



SAFETY PLAN

**APPLICATION FOR APPROVAL
OF THE DEVELOPMENT PLAN FOR
NIGLINTGAK FIELD
PROJECT DESCRIPTION**

INTRODUCTION

11.1.1 HSE MANAGEMENT SYSTEM

Shell’s Health, Safety and Environment (HSE) management system (see Figure 11-1) provides the framework for managing all aspects of the development.

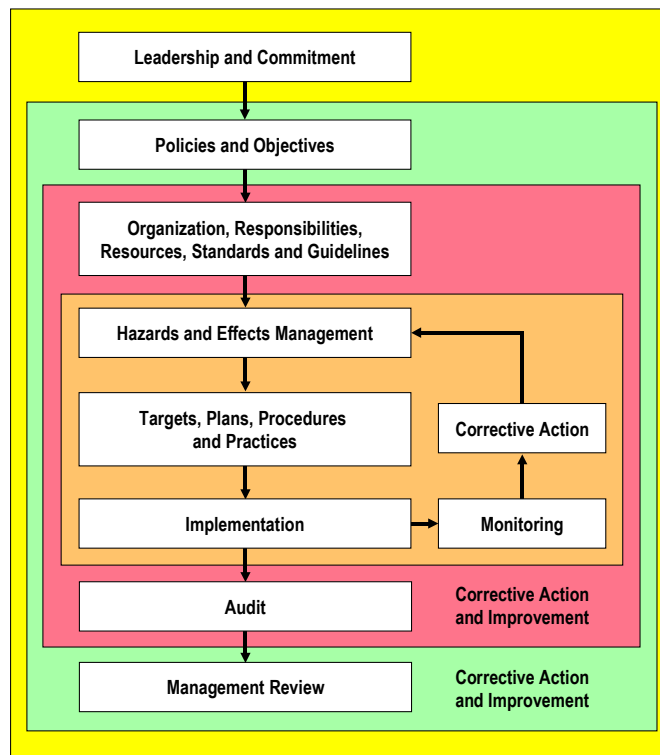


Figure 11-1: HSE Management System Framework

The management system is a systematic approach, which is designed to:

- ensure compliance with the law
- demonstrate that all hazards are adequately managed
- achieve continuous improvement in HSE performance

11.1.1 HSE MANAGEMENT SYSTEM (cont'd)

This framework facilitates the structured management of HSE hazards and effects associated with the business, and ensures that mitigative methods are in place for properly controlling the hazards.

11.1.2 ISO BASIS

The management system is structured around the ISO standard framework of:

- plan
- do
- check
- provide feedback



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PROJECT DESCRIPTION****HSE PLAN FOR NIGLINTGAK****11.2.1 SCOPE**

An HSE plan for the life of the Niglintgak field will be developed as the development progresses. The plan will include all activities that are within the context of the HSE management system.

11.2.2 LEADERSHIP AND COMMITMENT

Shell believes that strong and visible management leadership is critical for promoting a culture conducive to reducing risks. Shell requires that senior management provide a leading role towards constant HSE improvement through:

- visible leadership
- communicating the importance of HSE considerations in all business decisions
- communications with stakeholders

Management is expected to foster the active involvement of employees and contractors in improving HSE performance by encouraging a positive HSE culture through the following key beliefs in safety:

- The health and safety of people has first priority in achieving Shell's excellence goals.
- All injuries and occupational illnesses can be prevented.
- Top management must be committed to safety excellence through visible personal involvement.
- Safety is an integral part of every job and every employee has a responsibility for safety.

Shell conducts annual employee surveys, and requests feedback on the company's ability to provide a safe and healthy workplace.

11.2.2 LEADERSHIP AND COMMITMENT (cont'd)

A solidly implemented HSE management system is an essential foundation for HSE performance. Continuous improvement will only be achieved when management fosters a culture in which business is conducted safely.

11.2.3 POLICIES AND OBJECTIVES

11.2.3.1 Policies

Management uses policies to communicate its intentions and expectations to employees, contractors and stakeholders. Policies and commitments to the policies are mandatory for all Shell business. Examples of policies that will be used for the Niglintgak field include Shell's:

- Business Principles and Code of Ethics
- Commitment to Sustainable Development and HSE Policy
- Drug and Alcohol Policy
- Corporate Security Policy
- Respectful Workplace Policy

Within Shell, these policies are reviewed annually as part of the formal HSE management review.

11.2.3.2 Objectives

Shell establishes and maintains documented HSE objectives to reflect the company's short and long-term aspirations. These objectives provide direction for setting targets and are articulated each year in the annual sustainable development report. HSE objectives that will be used for the Niglintgak field include:

- obtaining ISO 14001 registration for all major operating facilities
- protecting soil and groundwater through programs to reduce the potential for spills or leaks
- demonstrating the capability of responding effectively to all emergencies
- avoiding adverse HSE impacts on communities through careful management

11.2.4 PLAN ADMINISTRATION

11.2.4.1 Organization and Resources

The organization and associated resources will be developed to align with the requirements for each stage of the development. Any change to resource levels will be managed as part of the required change control procedure.

11.2.4.2 Responsibilities and Competency

Within the Niglintgak field organization, all HSE responsibilities will be clearly indicated and all personnel will have adequate training to fulfill their responsibilities. HSE will be a project and operations organizational responsibility, with corporate HSE professionals providing support and advice.

HSE competency for all workers will be developed through a structured process that covers a broad range of requirements. The project will use many of Shell's existing management and assurance processes that have been developed for similar assets, and worker competencies will be periodically reviewed to identify gaps. Shell's Operations Training System will be the foundation for training and managing competency during the Operations Phase.

11.2.4.3 Contractor Management

One key to Shell's success in HSE management is the performance of contractors, suppliers and others who work on the development and support the operations. Shell uses a contractor HSE management system to ensure a high quality of HSE qualification, selection and management. The key steps of the process are:

- qualification
- selection
- pre-job activities
- work management
- post-job evaluation
- systems review

As part of the qualification step, Shell reviews each contractor's HSE-management system to ensure that it aligns with Shell's HSE management system. Expectations for, and clarity on, roles and responsibilities are critical to achieving an incident-free workplace. Shell will work with local contractors to enhance their HSE management systems to enable them to meet Shell's HSE performance requirements and expectations.

11.2.4.4 Standards

Shell's HSE management system requires that a number of standards be followed in implementing the plans. For the Niglintgak field, these standards include:

- incident management
- emergency preparedness
- journey management
- task analysis
- risk management
- HSE safeguarding
- system integrity

11.2.4.5 Document Control

Shell's HSE management system requires that document management and control be followed in implementing the plans. The critical documents for the Niglintgak field will be the HSE cases and performance data. The HSE plan will address how to update the HSE cases' hazards and effects information as a result of:

- specified review cycles
- job hazard analysis
- emergency drills
- inspections
- incident analysis
- a change in control or procedure
- proactive safety measures

11.2.5 HAZARD AND EFFECTS MANAGEMENT

The HSE management system centres on identifying and managing all HSE hazards. The risk assessment process requires:

- the systematic identification of hazards
- an assessment of the associated risks
- an explicit determination of the controls necessary to manage those hazards and reduce the risks

Shell's hazard and effects management process (see Figure 11-2) is composed of the following steps:

1. Systematically identify hazards, threats and their effects.
2. Assess the risks against specified screening criteria and ensure that it is as low as reasonably practicable (ALARP).
3. Record the significant hazards and effects in a risk register.
4. Implement suitable measures to reduce and control risks.
5. Plan for recovery if control is lost.

For the Niglintgak field, some of hazards that will be encountered are:

- extreme temperatures
- long periods of darkness
- travel, including by helicopter, boat and road
- high-pressure hydrocarbons

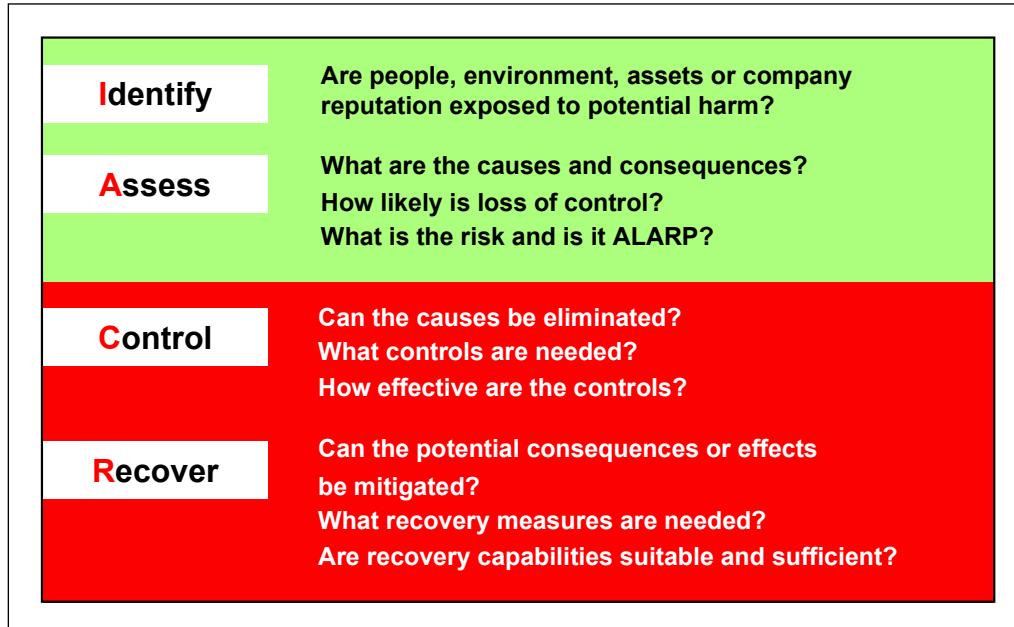


Figure 11-2: Hazard and Effects Management Process

Assessing the risks associated with these hazards:

- is fundamental to the management system
- will be addressed throughout the HSE plan
- will continue throughout the life of the project

Shell uses different risk tools, depending on the phase of the project and the information available. The emphasis in applying these tools is on adopting, where practicable, an inherently safe and minimal environmental impact approach. Some typical assessment tools that Shell will apply to the Niglintgak field are:

- HSE&SD assessments
- hazard identification (HAZID)
- environmental impact assessment (EIA)
- socio-economic impact assessment (SEIA)
- safeguarding analysis and review
- hazard and operability review (HAZOP)
- HSE cases

For any hazards assessed as significant, a detailed analysis of the risk will be undertaken. This will include identifying and assessing the controls necessary to reduce the risk to a level that is tolerable and ALARP.

The final step of managing hazards and effects is identifying and implementing any recovery measures required if a control does not function as planned. Although the focus is to implement necessary controls to adequately reduce the

11.2.5 HAZARD AND EFFECTS MANAGEMENT (cont'd)

risk, contingency planning for recovery measures is a critical step in the management system.

A key deliverable of the HSE plan is the HSE case. The HSE case demonstrates that:

- there is an effective HSE management system in place
- the hazards and effects have been fully identified and are properly managed
- the asset has been designed and is being operated to meet specific health, safety and environmental standards
- the methods used to control hazards and manage the risks have been systematically identified, and appropriate knowledge, experience, controls and verification processes have been applied
- the identified controls and recovery methods are continually assessed and improved by a systematic program of performance monitoring, auditing and reviewing
- there is documentary evidence of all previous points

Figure 11-3 provides an example framework for an HSE case.

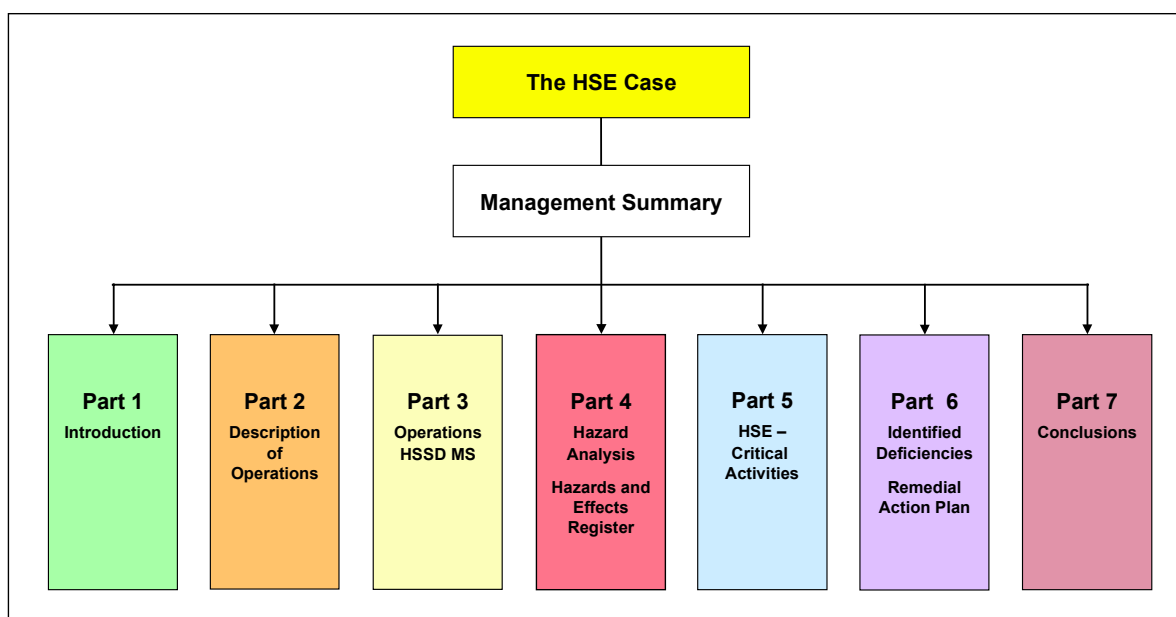


Figure 11-3: HSE Case Structure

For the Niglintgak field development, Shell is committed to providing HSE cases for the following key risk activity areas:

- drilling
- construction
- operations

Drilling and construction HSE cases will be completed before field execution activities, which are currently planned for 2006. The operations HSE case will be developed on an ongoing basis throughout the design and construction activities and completed before initial operations, currently planned for 2009.

11.2.6 PLANS AND PROCEDURES

11.2.6.1 Purpose

As a part of the controls and recovery measures identified during the hazards and effects management process, specific plans and procedures will be developed.

These plans and procedures include process-related and management-related activities to address such items as:

- organization, roles and responsibilities
- communication requirements
- competence and training
- asset integrity
- change management
- engineering controls

They will also include task-related activities to address such items as:

- adequacy of personnel resources to do the work
- adequacy of equipment, tools and services for the work
- adequacy of time available to perform the work safely
- specific procedures and methodologies for performing the work safely

Many task level control requirements will be identified during the hazard assessments. The controls will be developed using knowledge and experience that Shell has developed for similar applications, and the best practices of the proven procedures used for other assets.

11.2.6.2 Contingency and Emergency Planning

Emergency response plans and procedures will be developed as part of the recovery step. Shell has a fully functioning system in place, for all its assets, that uses the following guiding principles to ensure effective emergency management:

- Create awareness of emergency situations, including the following details, and how they could arise from operations:
 - what hazards exist

11.2.6.2 Contingency and Emergency Planning (cont'd)

- what consequences can be expected
- what level of response might be required
- how operations can be returned safely to normal as soon as possible
- Develop an organization of teams and individuals that have clearly defined responsibilities for implementing an emergency response.
- Develop and define procedures that will deliver an effective and appropriate level of response, including mobilization and contingency plans for specific response situations.
- Conduct training, practice and review activities.

The emergency response plan for Niglintgak will include the following:

- organization, responsibilities, authorities and procedures for emergency response and disaster control, including maintaining internal and external communications
- systems and procedures for preventing, reducing and monitoring environmental effects of emergency actions
- procedures for communicating with authorities, communities, relatives and other affected parties
- systems and procedures for mobilizing third-party resources for emergency support
- arrangements for training response teams and for testing emergency systems and procedures through developed scenarios and drills

The specific emergency response plans for Niglintgak will consider all emergency situations, including:

- fire and explosion
- failure of key controls, such as loss of well control
- structural failures
- work-site injuries
- aviation incidents
- person overboard
- spills and loss of containment
- security breaches
- floods

Incorporated in the Niglintgak design will be emergency response measures and equipment, such as:

- emergency shutdown systems

- fire-fighting devices
- spill clean-up systems and services
- specialist medical treatment available for remote locations
- emergency evacuation procedures
- rescue craft
- first aid equipment, and trained personnel available

11.2.6.3 Security Planning

For construction and operations, Niglntgak will implement a site security system that conforms to Shell's corporate security policy and procedures. This system will include the security of people and physical and intellectual property, and will be part of the site construction and operations procedures.

Once the facilities are operational, they will be equipped with a security and surveillance system, and with appropriate remote monitoring and alarm capabilities.

11.2.7 MONITORING AND PERFORMANCE REPORTING

11.2.7.1 Monitoring

Shell will develop and maintain procedures for monitoring relevant aspects of HSE performance and for establishing and maintaining records of the performance results. Monitoring includes:

- active monitoring, which includes:
 - information in the absence of any incident
 - progress against plans
 - reviewing the effectiveness of the HSE management system
 - proactive safety measures
 - job observation
- reactive monitoring, which provides information on incidents, including near miss incidents, and insights for future prevention

The monitoring aspects of the Niglntgak HSE plan include:

- regularly monitoring progress towards objectives and targets
- regularly inspecting, according to specific performance criteria, the facilities, plant and equipment
- regularly analyzing discharges, emissions and waste disposal
- systematically observing the work practices and behaviours of workers to assess compliance with procedures and instructions

11.2.7.1 Monitoring (cont'd)

- monitoring the health and medical condition of workers
- monitoring HSE critical activities and processes in alignment with the HSE cases

11.2.7.2 Incident Reporting and Investigation

Niglintgak will maintain an incident database on HSE performance in alignment with Shell standards. The project will contribute to and use a database that will share relevant information from Shell and industry incidents to help avoid recurrences. All workers will be required to follow incident reporting standards and procedures. All HSE incidents and near misses with significant actual or potential consequences will be thoroughly investigated and reported. Any unsafe conditions or unsafe practices that are identified will be immediately stopped until corrected.

The immediate circumstances of the incident and the underlying management system's failures that caused, or contributed to, the incident will be identified in the incident investigation. The procedures for incident investigation are well developed within Shell. All incidents and high-potential-consequence near misses require an appropriate investigation and report to:

- ensure that the full requirements for investigating and reporting are met
- establish the root cause, and identify the required actions to reduce the chance of recurrence
- enable the action plan to be monitored to ensure that it is completed promptly
- provide a factual record of the incident and the recommended actions
- ensure that key findings are shared to prevent recurrence

11.2.8 AUDIT, MANAGEMENT REVIEW AND CORRECTIVE ACTION

Corrective action and improvement are critical components in verifying that the management system is working and identifying areas for improvement. The HSE plan will schedule formal audits, regular monitoring and measurement, and structured management reviews to ensure the continuing suitability, adequacy and effectiveness of the management system. These reviews and audits will incorporate any HSE concerns of employees, contractors and external stakeholders.

Niglintgak will be scheduled in the regular internal HSE audit cycle for Shell, as these audits are valuable in providing input on key areas for improvement, leading to progressively better HSE management. A protocol exists within Shell for documenting audit results and remedial action plans that will be followed for Niglintgak.

As with all Shell operations, Niglntgak will have the environmental management system component of the HSE management system registered under ISO 14001. External auditors will verify compliance with the ISO 14001 requirements for environmental management systems. In addition, external auditors will periodically verify HSE data.

