HEALTH AND SAFETY IN OIL AND GAS SECTOR

Presenter:

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Workforce health

In the early 1900s industrial accidents were common for example, in 1907 over 3,200 people were killed in mining accidents. At this time legislation and public opinion all favored management. There were few protections for the worker's safety. Today's industrial employees are better off than their colleagues in the past.
Work-related accidents or diseases are very costly and can have many serious direct and indirect effects on the lives of workers and their families.

For workers some of the direct costs of an injury or illness are:

- The pain and suffering of the injury or illness
- The loss of income
- The possible loss of a job
- Health-care costs
Costs to employers of workplace injuries and work-related ill health

Previous HSE estimates of the costs to employers of workplace injuries and Work-related ill health considered five main categories:

• Absence costs
• Administrative costs
• Recruitment Costs
• Damage from injuries and non-injuries (excluded from this update)
• Compensation and insurance costs
Figure 1. Cost Categories.

- Lost earnings
- Extra expenditure when absent
- Human costs (pain, grief and suffering)
- Sick pay
- Compensation (ELCT)
- Other insurance (low frequency, high cost events, etc., etc.)
- Company admin.
- Recruitment
- Damage from injuries (equipment, goods and materials)
- Damage from non-injury accidents
- Insurance industry admin costs
- DWP admin costs
- Loss of output
- Medical treatment (short and long term)
- HSE and LA investigation costs

Individuals

Employers

Society
MANAGING HEALTH FOR FIELD OPERATIONS IN OIL AND GAS ACTIVITIES

International Petroleum Industry Environmental Conservation Association (IPIECA)
hazard in the oil and gas industry

The presence of flammable hydrocarbons is an intrinsic hazard in the oil and gas industry, in operational locations and wherever products are transported or used. The related health and safety risks have to be addressed across the industry’s activities, which include

- seismic and drilling
- projects,
- facility operations,
- maintenance,
- construction,
- and marine and road transport
hazard in the oil and gas industry
Management systems have been successful in mitigating health and safety risks and reducing the number of incidents. An important aspect of these systems is continuous improvement that is assessed by monitoring performance using indicators.
The most common types of health and safety incidents occur in the workplace, therefore, three of the five indicators focus on protection of the workforce,

- including measurement of incidents that can provide lessons for the future. Less frequent, but potentially more severe, are

- Failures of plant integrity or product-related hazards to third parties.

- Process safety is a new indicator reflecting the potential for major incidents or near misses that have the potential for serious consequences.
The most established indicator across the industry is the record of injuries and illnesses that are investigated to provide systematic learning on how to prevent incidents from recurring.

- Workforce protection
- Product health, safety and environmental risks
- Process safety and asset integrity
World Day for Safety and Health at Work 2013

The World Day for Safety and Health at Work in 2013 focuses on the prevention of occupational diseases.
and figures 2.02 million people die each year from work-related diseases.

321,000 people die each year from occupational accidents.

160 million non-fatal work-related diseases per year.

317 million non-fatal occupational accidents per year.

This means that:

Every 15 seconds, a worker dies from a work-related accident or disease.

Every 15 seconds, 151 workers have a work-related accident.

Deaths and injuries take a particularly heavy toll in developing countries, where a large part of the population is engaged in hazardous activities, such as agriculture, construction, fishing, and mining.
The Prevention of Occupational Diseases

World Day for safety and health at work
28 April 2013
Health Performance Indicators
Health Performance Indicators
Implementation of a Health Management System
Health Performance Indicators

Leading indicators

- Health risk assessment and planning
- Industrial hygiene and control of workplace exposures
- Medical emergency management
- Management of ill-health in the workplace (no indicators)
- Fitness for task assessment and health surveillance
- Health impact assessment
- Health reporting and record management (no indicators)
- Public health interface and health promotion
Implementation of a Health Management System
The Model Health, Safety and Environmental Management System (HSEMS)

- OSHAS 18001/18002, which specifies the requirements for an Occupational Health and Safety Management System (OHSMS)
Management systems should convey a company’s structure, responsibilities, practices, procedures and resources for implementing health management, including processes to identify root causes of poor performance, prevent recurrences, and drive continuous improvement.

A Health Management System may be integrated into an Environmental, Health and Safety—and possibly also Quality and Security—Management System or it may stand alone.
Health risk assessment and planning

Controlling Health Risks at Work:

A roadmap to

Health Risk Assessment

in the oil and gas industry
## Health risk assessment

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<th>Severity</th>
<th>People</th>
<th>Assets</th>
<th>Environment</th>
<th>Reputation</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<td>0</td>
<td>no injury or health effect</td>
<td>no damage</td>
<td>no effect</td>
<td>no impact</td>
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<td>heard of in the industry</td>
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<td>minor damage</td>
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<td>moderate damage</td>
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<td>major damage</td>
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<td>massive effect</td>
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</table>
Industrial hygiene and control of workplace exposures

The percentage of ‘at-risk’ people that have completed appropriate job-related health awareness, education and training program
Management of ill-health in the workplace

(No indicators)
Fitness for task assessment and health surveillance

The identification of jobs/tasks with specific physical, mental and social requirements, and the process for assessing worker ability to meet requirements with or without restriction or limitation

Purpose: An objective measure of compliance with a required control for a hazard
Identification of occupational illnesses

- Respiratory disease
- Skin disease
- Upper limb and neck disorder
- Back problems and lower limb disorder
- Cancers and malignant blood disease
- Poisoning
- Noise induced hearing loss
- Mental ill-health
- Other occupational illness
Regular medical emergency drills are conducted at all locations to a defined standard.
Public health interface and health promotion

A description of how the company manages the interface between employees in different locations and the public health situation in those locations
Transportation of Hazardous and flammable Material
Land transportation safety recommended practice

Guidance note 8

Driver trainer recommended approach and profile
Bureau Veritas and its presence in Pakistan since 1999

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- 16,000 employees

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- 20,000 employees

46% of revenue generated in mature countries
54% of revenue generated in fast-growing countries

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- Ergonomics
- Indoor Environmental Quality (IEQ)
- Behavioral Safety / Performance Management
- Insurance Loss Control
- Workers’ Compensation
- OHSAS 18001 Management Systems
- Laboratory Services
- Training
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HSE TRAINING SERVICES
*Helping you develop a health & safety, environmental and quality policy with effective support from your employees.*

BUSINESS CHALLENGE

You need to establish training programs that educate your own employees and your supply chain partners about health & safety, environmental and quality issues in the workplace. Training can be carried out to deliver short-term requirements, such as for behavioural improvement or for re-skilling of re-deployed people. Or it can be part of long-term planned programs for induction of new employees or preparing staff for job changes. Whatever the need, you want to ensure that people are properly qualified and competent to do the job.
DEFENSIVE DRIVING TRAINING
IN-SERVICE VERIFICATION OF FIRE SAFETY EQUIPMENT

Checking fire safety equipment to protect human life and property.

BUSINESS CHALLENGE

The main role of fire safety devices is to help protect people and property. When a fire breaks out, the results can be disastrous if there is a failure or malfunction in the fire safety installations chain. A thorough maintenance and inspection program is essential to prevent loss of life or assets from such failures. Considering the risk and what is at stake, it is key to seek reliable expertise.

SOLUTION

What is Fire Safety Equipment Verification?
Fire Safety Equipment inspection involves a series of tests performed on your installation.

The main critical points checked are sprinklers, smoke detectors and related devices, automatic extinguishing systems and related equipment. The fire risk assessment covers the following:

- Fire/smoke detection and warning system
- Sprinkler installations
- Means of escape
- Planning for an emergency and training
- Fire risk factors – people at risk
Fire Prevention & Fire Safety

HSE Training

Move Forward with Confidence
Assessing the need for better data

► Many developing countries lack the specific knowledge and experience for diagnosis, recognition and reporting of occupational diseases (trained doctors, list of occupational diseases, guidelines for diagnostic criteria and recognition and compensation,

► The intensification of migration flows, ageing of the workforce and increasing number of people in temporary work complicate monitoring and recording of occupational diseases

► Most occupational diseases are difficult to identify due to their long latency periods (e.g.: occupational cancer)
Steps for the prevention of occupational diseases

► For national OSH systems to deal effectively with the prevention of occupational diseases, it is necessary to:
   • build capacity for recognition and reporting of occupational diseases and establish the related legislative framework
   • improve mechanisms for collection and analysis of occupational disease’s data
   • improve collaboration of OSH and social security institutions to strengthen compensation schemes
   • integrate the prevention of occupational diseases into OSH inspection program
   • improve capacity of occupational health services for health surveillance and monitoring of the working environment
   • update national lists of occupational disease using the ILO list as a reference
   • reinforce social dialogue among governments, employers and workers and their organizations
THANKS

Move Forward with Confidence