Safety & Health Management Systems:
Comparing the Options

A Review of National & International SHMS Standards

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Safety & Health Management Systems

- Any safety and health management system (SHMS) specifies processes to continuously improve S&H performance while simultaneously complying with regulations, e.g., MSHA, OSHA, etc.

- It provides the framework to integrate the SHMS with your overall business plan/mine plan, etc.

- Adopting/adapting a SHMS for use in your company requires an investment in resources: time & people.

- The aim should be a SHMS that is consistent with the your organization's needs & management approach.

Questions to Ask in Selecting a SHMS

- Does your company have an existing SHMS?

- Does your company have experience developing SHMS's?

- Does your company have both MSHA & OSHA obligations?

- Does your company have international operations?

- Does your company have business outside of mining?

- Does your company have good operating management systems?

NMA CORESafety SHMS

- Member companies to develop a SHMS that is equivalent to the example SHMS developed through CORESafety.

- Allows maximum flexibility for companies to chose an approach that works best for them.

- In the U.S., three SHMSs have gained attention and interest: OHSAS 18001, ANSI Z-10 and OSHA VPP.

Options for Selecting a SHMS

1. If you already have an SHMS, keep it and use CORESafety for areas of additional improvement.

2. Adopt NMA's CORESafety generic SHMS.

3. Develop a customized system.

4. Adapt an existing national or international system:

   a. ANSI Z-10, 2007

   b. OHSAS 18001, 2007

   c. OSHA VPP

OHSAS 18001

Scope

- Internationally recognized model for Occupational Health and Safety Assessment Series (OHSAS) for management systems.

Purpose

- Enable organizations to control their S&H risks and improve their S&H performance.

Application

- Specification is intended to address occupational health and safety, rather than product and services safety.

- A S&H management *assessment series* for SHMSs. Intended to help an organizations control S&H risks.

Why and Where Was OHSAS 18001 Developed?

- In response to urgent demand for a recognizable occupational health and safety management system standard.

- Need for health and safety management system that could be audited and certified.

- 13 cooperating organizations from around the world assisted in development of OHSAS 18001: Spain, Malaysia, UK and several other European standards organizations.

Major Elements of OHSAS 18001

- Planning for hazard identification, risk assessment & risk control

- OHSAS management program

- Structure & responsibility

- Training, awareness & competence

- Consultation & communication

- Operational control

- Emergency preparedness & response

- Performance measuring, monitoring & improvement

American National Standards Institute (ANSI) Z-10

Scope

- Defines minimum requirements for a SHMS.

Purpose

- Management tool to reduce risks of injury, illnesses, etc.

Application

- Organizations of all sizes & types of businesses. Specific to the U.S. Non-specific to any one industry.

Major Elements of ANSI Z-10

- Management leadership & employee participation

- Planning

- Implementation of the SHMS

- Evaluation & corrective action

- Management review

ANSI Z-10 Elements

Plan		Do	Check	Act
3.0 Mgmt Leadership	**4.0 Planning**	**5.0 Implementation & Operation**	**6.0 Checking & Corrective Action**	**7.0 Management Review**

3.0 Mgmt Leadership

Management Leadership

- OH&S Management System
- Policy Statement
- Responsibility and Authority

Employee Participation

4.0 Planning

Review

- Gap analysis
- Regulations, standards, etc.
- Resources
- Hazard analysis
- Exposures

Assessment & Prioritization

- Risk Determination
- Trend analysis

Objectives

Plans and Resources

5.0 Implementation & Operation

Operational Elements

- Hierarchy of Controls
- Design Review and MOC
- Procurement
- Contractors
- Emergency Preparedness

Education, Training, Awareness & Competence

Communication

Documentation & Record Control

6.0 Checking & Corrective Action

Measurement, Monitoring & Assessment

Incident Investigation

Audits

- OHSAS
- Compliance

Corrective & Preventive Actions

Planning

Feedback

7.0 Management Review

Risk Reduction

Outcomes & Follow-ups

Benefits of the ANSI Z-10

- It can reduce workplace risks, injuries & improve bottom line.

- As a voluntary consensus standard, it is compatible with quality & environmental management system standards.

- It aligns with other U.S. & international guidelines for OHSMS.

- Its approach aims for long-term solution to eliminate causes of deficiencies.

- It can help reduce hazards, risks, improve productivity & financial results.

OSHA's Voluntary Protection Program (VPP)

- OSHA's VPP recognizes that enforcement of OSHA standards alone cannot fully achieve the objectives of the OSHA Act of 1970.

- Good SHMSs go beyond the OSHA standards.

- A quality safety program must be approached as a business priority, just as productivity, quality and customer satisfaction are.

- A safety culture can protect workers more effectively than stand alone, one dimensional OSHA compliance. The OSHA standards primarily address the physical worksite. Safety must be both regulatory and people- centered.

- VPP worksites have a performance-based approach to safety that includes the VPP criteria and elements as a foundation.

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OSHA's Voluntary Protection Program (VPP)

- A basic and voluntary management system sponsored by OSHA.

- With VPP, OSHA-regulated site agrees to have OSHA heavily audit the site. Approval of VPP status leads to modified enforcement status.

- In the VPP, management, labor and OSHA establish cooperative relationships at workplaces that have implemented a comprehensive safety & health management system.

- Approval into VPP is OSHA's official recognition of the outstanding efforts of employers and employees who have achieved exemplary occupational safety & health.

Major Elements of OSHA VPP

- Management leadership

- Employee involvement

- Worksite analysis

- Hazard prevention

- Safety & health training

Comparing Management Systems

Areas of Comparison	CORESafety	OHSAS 18001	ANSI Z10	OSHA VPP
Defined goals & objectives (e.g., 0:50:5)	Included	Not Included	Not Included	Not Included
Senior management pledge	Included	Not Included	Not Included	Included
Senior management acceptance of responsibility for S&H	Included	Included	Not Included	Included
Appoint a senior manager to develop the SHMS	Included	Included	Not Included	Not Included
Leadership development process	Included	Not Included	Not Included	Included
Responsibility & accountability	Included	Included	Included	Not Included
Risk management	Included	Included	Included	Partial
Emergency planning & response	Included	Included	Included	Included
Training & competence	Included	Included	Included	Training only
Culture enhancement	Included	Not Included	Not Included	Not Included
Collaboration & communication	Included	Included	Included	Not Included

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Comparing Management Systems

Areas of Comparison	CORESafety	OHSAS 18001	ANSI Z10	OSHA VPP
Reinforcement & recognition	Included	Planned Intervals	Intervals	Min Annually
Change management	Included	Included	Not Included	Included
Resources & planning	Included	Included	Not Included	Not Included
Work procedures & permits	Included	Included	Included	Included
Occupational health	Included	Included	Included	Included
Incident investigation	Included	Included	Included	Included
Investigation of near miss incidents	Included	Discretionary	Discretionary	Not Included
Behavior optimization	Included	Not Included	Not Included	Not Included
Engineering & construction	Included	Included	Included	Not Included
Contractor management & purchasing	Included	Included	Included	Not Included
Assurance (regulatory compliance)	Included	Included	Included	Included

Comparing Management Systems

Areas of Comparison	CORESafety	OHSAS 18001	ANSI Z10	OSHA VPP
S&H management assurance	Included	Included	Included	Not Included
Organizational change management	Included	Included	Included	Not Included
Employee reward/incentive system	Discretionary	Not Included	Not Included	Included
SHMS self-assessment	Initial	Intervals	Annual	Annual
External sharing of lessons learned	Included	Not Included	Not Included	Included
Independent internal site audits	Included	Included	Included	Not Included
System assessment by third party.	Included	Included	Not Included	Included
S&H management metrics & trends analysis	Included	Included	Included	Included
Independent internal site audits	Included	Included	Included	Not Included
External reporting , e.g., NMA, MSHA.	Included	Not Included	Not Included	Included
Documentation & information management	Included	Included	Included	Not Included