

# **Molecular Energies PLC**

# Health, Safety and Environmental (HSE) Policy

Molecular Energies PLC ("Molecular Energies" or "the Company") is committed to maintaining high standards of health, safety and environmental performance across all its oil and gas exploration operations plus its green and alternative energy sub-sectors. Our aim is to create a sustainable business which is of benefit to all the Company's Stakeholders (including shareholders, host governments, partners, employees, contractors, suppliers and the communities where we work) and hence we are committed to the goals of:

- Avoiding harm to all personnel involved in, or affected by, our operations
- · Minimising the impact of our operations on the environment
- Complying with all the applicable legal and other requirements where we operate
- Having a positive impact on people or communities directly affected by our activities and
- Achieving continual improvement in our HSE performance.

To achieve the above-mentioned goals, Molecular Energies will:

- Ensure there is strong leadership and clearly defined responsibilities and accountabilities for HSE at all levels of the organisation
- Ensure that the necessary resources are made available for effective HSE management
- Implement an HSE Management System that provides guidance on objectives and performance standards to which the Company aspires
- Identify, assess and manage HSE risks to people, the environment and assets as an integral part of the business
- Select competent staff, contractors and suppliers to manage and support the business
- Invest in HSE training to ensure individuals can perform their work safely and with due regard for the environment
- Maintain procedures which will allow an effective response in the event of an emergency
- Continually evaluate and seek to improve our HSE performance through regular reporting, audits, reviews and external benchmarking.



high HSE standards and this Policy will be used to guide their activities.

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**Chief Executive** 



# **Molecular Energies PLC**

# Corporate Health, Safety, Environmental Management System

**Framework Document** 

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#### 1. Policies and Framework

#### 1.1 Purpose

This document describes the Corporate Health, Safety and Environmental (HSE) Management System of Molecular Energies PLC (Molecular Energies). It outlines the HSE Policies and the framework for managing HSE within the business.

### 1.2 Scope

Molecular Energies is an oil and gas exploration development and production company with interests in three countries with its registered Head Office in London. All of the following interests operate within the scope of this HSE Management System.

#### **Paraguay**

Molecular Energies exploration and exploitation contracts in the Pirity and Hernandarias concessions.

#### **Argentina**

Molecular Energies holds the following working interests;

- 100% working interest in the Puesto Guardian Concession in Salta Province,
   Argentina.
- 90% working interest (EDHIPSA 10%) in the Puesto Flores, Estancia Vieja, Las
   Bases and Puesto Prado Concessions in Rio Negro
- 100% working interest in the Angostura field, Rio Negro

#### **USA**

Molecular Energies has interests in two producing oil and gas wells in Louisiana, as operator of the East Lake Verret.

#### 2. Structure

The system structure is illustrated in figure 1 below. HSE Polices sit at the top setting the strategic goals and commitments of the Company. The HSE Management System Framework (this document) provides guidance on the implementation of policy requirements across the Company. Beneath this sit local HSE Manuals and Operational Procedures, which provide the specifics of how things should be done within each operation. In most cases, these local HSE Manuals and Operational Procedures would be contractor documents, which may be augmented or replaced by Molecular Energies documentation if required. At the base are the Emergency Procedures, for managing any emergencies which may arise, these are operating company specific

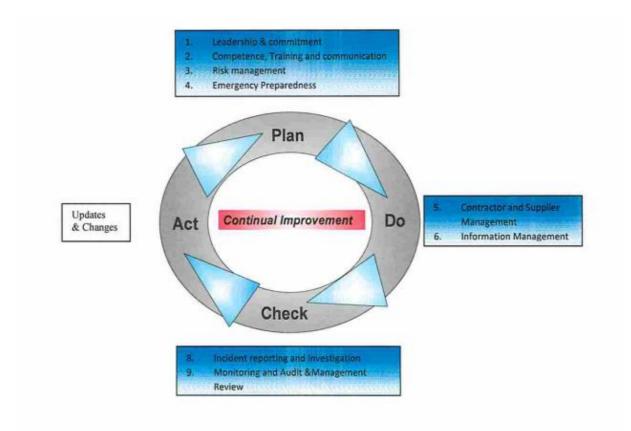
linking back to the Company at corporate level.



Figure 1.1 HSE Management System Structure

# 3. Process and System Elements

The HSE Management System is consistent with existing international models for health, safety and environmental management (e.g. ISO14001 and OHSAS 18001). The system is structured around the Plan, Do, Check, Act process to encourage systematic application of continual improvement. The diagram below illustrates the cyclical nature of the process. The Management System comprises a set of elements (highlighted on the diagram below) and expectations relevant throughout the business lifecycle which facilitate effective HSE management and continual improvement.



## 3.1 Summary of Requirements

#### **POLICIES**

The system is underpinned by a HSE Policy which sets out the Company's commitment to high HSE standards. HSE objectives consistent with the Policy shall be established annually.

#### **PLAN**

The Company shall allow for sufficient resources to be provided in order to implement the HSE Management system. Roles and responsibilities shall be clearly defined and communicated. Commitment to HSE shall be visibly demonstrated by all levels of management. Personnel shall be selected with the appropriate qualifications, experience and skills to meet their responsibilities. Potential hazards and risk associated with planned activities shall be identified and appropriate control measures established and implemented. Effective emergency response plans shall be developed.

#### DO

Facilities and equipment at Company locations shall be constructed, operated and maintained in a manner that assures their integrity. Competent contractors and suppliers shall be selected and managed to undertake specialist tasks. Critical HSE information shall be managed and maintained through controlled processes.

#### **CHECK**

Routine monitoring and inspections shall be undertaken to assess and where necessary improve performance. Procedures for reporting and investigating incidents and non-compliances shall be established. Periodic audits shall be conducted to enable the effective functioning and continued suitability of the management system.

#### ACT

Performance shall be reviewed annually by management and areas for improvement identified and implemented.

# 4. Elements and Expectations

#### Element 1 - Leadership and Commitment

The HSE Management System and Policies will be adopted and implemented throughout the organisation. Expectations and responsibilities will be clearly defined, communicated and visibility demonstrated by leaders, manager and supervisors. Management will set HSE objectives at relevant levels of the organisation.

#### **HSE Expectations:**

1.1 Management commitment to high HSE standards is documented in the Molecular Energies HSE Policies. These policies shall be signed and dated

- by the Chief Executive and communicated to staff, contractors and stakeholders. The policies shall be periodically reviewed and updated.
- 1.2 Measurable HSE objectives, consistent with the HSE Policies, shall be developed, documented and integrated into the Company's business objectives; these are documented within the Annual Management Review.
- 1.3 Country level objectives are established in accordance with local HSE Management Systems and provided to Corporate Management.
- 1.4 Managers at all levels shall ensure that sufficient human, financial and material resources are provided in their area of responsibility to ensure the HSE Policies and Management System is effectively implemented, maintained and improved.
- 1.5 HSE roles, responsibilities and accountabilities for each staff position shall be defined, communicated and documented. Personnel will be briefed on HSE risks associated with their work activities and any specific HSE responsibilities via induction programmes and ongoing training.
- 1.6 Managers at all levels shall provide visible and active leadership to the organisation promoting a positive HSE culture.
- 1.7 In projects wherein Molecular Energies has involvement, but not as the Operator, Molecular Energies will comply with the Operator's Policy and HSE Management System as appropriate. Molecular Energies will monitor the HSE performance of its non-operated assets.

#### **Responsibilities:**

#### The Chief Executive is responsible for:

- Implementation of the Management System and HSE performance
- Communicating to all employees and contractors that good HSE performance is one of the highest priorities of the Company.
- Approving HSE objectives for the organisation and for allocating adequate resources to achieve required performance.

#### Country/Line Managers are accountable and responsible for:

- Instilling an understanding in employees and contractors that good HSE performance is critical to the success of their business, and personally setting the standards that must be achieved.
- Establishing annual HSE objectives for the local facilities and operations.
- Communicating Molecular Energies HSE objectives to those working for them and facilitating an understanding of individual responsibility associated with these objectives

#### Element 2 - Competence, Training and Communication

All personnel shall have the relevant HSE awareness and will be competent to conduct assigned activities. Training is provided to maintain personnel skills and competencies. Competencies will be regularly assessed.

#### **HSE Expectations:**

- 2.1 Employees shall be selected on the basis that they are medically fit and have the qualifications, experience and/or training to perform the roles and responsibilities they have been assigned.
- 2.2 Inductions shall be conducted for all personnel (including employees, contractors and visitors), covering HSE Management Systems, polices, objectives, hazards, risks and controls.
- 2.3 HSE competencies required for each position will be defined, documented and periodically reviewed. Competence assessments and, where appropriate, training programmes and shall be established for HSE critical positions.
- 2.4 A formal review of training needs shall be conducted as part of the appraisal process, or if the job description changes with training undertaken as necessary.
- 2.5 Personnel shall be provided with information on HSE hazards and risks, their controls and applicable HSE regulatory requirements.
- 2.6 Personnel shall be consulted on HSE matters. The results of consultations will be considered during decision making.
- 2.7 Effective workplace communication shall be maintained between personnel via management meetings, staff meetings, worksite pre-job discussions, HSE alerts and hazard reporting.
- 2.8 The decision to communicate with external stakeholders shall be assessed on a case-by-case basis and approved by management prior to release.
- 2.9 HSE meetings will be held regularly during operations, to review HSE performance. Action lists will be produced and updated prior to each following meeting.

#### **Responsibilities:**

#### Country/Line Managers are accountable and responsible for:

- Employing personnel that are as close as possible to the desired competencies listed for each position;
- Enabling workplace HSE communication and authorising external HSE communication; and
- Facilitating time and resource for appropriate training.

#### Line Managers are responsible for

- Personnel competence assessment and identifying training needs.
- Ensuring that training is recorded and competencies demonstrated are maintained; and.
- Workplace HSE communication.

#### All personnel are responsible for

- Notifying their Supervisor/Line Manager when they are requested to do a task they do not have the appropriate skill or training to complete.
- · Attending training as assigned.

#### Element 3 - Risk Management

HSE hazards and risks associated with Molecular Energies activities, processes, products and services shall be identified, assessed and prioritised with steps taken to eliminate or minimise harm.

#### **HSE Expectations:**

- 3.1 Hazards and risks associated with operational activities, processes, facilities, plant and/or equipment, with the potential to adversely impact operational and HSE performance, security or result in loss of business opportunities, shall be identified, evaluated and controlled to levels that are as low as is reasonably practicable.
  - Risks shall be managed in order of: prevention, detection, control and mitigation.
  - A record of HSE aspects, impact, risks and management control measures shall be maintained in a Risk Register.
  - The Risk Register will be reviewed periodically to monitor the effectiveness of risk management.
  - Significant risks shall be communicated to the workforce (including contractors) and where appropriate local communities and other stakeholders. Safe systems of work such as 'Permit to Work' shall be implemented where the risks warrant additional controls.
- 3.2 The results of hazard and risk assessments shall be reported on an ongoing basis and considered in the preparation of crisis and emergency plans.
- 3.3 Regulatory and other applicable requirements shall be periodically reviewed to ensure that requirements are identified and communicated, and plans developed for compliance. A register of applicable HSE regulatory and other requirements shall be maintained at a country level.
- 3.4 A system for managing change will be implemented in the organisation to evaluate temporary and permanent changes to

personnel, systems, equipment, products and materials to ensure that HSE risks are managed throughout these processes.

#### **Responsibilities:**

#### The Operations Director is responsible for

 Enabling a system to be established for managing HSE risks and ensuring a template for a Risk Register is available for use in the operating companies.

#### Country/Line Managers are responsible for

- Identifying and recording risks associated with hazards in their operations and implementing appropriate, controls where appropriate.
- Facilitating appropriate management of change and regular reviews of hazards and risks (in accordance with the risk register) for all operations.

#### **Element 4 - Emergency Preparedness**

Procedures and resources are in place to identify potential crisis and emergency situations and effectively respond so as to preserve the health and safety of people and protect the environment, preserve property and maintain Molecular Energies' capability and reputation.

#### **HSE Expectations:**

- 4.1 Plans shall be established to address potential crisis or emergency situations, to designate roles and responsibilities and to identify the interface requirements with stakeholders (e.g. community, media, relatives, partners, insurers, shareholders or regulators). Points of contact and telephone numbers shall be included in the plans. Back-up equipment, facilities and personnel shall be identified in the plans and appropriate mobilisation procedures agreed. Where appropriate, these plans shall be supplemented with appropriate contingency plans.
- 4.2 Personnel shall be adequately trained to understand the regulatory requirements and apply the necessary controls and preventative measures described in the plans. This includes specific emergency duties (e.g. fire training, first aid, etc.) and managing interfaces with partners, media, authorities and other external agencies.
- 4.3 Emergency equipment (e.g. communications, operational specific equipment, spill control equipment, fire detection/protection, first aid, etc.)

- shall be available in sufficient quantities and shall be maintained in good working order.
- 4.4 Emergency plans shall be maintained through periodic reviews, and drills and exercises to validate controls and preventative measures, including liaison with and involvement of external support.
- 4.5 Lessons from emergency response drills, exercises and incidents shall be documented, communicated and incorporated into plans and resources.
- 4.6 Lessons learned from other operator incidents shall be communicated and incorporated into plans and resources as deemed appropriate.

#### **Responsibilities:**

#### The Operations Director is responsible for

• The development, implementation and ongoing review and maintenance of the corporate Emergency Management Plan.

#### Country/Line Managers are responsible for

 The development and implementation of emergency response plans and the integration with the corporate Emergency Management Plan.

#### Element 5 - Contractor and Supplier Management

The contracting of services and the purchase, hire and lease of equipment and materials shall be carried out in a manner that meets HSE expectations

#### **HSE Expectations:**

- 5.1 Contractors shall be selected in accordance with a formal process of contractor selection
- 5.2 Contractors will be competent to perform the tasks for which they have been contracted and have a good safety and environmental record.
- 5.3 Contracts shall specifically require contractors to implement systems consistent with the HSE policies and the level of risk involved in their respective tasks.
- 5.4 HSE requirements for equipment and materials shall be specified prior to purchase and compliance with these requirements shall be verified prior to, or upon delivery.
- 5.5 HSE performance of suppliers and contractors, and their compliance with obligations specified in contracts or purchase orders, shall be monitored and reported.

#### **Responsibilities:**

#### Country Managers are responsible for

 Implementing procedures to select, approve and manage contractors and the controlled purchase of goods and services.

#### Line Managers are responsible for

 All matters relating to contractors, or suppliers, working or supplying equipment/materials on their behalf, including monitoring of performance against contractual obligations.

#### **Element 6 - Information Management**

Critical HSE information (procedures, documents, records) will be managed and maintained through formally controlled processes. Records will be maintained securely yet readily available.

#### **HSE Expectations:**

- 6.1 Critical HSE procedures, documents, drawings, and data shall be identified and managed via an information management system.
- 6.2 Applicable laws, regulations, permits, codes and standards shall be identified at a country level, and requirements documented and communicated to relevant levels of the organisation.
- 6.3 Pertinent records shall be retained as necessary with copies retained centrally at Molecular Energies' UK office. Obsolete documentation will be identified and removed from circulation.
- 6.4 Employee health, medical and occupational exposure records shall be maintained with appropriate confidentiality and retained as necessary.

#### **Responsibilities:**

#### Country Managers are responsible for:

 Managing critical HSE information through formally controlled processes with personnel responsibilities assigned to it.

#### Line Managers are responsible for:

• Properly controlling all critical information.

#### All personnel have the responsibility for:

 Identifying through line management, any changes which may be required, using the current revision of any controlled document or, when using uncontrolled copies of documents, which have been issued for reference in connection with a specific job, the user is responsible for destroying the document after its use.

 At all times for using the current latest revision of any uncontrolled document.

#### Element 7 - Incident Reporting and Investigation

All incidents will be reported, investigated and analysed to improve systems and prevent recurrence. Corrective and preventative actions, with a focus on root cause and / or system failures, will be taken.

#### **HSE Expectations:**

- 7.1 Systems will be established and maintained for the identification, reporting and investigation of all incidents (including legislative non-conformances), their root causes impacts and preventative actions.
- 7.2 Prioritised actions will be implemented, verified, and monitored to prevent recurrence.
- 7.3 Incident investigation results will be used to improve standards, systems and practices. Lessons learned will be shared across the organisation and, where appropriate, with other stakeholders.
- 7.4 A review of the effectiveness if any corrective I preventative actions will be undertaken.
- 7.5 Major incidents shall be investigated by a multi-function team with participation and leadership from outside the operating company.
- 7.6 Where necessary HSE MS documents will be amended in accordance with any changes.

#### **Responsibilities:**

#### The Operations Director is responsible for

 Developing and implementing a consistent process for reporting, recording and investigating all incidents across the business.

#### Country/Line Managers are responsible for

 All incident reporting, record keeping, investigations and corrective action implementation.

#### All personnel are responsible for

• Reporting incidents to their Supervisors/Line Managers.

#### Element 8 - Monitoring, Audit, Evaluation & Management Review

HSE performance and systems are monitored, inspected and audited to identify trends and measure progress and assess compliance. Regular management reviews shall be undertaken that comprise an assessment of the Company's commitment to continual improvement based on the elements presented to the management team usually on an annual basis.

#### **HSE Expectations:**

- 8.1 Monitoring and Audit procedures shall be established and implemented.

  Audits will be conducted by appropriately qualified, impartial personnel.
- 8.2 HSE performance indicators (leading and lagging) shall be established, consistent with established objectives, and monitored/reported on a regular basis.
- 8.3 The monitoring results will be assessed regularly against the established HSE objectives.
- 8.4 Internal and external audits and site inspections shall be undertaken periodically to measure HSE performance, at frequencies appropriate to the level of risk.
- 8.5 HSE non-compliances and deficiencies shall be reported through line management and remedied.
- 8.6 Findings and recommendations from the monitoring, audit and review will be tracked and used to improve performance.
- 8.7 The HSE system will be subject to periodic monitoring and review.
  Suitability and application of the HSE Policy will be made
- 8.8 Assessment of status of the current KPI's and preparation of the following years KPIs will be completed.
- 8.9 Progress made against annual objectives and targets will be assessed An audit plan for the following year will be established.
- 8.10 Results of evaluations of compliance with legal and other company requirements will be presented.

#### Responsibilities

#### The corporate management team are responsible for

Facilitating the regular HSE Management review

#### The Operations Director is responsible for

 The periodic review of HSE performance, setting ongoing HSE objectives and implementing a consistent audit procedure.

#### Country/Line Managers are responsible for

 Facilitating inspections, assessments and audits, recording deficiencies and implementing corrective actions tracked to completion.