dry chemical substances (BC Code, soon to be IMBC)

The BC Code provides guidance to Administrations, ship-owners, shippers and masters on the standards to be applied in the safe stowage and shipment of solid bulk cargoes excluding grain, which are dealt with under separate rules. The BC Code includes practical guidance on the procedures to be followed and the appropriate precautions to be taken in the loading, trimming, carriage and discharge of bulk cargoes.

4. Ships Carrying Liquefied Gases in Bulk (IGC Code)

The International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code) applies to gas carriers constructed on or after 1 July 1986.

Gas carriers constructed before that date comply with the requirements of the Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk or the Code for Existing Ships Carrying Liquefied Gases in Bulk.

After the submission of the proforma Port Evaluation Sheet by the current OPRC compliant ports and harbours the ports and harbours will be assigned or otherwise an **OPRC-HNS Port Categorisation** as follows:

OPRC- HNS port categorisation

Category One

Any harbour or HNS handling facility offering berths alongside, on buoys or at anchor, to ships of over 400 GT or chemical tankers of over 150 GT, or

Category Two

Any harbour for which there is a statutory harbour authority having an annual turnover of more than £1 million, or

Category Three

Any harbour or HNS handling facility on which the Secretary of State has served the harbour authority or operator a notice stating that he is of the opinion that it is

located in an area of significant environmental sensitivity, or in an area where a discharge of HNS or other substances could cause significant economic damage.

All ports and harbours assigned an OPRC-HNS Port Categorisation will have to submit a contingency plan to the MCA for approval in either of the following formats:

Port or Harbour Contingency Plan Requirements

- Adaptation of an existing plan (i.e. OPRC-HNS Pollution Emergency plan), or
- A stand alone plan (i.e. HNS Pollution Emergency Plan)

This will form the basis for a port or harbour to be OPRC-HNS compliant.

The existing UK MCA Oil Spill Contingency Plan Guidelines for Ports, Harbours and Oil Handling Facilities will be re written to provide guidance and advice to ports and harbours that must be OPRC-HNS compliant.

Anticipated UK resource pool

HNS Marine Response Level 1- Remote advice (local resources)

- Chemical Emergency Advice Centre
- Chemical manufacturer
- Chemical supplier
- Chemical shipper
- Chemical receiver
- Fire & Rescue Service (FRS)

HNS Marine Response Level 2 - On scene advice (local/regional assistance)

All of the above plus:

- Recognised / Accredited Level 2 response contractor
- Maritime Incident Response Group (MIRG)

HNS Marine Response Level 3 - On scene national assistance

All of the above plus:

- MCA National HNS Response Team

In support of the response arrangements ports and harbours will have to demonstrate to having undertaken a minimum level of **Accredited Training**.

Accredited Training Requirements for Ports and Harbours

The existing UK qualifications and IMO equivalents are as follows:

| | |
|-----------------|--------------------|
| UK course types | 3/3p (IMO Level 1) |
| UK course types | 4/4p (IMO Level 2) |
| UK course types | 5/5p (IMO Level 2) |

There will be a requirement for an **HNS Endorsement** of any Port or Harbour Authorities existing accredited training levels. This may be in the form of a one or two day HNS module or a fully inclusive 'pollution' training course may be developed covering the response to incidents involving crude oil, refined petroleum products *and* HNS.

There will be a grace period for ports and harbours who have to be OPRC-HNS compliant which enable them to consider an HNS Endorsement or a fully inclusive 'pollution' training course. This decision may be made on the basis of current training status and the due expiry date.

UK MCA is in discussion with the Nautical Institute who accredit trainers on behalf of the MCA, UK Government, with the intention to accredit these new HNS Endorsement and fully inclusive 'pollution' training courses.

Ports and harbours will also have to use **Accredited Responders**.

Accredited Responders for HNS Marine Response Level 2

The current system for the accreditation of responders is managed and coordinated by the trade organisation UK Spill. Discussions are underway with UK Spill and the Chemical Industry as to whether the existing accreditation arrangements can be expanded to include HNS.

There may be other viable, as yet unidentified options available which may help to ensure consistency.

OPRC-HNS compliant port or harbours will also have to **exercise their response arrangements**.

Port and Harbour exercises

The criteria for the port and harbour exercises will not be doubled with the introduction of the OPRC-NHS protocol. The existing exercise criteria will be reworded to allow ports and harbours to have a crude oil & refined petroleum products scenario, HNS scenario or combined scenario. This will be monitored through existing audit arrangements to ensure that appropriate exercises are

planned for and conducted according to the assessed risk of the individual port or harbour operations.

| Exercise Type | Frequency |
|---|--------------------|
| Notification exercise | Twice per year |
| Table-top Exercise <i>(may incorporate mobilisation and deployment of local response equipment)</i> | Once per year |
| Incident Management Exercise <i>(will incorporate mobilisation and deployment of resources up to Tier 2 level)</i> | Once every 3 years |

In Summary

The UK remains committed to acceding to the OPRC HNS protocol as soon as possible when the appropriate measure and procedures are in place. This will include the accreditation schemes for responders and trainers, secondary legislation and comprehensive guidelines for ports and harbours to submit adequate plans.

Toby Stone
Counter Pollution Branch
Maritime and Coastguard Agency
United Kingdom
March 2009