Environmental Management Systems

prepared for

California State Lands Commission

Prevention First 2002

presented by

Mark Shemaria

September 11, 2002

Development and Implementation of an Environmental Management System Conforming to the ISO 14001:1996 Standard at an Independent Oil and Gas Company.

ISO 14001:1996

International Organization for Standardization published the ISO 14001 Environmental Management System (EMS) standard in the fall of 1996.

<u>Voluntary Standard</u>

• Internationally recognized and accepted
• Sustainable development

What is it?

ISO 14001 is **<u>not</u>** an environmental program –

- Contains no environmental performance requirements.

- Provides an outline for a Management System to ensure environmental performance.

- Pro-active promotes pollution prevention and continual improvement.

- Creates a "cultural" shift toward environmental awareness.

- Focus on understanding how your activities may affect the environment.

What does the Standard require?

- Environmental Issues are given the same consideration as traditional management elements such as finance, operations and engineering.

- Focus on the prevention of incidents and continual improvement of performance by making sure needed resources are available. These include financial, knowledge, information and authority.

- A "Plan-Do-Review" System

TIDELANDS
OIL PRODUCTION COMPANY
A NESTE/CHANSE PARTNERSHIP

Your system must meet the requirement of each of the elements

These are –

- Establishment of policy
- Identification of aspects and legal requirements
- Establishing objectives and targets
- Environmental management programs
- Emergency response
- Training of personnel whose work may have environmental impacts
- Communication
- Document control
- Operational control
- Monitoring and review of performance
- Corrective action
- Management review

TIDELANDS
OIL PRODUCTION COMPANY
A NESTE/CHANSE PARTNERSHIP

Environmental Policy

Top management commits to environmental performance through the development of Environmental Policy.

Must include a commitment to –

- Obey the law

- Pollution prevention

- Continual improvement

Environmental Aspects

Are: "those parts of your operations impacting or having the potential to impact the environment."

- Identify those associated with all the company's activities, products and services.

- Identify the actual potential impact of each and the significance of the impact.

Legal Requirements

- Systems to be in place to identify and access what legal and other requirements exist for the operations.

Objectives and Targets

- Establish and Maintain documented O & T.

- Responsibility for achieving targets lies heavily within various departments, rather than with environmental compliance employees.

Documentation

Requires documented policy and procedures on some elements of the EMS including:

- Aspects, legal requirements, communications, training, operational control, monitoring and auditing (work instructions describe step-by-step actions, including operating criteria).

Emergency Preparedness & Response

Establish procedures to identify & respond to emergencies.

- Prevent and mitigate impacts.

- Review and revise emergency procedures after an incident.

- Periodically test procedures.

Training

- An important implementation tool.

- Employees must be trained on how their activities may affect the environment and how deviations from job duties can lead to problems.

- Awareness training, including policy, operating requirements and limits, and important EMS mechanisms such as the non-conformance system and internal audits.

- Emphasis that problems are best prevented by employees being properly trained and work being properly planned and performed.

Communication

TIDELANDS
OIL PRODUCTION COMPANY
A NESTE/CHANSE PARTNERSHIP

Have procedures for:

- Internal communication of aspects and EMS.
- Receiving and responding to external communications.
- Consider for external communication of significant aspects.

Operational Control

- Identify operations with significant aspects.
- Establish procedures for operations where their absence could lead to deviations from policy and objectives and targets.
- Stipulate operating criteria in procedures.
- Establish procedures for goods and services (with significant aspects) and communicate to suppliers and contractors.

Tracking Environmental Performance

- Monitor and measure the key characteristics of operations and activities that can have a significant impact on the environment.

- Effectiveness can be measured against the EMS's ability to achieve its objectives and targets.

- Measures of environmental performance as defined by the company.

- Management Review Meetings are held to review the overall adequacy and performance of the EMS.

Internal System Audits

- Audits verify implementation and compliance with the standard and the EMS.

- Provides an opportunity to check procedures against real world activities and vice versa.

- Opportunity for employees from all aspects of your company to get involved and improve their awareness of the EMS.

Nonconformance/Corrective Actions

- A critical part of the EMS lies in being able to discover and correct non-conformances within the system.

- Non-conformances can be described as "a part of the system that is not working as designed or in accordance with established procedures.

- Corrective or preventive action systems are required to take a root cause approach to system and operating non-conformances.

Management Review

- Top management shall review the EMS to ensure its suitability adequacy and effectiveness.

- Address the need for changes to policy, objectives and other elements of the EMS.
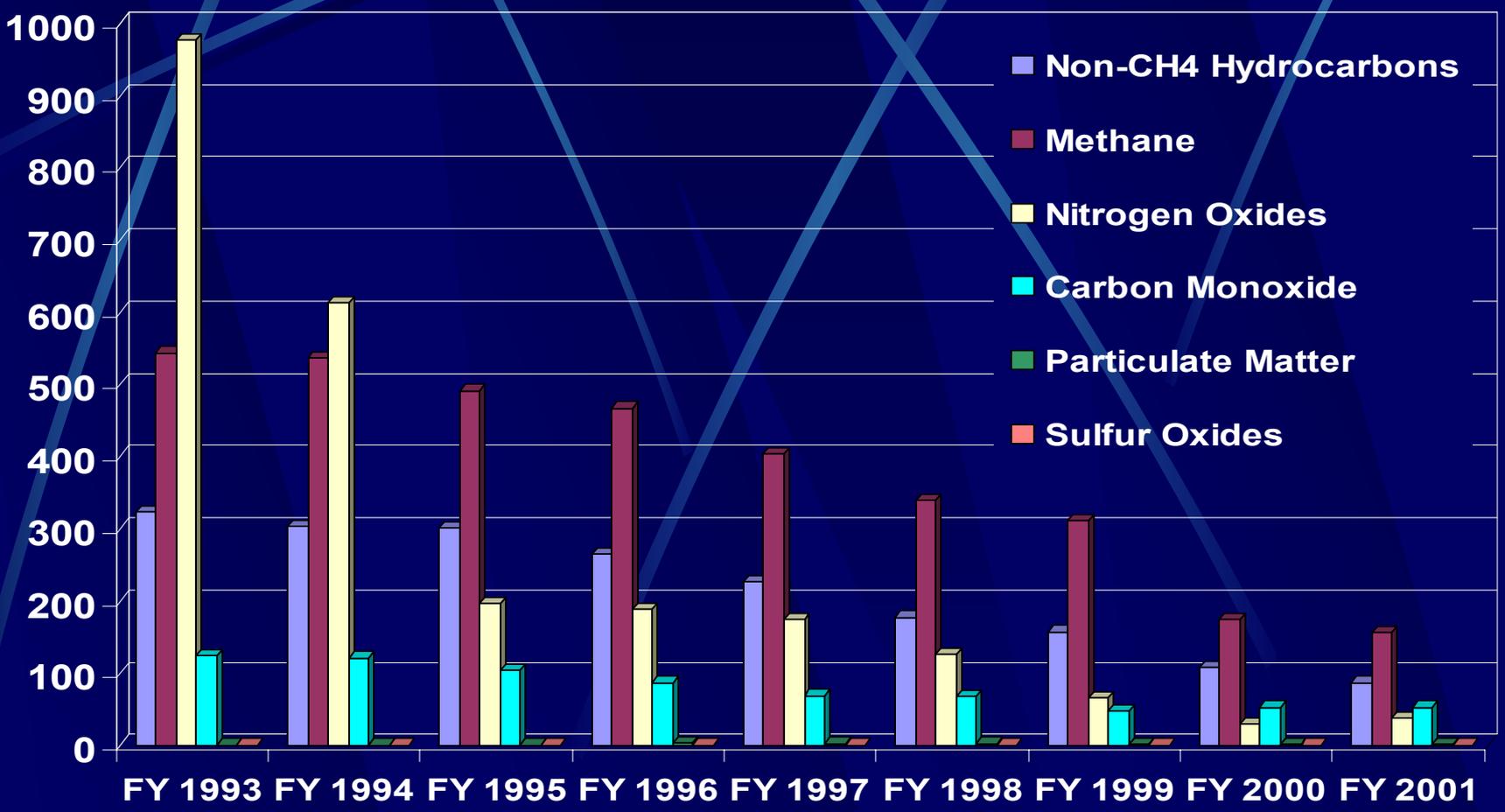
Benefits of Fully Implemented EMS

- Structure for EMS internationally recognized.

- Gives stakeholders an objective measure of performance.

- Promotes and environmental culture within organization.

- Increase employee and contractor <u>awareness</u> and knowledge.

- Reduce operating risk, unplanned incidents and associated cost.

- Less downtime.

- Control legal and insurance cost.

- Reductions in waste, air emissions and improved energy efficiency.

ISO Certification

- Certification of EMS by an accredited third party registrar.

- In the U.S., registrars are accredited by the American National Standards Institute (ANSI)/ Registrar Accreditation Board (RAB).

- ISO Certification is good for three years and requires at least one checkup audit each year.