

HSE

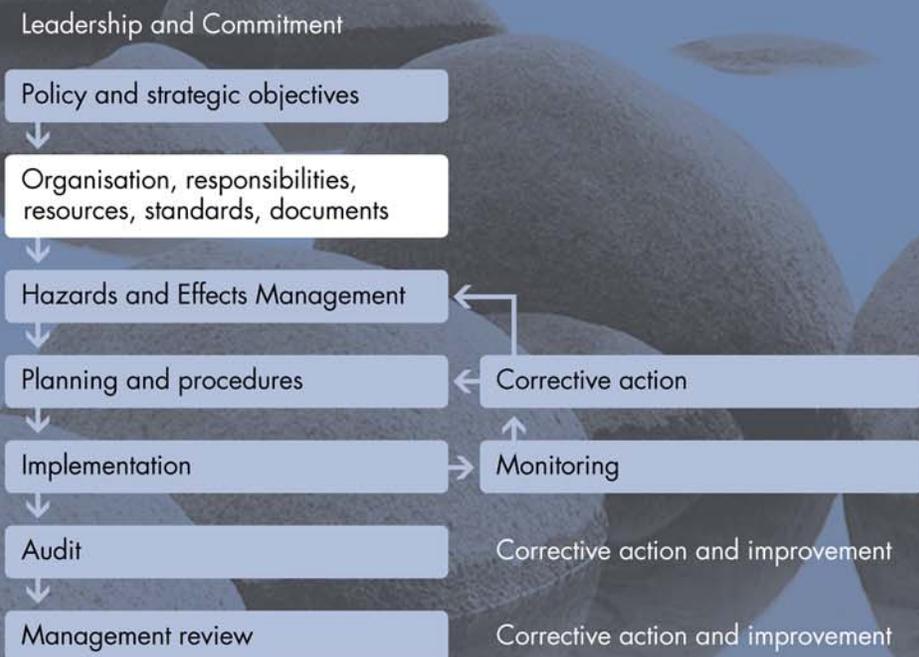
HEALTH, SAFETY AND ENVIRONMENT

PROTECTING PEOPLE, PROTECTING OUR PLANET



Standard – Mandatory

GLOBAL ENVIRONMENTAL STANDARDS (GES)



Global Environmental Standards

The purpose of Group Global Environmental Standards is to form a baseline for continuous improvement as required by the Group HSE Commitment and Policy.

In addressing the Group's requirements with respect to environmental protection, reference should also be made to the Group Biodiversity Standard and related commitments on protected areas.

Business Executive Directors are responsible for implementation of these standards. Compliance is reported annually through the Business Assurance Letter and tested by HSE management system (HSE-MS) audits.

Ships that are owned, operated or managed by Shell companies shall comply with international regulations (MARPOL).

1. Greenhouse gases

All major installations* shall manage GHG emissions, taking into account the carbon value, to maximise the business opportunities by:

- Implementing 5-year greenhouse gas (GHG) management plans which capture the inherent value of GHG emission reduction opportunities within the installation according to the relevant market.
- Quantifying GHG emissions at a frequency suitable for the relevant legal framework, but reporting at least annually.
- Forecasting GHG emissions 10 years ahead at least annually.

2. External certification of the environmental component of HSE management systems against a recognized, independent system standard

The environmental component of the HSE-MS of all major installations having significant environmental risks shall be certified against a recognised, independent system standard.

All ships that are owned, operated or managed by Shell companies shall be accredited under the Management Code for the Safe Operation of Ships and for Pollution Prevention ("ISM Code").

3. Impact Assessment, engagement and public disclosure

The management of all major new activities and installation developments or significant modifications shall recognize the consequences of the development, whereby:

- Impact Assessments (IA) shall be conducted covering environmental, social and health aspects and shall be based on internationally accepted standards (e.g. World Bank Policy).

* Major installations include Shell operated crude oil and natural gas terminals, gas plants, major offshore platforms, major flow stations, floating production and storage vessels, refineries and chemical manufacturing facilities.

- The management of identified environmental, social and health aspects shall comply with the appropriate Shell Group and Business standards.
- Stakeholder engagement shall be an integral part of any IA.
- Information on IA shall be disseminated in ways that are appropriate for the various stakeholder groups.

4. CFCs and Halons

Use and inventories of Halons and hard CFCs⁷ shall be eliminated in all operations by 2010 in accordance with the Montreal Protocol.

New installations shall not be fitted with CFCs or Halons or related substances listed to be banned under the Montreal Protocol within 10 years.

5. Continuous flaring and venting (EP)

New installations shall be designed not to flare or vent hydrocarbons continuously for disposal.

For existing installations, disposal by continuous venting is not allowed and disposal by continuous flaring shall be eliminated by 01.01.2008. Derogations shall only be permitted when endorsed by qualified professionals and approved by the Head of HSE in EP and by the Group Vice President HSE.

Since it is recognised that the exceptionally challenging environment in Nigeria will prevent installations in that country from meeting the general target date of 01.01.08, such installations shall implement this paragraph as quickly as reasonably possible.

6. SO_x and NO_x

The standards for SO_x and NO_x annual emissions at major installations outside the Organisation for Economic Cooperation and Development (OECD) shall fall within the ranges of those applicable at major installations within the OECD.

SO_x and NO_x emissions in new major installations shall meet the World Bank Onshore Standards.

7. Water

Produced water and all process effluents shall only be discharged to a receiving aquatic environment with which it is physically and chemically compatible, whilst:

- All process effluent shall, if necessary, be subjected to waste water treatment to meet local regulations or, if there are no local regulations, to comply with relevant Shell guidance. For new major installations World Bank Standards shall be met in addition to complying with local requirements or (in the absence of local regulations) Shell guidance.

⁷ CFCs are here defined as those substances listed in Annexe A, Group I, and Annexe B, Group I of the Montreal Protocol. Halons are those substances listed in Annexe A, Group II of the same.

- In the open sea the monthly average oil content of produced water shall not exceed a level of 30 mg/l in line with existing Gulf of Mexico and North Sea standards.
- Within the coastal zone^φ the monthly average oil content of produced water discharged to sea shall not exceed 15 mg/l oil in water.
- The standard for “oil in effluent water” annual discharges at refineries and chemical manufacturing installations outside the OECD shall fall within the range of those applicable at such installations within the OECD. For new refineries and chemical manufacturing installations, World Bank Standards shall be met in addition to local regulations or (in the absence of local regulations) Shell standards.

8. Drilling fluids

Oil-based muds (OBMs) and cuttings shall not be discharged to surface waters. OBMs may be used provided that self-contained systems are in place to return the oily wastes to shore for recycling or disposal.

The discharge of Synthetic Based Mud (SBM) to sea is not allowed and rigs shall be equipped to contain mud losses. SBM cuttings can only be discharged if it can be demonstrated either in laboratory tests or under comparable field conditions that they fulfil toxicity and biodegradability criteria as stipulated in the EPA 2001 Guidelines for the Gulf of Mexico.

9. Soil and groundwater monitoring/remediation

All onshore major installations shall have been assessed for soil and groundwater contamination. Where soil and/or groundwater contamination has been detected, risk-based mitigation measures shall be demonstrably in place for any necessary control and/or remediation, including control mechanisms to minimise the risk of migration of contaminants off-site.

10. Energy use and efficiency

Energy use and energy efficiency shall be actively monitored at all major installations and 5-year Energy Management Plans shall be in place that describe the continuous improvement process to maximise the efficiency of energy use and throughput.

A demonstration of how energy efficiency considerations have been included in the design of the project shall be made for new and modified major installations.

^φ The coastal zone is defined as the sea area extending 5 km from the shoreline unless specified otherwise in legislation, licence or contractual arrangements.

11. Waste

Management and control systems shall be in place in all major installations to minimise waste. Hazardous and non hazardous wastes shall be identified, segregated, appropriately stored and managed including:

- All waste shall be disposed of by using, where appropriate, government approved disposal sites, methods and contractors.
- Hazardous waste shall be disposed of ensuring segregation from other waste is maintained and disposal sites shall meet the appropriate World Bank Standards.
- Land farming shall only be done after consideration of the risks of potential leaching of hazardous compounds and build up of metals, and appropriate mitigation measures are in place to manage the risks.
- All trans-national movements of wastes shall conform to the requirements of the Basel Convention.

12. Product stewardship and product safety data sheets

All new (manufactured or purchased) products shall be assessed considering environmental, health and safety risks. Any necessary emergency response plans and other controls required to manage those risks shall be implemented.

A full Material Safety Data Sheet (MSDS), in appropriate languages, shall be available for all marketed chemical and oil products. MSDSs shall provide, amongst other things, guidance on safe product handling and disposal and shall, unless local legislation or codes of practice dictate otherwise, use the ISO format and be based on EU, US or comparable norms.

An MSDS shall be available on site for potentially hazardous substances in use and accessible to staff.

13. Spill response preparedness

Plans shall be in place to deal with spills arising from the activities of a Company/Business Unit/site. These plans shall: i) link to a national oil and chemical spill response plan, which includes interfaces with the relevant local authorities and ii) comply with the Group MOSAG 'Guidelines for Shell Companies on Preparedness, Response and Compensation for Oil and Chemical Spills'.

CAUTIONARY NOTE

These standards are intended to direct Shell staff and employees in the performance of their duties. They are not intended for investors, and should not be relied on when considering whether to buy, retain or sell shares in any Shell company.