

Auditing Safety Management Systems



**Colorado ASSE
Spring Professional
Conference**

March 4, 2016

9:30 a.m.

Denver Athletic Club

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Session Objectives

By attending this session, you should be able to:

- State the purpose and benefits of auditing the SMS.
- Identify ANSI Z10, OHSAS 18001, and VPP system elements.
- Examine the design of your organization's SMS against national and international standards.

Welcome!

Session Objectives

By attending this session, you should be able to:

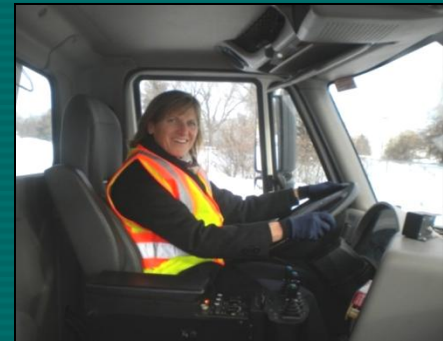
- Identify phases of a SMS audit (plan, execute, report, follow-up, closure).
- Explain roles and responsibilities of the auditor, including technical and interpersonal skills.
- Analyze tools (checklists/software) to assess and measure SMS performance.

Welcome!

Introduction

Basic assumptions:

- Different terms & acronyms: SMS, HSMS, OHSMS, EHSMS
- Management system audit is not an OSHA compliance audit
- Attendees have knowledge/experience with SMS implementation
- Facility, corporate, contractor – adapt info to your workplace
- Limited depth based on time



What is a Safety Management System?

- Organized and structured means to achieve and maintain high standards of performance
- Organized way to identify, evaluate, and manage hazards proactively (beyond compliance)
- Coordinated, comprehensive set of processes designed to direct and control resources to optimally manage employee health and safety



What is a Safety Management System?

- Structure defined and managed by identifying interrelated processes and their interdependencies
- Central place for H&S documents and data; can be shared internally and externally
- Communication tool; sharing documents, work activities, lessons learned
- Improved by continuous measurement and evaluation of all related processes



FACT:

- Almost 13 workers die each day;
90 per week
- Nearly 24,000 workers are injured every
8 hour work day
- On-the-job injuries cost \$130 billion per
year
- Average cost of an eye injury is \$1,463,
when you consider all the hidden costs

Economics - 2011

- National Safety Council estimated average comprehensive cost by injury severity
 - Death \$4,459,000
 - Incapacitating injury \$225,100
 - Non-incapacitating evident injury \$57,400
 - Possible injury \$27,200
 - No injury \$2,400

Statistics - 2011

- Average number of reportable injuries were 35 injuries per 1,000 employees
- Median number of lost work days 11 days
- Musculoskeletal disorder (MSD) cases accounted for 33 percent of all injury and illness cases
- Proportion of injuries/illnesses highest among workers age 45-54 — accounting for 26% of total cases

Benefits of SMS

- Avoid incidents
- Reduce injuries, liabilities
- Reduced insurance costs
- Protect personnel and the environment
- Cost-effective risk management
- Enhance and maintain compliance



Benefits of SMS

- Define authority and accountability
- Measure, manage, improve
- Framework to move beyond compliance to discover profit from H&S activities
- Integration of H&S and business needs (particularly in planning process)
- Decrease downtime, fines, overruns, quality defects
- Develop consistency, sharing of best practices at multiple facilities



Benefits of SMS

- System can be expanded, contracted and altered as priorities change
- Attract employees, customers, markets
- Enhance employee morale
- Build a positive safety culture, employee involvement
- Prevent pollution and conserve resources
- Qualify for recognition programs (e.g., OSHA VPP)



Benefits of SMS

EHS managers can't be every place at the same time

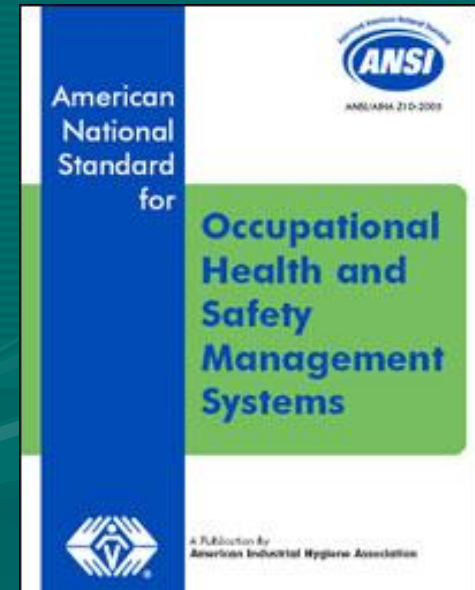
SMS provides tools to ensure health & safety is everyone's responsibility

Integrates health and safety into all aspects of your business



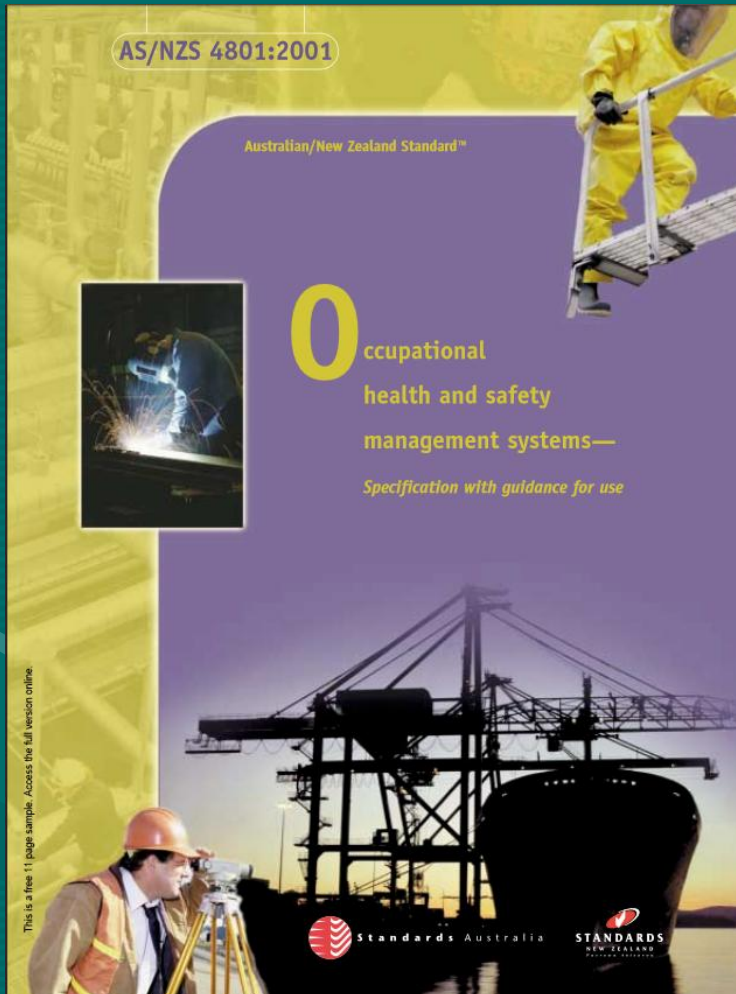
Examples of Health and Safety Management Systems

- ❑ OSHA Voluntary Protection Program (VPP)
- ❑ American National Standards Institute (ANSI) Z10
- ❑ OHSAS 18001 (British Standards Institute)
- ❑ ISO 45001 (www.iso.org)
- ❑ ILO-OSH 2001 (www.ilo.org)



*Guidelines
on occupational
safety and health
management
systems
ILO-OSH 2001*

Examples of Health and Safety Management Systems



- ❑ Det Norske Veritas International Safety Rating System (www.dnvgl.com)
- ❑ Malcolm Baldrich National Quality Award (www.nist.gov)
- ❑ AS/NZS 4801:2001, Joint Australian/New Zealand standard titled *Occupational Health & Safety Management Systems*

Elements of the HSMS



Elements of the SMS

1. Policy
2. Planning
3. Implementation and Operations
4. Checking and Corrective Action
5. Management Review



Safety Management System



NATIONAL AND INTERNATIONAL STANDARDS FOR SAFETY MANAGMENT SYSTEMS



OSHA VPP

Categories of Participation

1. Star
2. Merit
3. Demonstration



Elements of VPP Success

1. Management Leadership
2. Employee Involvement
3. Worksite Analysis
4. Hazard Prevention and Control
5. Safety and Health Training



Management Leadership

- Top management visibility
- Clear S&H policies communicated
- Responsibility, planning, resources, accountability



Employee Involvement

- Active and meaningful
- Problem identification and resolution
- Employees involved in S&H planning
- Employee feedback
- Includes contractor employees



Worksite Analysis

- Pre-use/Pre-Startup Analysis
- Comprehensive Surveys
- Self Inspections
- Job Hazard Analysis
- Employee Reporting of Hazards
- Accident Investigation
- Trend Analysis



Hazard Prevention & Control

- Hazard Tracking System
- “Hierarchy of Controls”
- Preventive Maintenance
- Emergency Response Procedures
- Medical Program



Safety and Health Training

- Everyone's responsibility
- From top managers to line workers
- New Hire/Transfer Orientations
- Contractor and Visitors
- Schedule training sessions on a regular basis



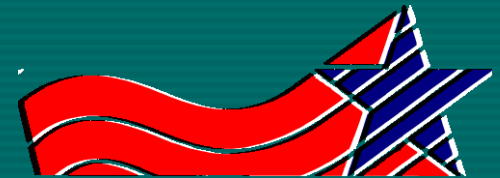
VPP Benefits

- Decreased I/I rates
- Decreased turnover and absenteeism
- Increased productivity
- Exempt from programmed OSHA inspections
- Community recognition
- Models of excellence, Best of the Best
- Competitive Edge



VPP Benefits

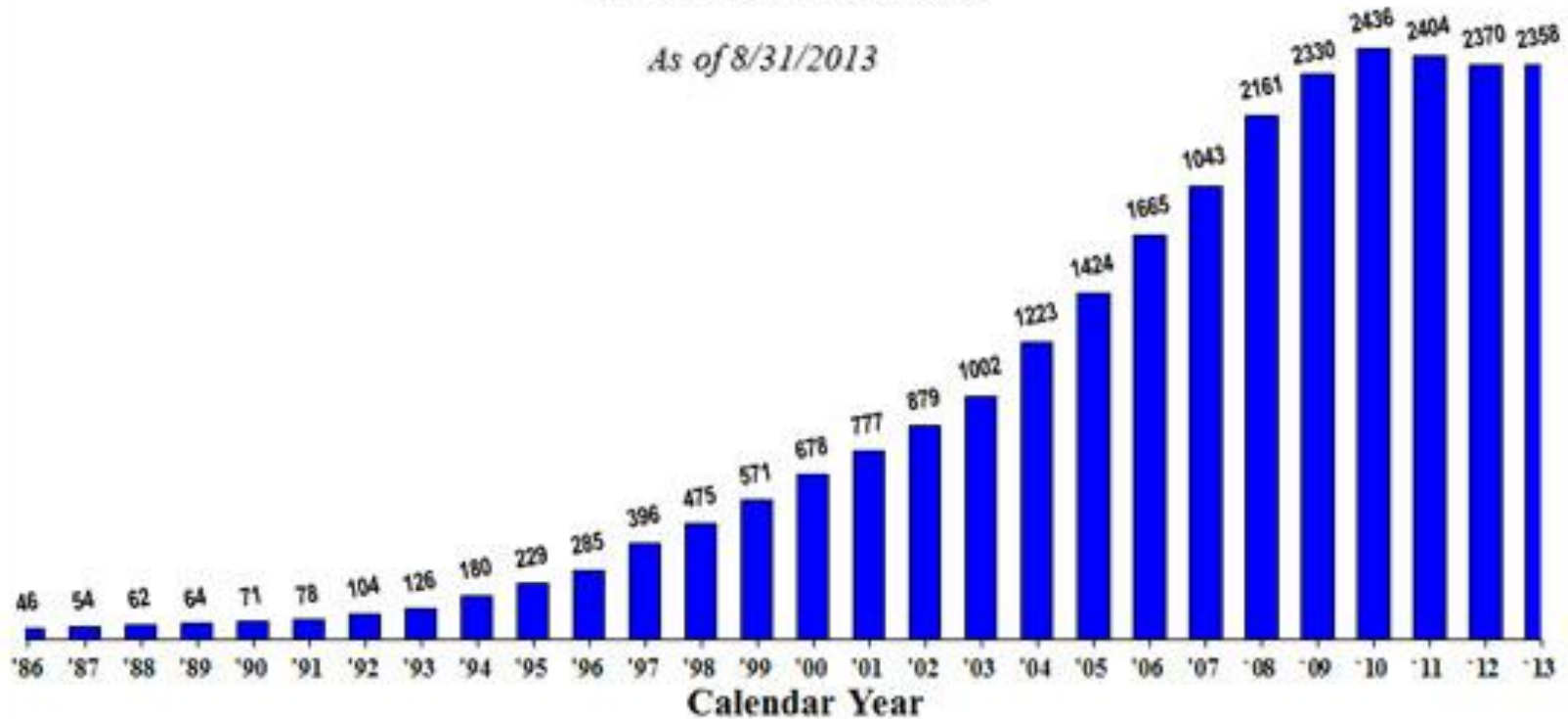
- Partners in excellence
- More successful than compliance alone
- VPP partners serve as models for their industries
- Leverages resources
- Accomplishes OSHA's mission
- Helps OSHA promote value of safety and health



Growth of VPP

Federal & State

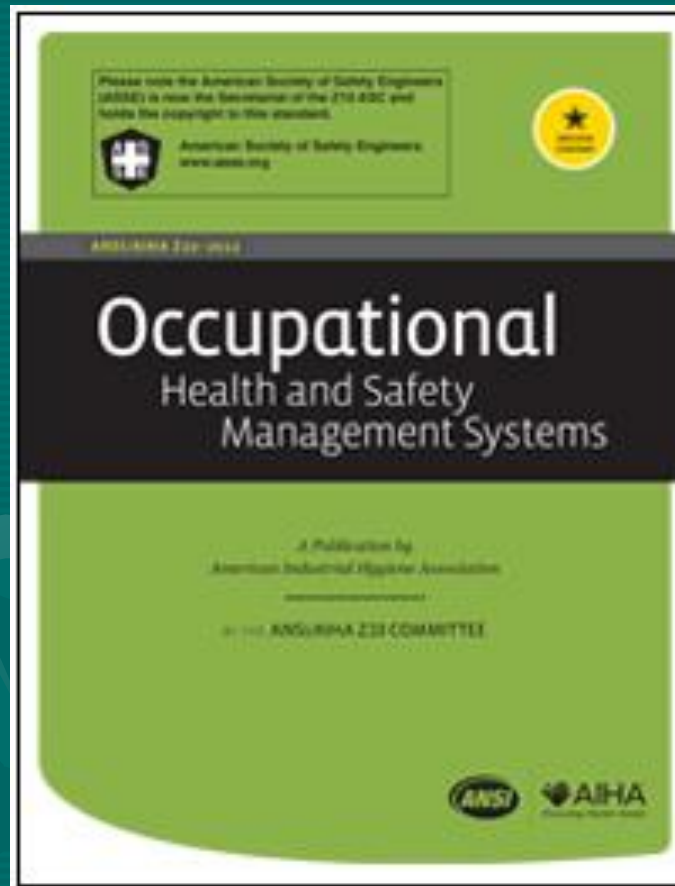
As of 8/31/2013



Source: OSHA, Office of Partnerships & Recognition

ANSI/AIHA/ASSE Z-10

Occupational Health and Safety Management Systems



ANSI/AIHA/ASSE Z10

Occupational Health and Safety Management Systems

- 2005 – became a USA national standard (better represents US stakeholders)
- Compatible with ISO 9001 (Quality) and ISO 14001 (Environmental Management System) standards
- 2012 - Revised June 27, 2012
- Voluntary national consensus standard
- Blends with ISO and other standards
- Fits all business sizes

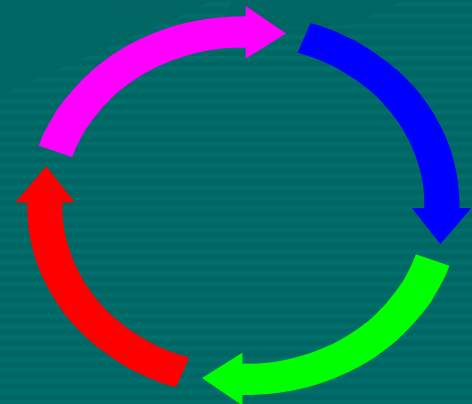
ANSI/AIHA/ASSE Z10

- Primary purpose is to provide a management tool to reduce risk of occupational injuries, illnesses and fatalities
- Characterized by:
 - Continuous improvement
 - Systematic elimination of underlying (root causes) of deficiencies



ANSI/AIHA Z-10 Standard Outline

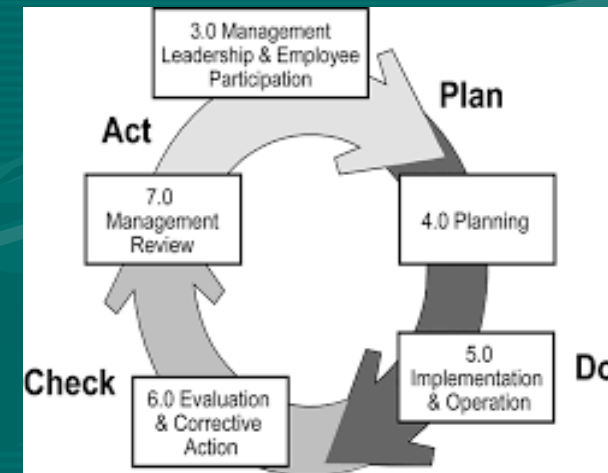
1. Scope, Purpose & Applications
 2. Definitions
 3. Management Leadership & Employee Participation
 4. Planning
 5. Implementation & Operation of OHSMS
 6. Checking & Corrective Action
 7. Management Review
- Appendices A-O



Z10 Sections

Section 3 Management Leadership and Employee Participation

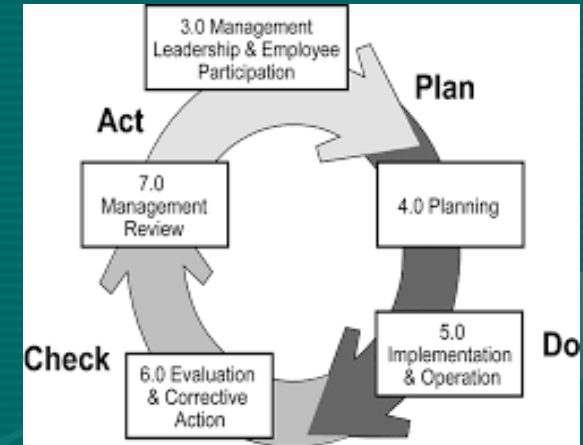
- Management Leadership
 - OHS Management System
 - Policy
 - Responsibility and Authority
- Employee Participation



Z10 Sections

Section 4 Planning

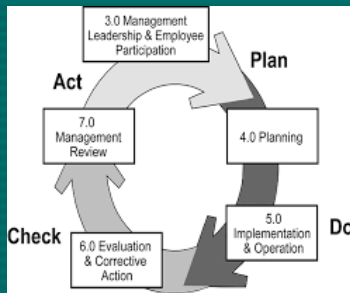
- Initial and ongoing review
- Assessment and prioritization
- Objectives
- Implementation plans and Allocation of resources



Z10 Sections

Section 5 Implementation of the OHSMS

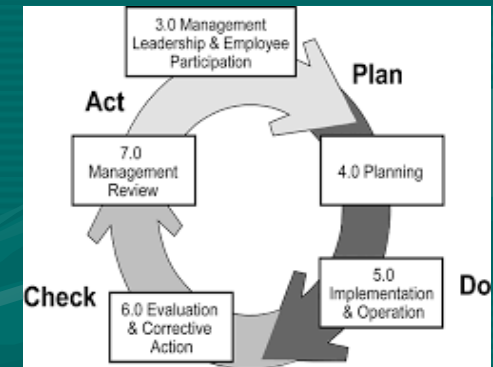
- Operational elements
 - Hierarchy of controls
 - Design review & management of change
 - Procurement
 - Contractors
 - Emergency preparedness
- Education, training and awareness
- Communication
- Document and record control



Z10 Sections

Section 6 Evaluation and Corrective Action

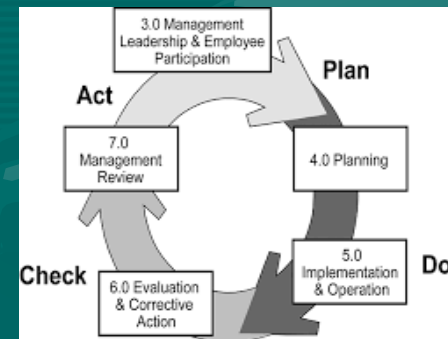
- Monitoring and measurement
- Audits
- Incident investigation
- Corrective and preventive actions
- Feedback to the planning process



Z10 Sections

Section 7 Management review

- Management review process
- Management review outcomes and follow-up
- Appendices
 - Multiple examples of “how”
- Helpful hints
 - ‘Right-side’ explanatory comments in document
 - Two columns (left is requirements)



OHSAS 18001

Occupational Health and Safety Assessment Specification



What is OHSAS 18001?

Specification

- April 1999 – released by BSI
- Based on British Standard 8800
- Developed in response to strong worldwide demand for a generalized, comprehensive outline for managing occupational health & safety issues
- Need for health and safety management system that could be audited and certified
- Created by world's leading national standards bodies, certification bodies, and specialist consultancies.....

OHSAS 18001

Participants were:

- * National Standards Authority of Ireland
- * Standards Australia
- * South African Bureau of Standards
- * British Standards Institution
- * Bureau Veritas Quality International
- * Det Norske Veritas
- * Lloyds Register Quality Assurance
- * National Quality Assurance
- * SFS Certification
- * SGS Yarsley International Certification Services
- * International Safety Mgt. Organization Ltd
- * Standards and Industry Research Institute of Malaysia
- * International Certification Services



What is OHSAS 18001?

It is not a formal standard, an official British Standard, nor is it an official International Standard

Not mandatory - voluntary basis

Comprised of two parts: 18001 (specifications) and 18002 (implementation)

OHSAS 18001:2007

- Compatible with ISO 9001 (Quality) and ISO 14001 (Environmental)
- Establishes a framework to move beyond compliance
- www.bsi-global.com
- Does not state specific OH&S performance criteria
- Does not give detailed specifications for design of a management system
- Not intended to cover product and service safety



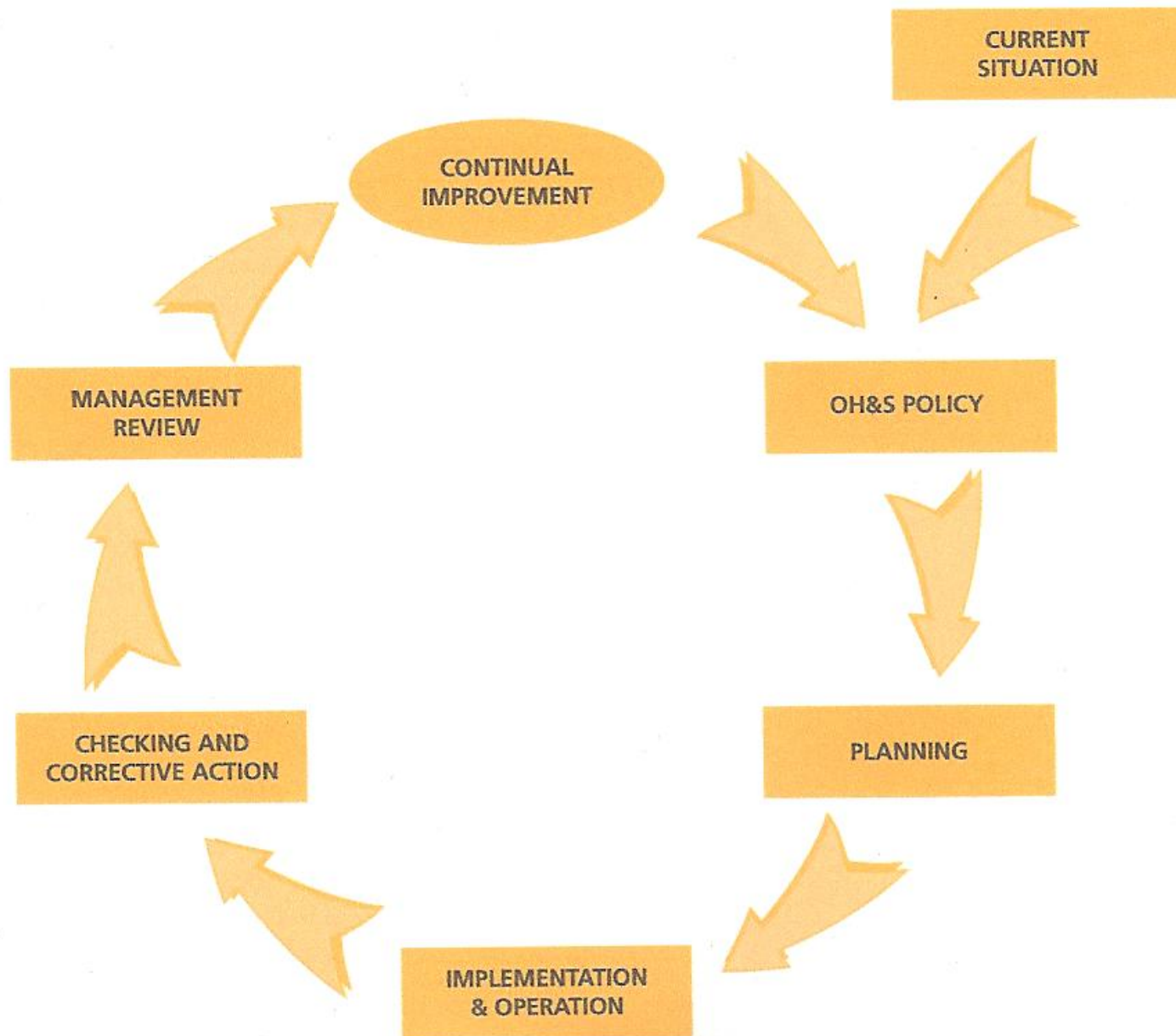
OHSAS 18001:2007

- Health and Safety Management System must be monitored by your own internal audit system
- No accreditation scheme for OHSAS 18001 offered by any national accreditation body e.g. RAB, UKAS, RvA, etc.
- Certification bodies can only issue non-accredited certificates for OHSAS 18001
e.g. Certificate of Conformance

Companies that Implemented OHSAS

- Snap-On Tool – Kenosha, Wisconsin
- Compaq - Fremont, CA / Galway, Ireland / Erskine, Scotland
- Alcan Cable – Williamsport, PA
- Rockwell Automation
- Pratt & Whitney
- Seagate – China, Malaysia, Northern Ireland, Singapore, Thailand, USA
- Honeywell Control Systems – Bracknell, UK
- Hanjin Shipping – Korea
- Samsung Heavy Industries – Koje Island, Korea

OHSAS 18001 MODEL



OHSAS 18001 ELEMENTS

OH&S management system elements:

4.1 General requirements

4.2 OH&S policy & commitment

4.3 Planning

4.3.1 Hazard identification, risk assessment/control

4.3.2 Legal and other requirements

4.3.3 Objectives

4.3.4 OH&S management program(s)



OHSAS 18001 ELEMENTS



4.4 Implementation and operation

4.4.1 Structure and responsibility

4.4.2 Training, awareness and competence

4.4.3 Consultation and communication

4.4.4 Documentation

4.4.5 Document and data control

4.4.6 Operational control

4.4.7 Emergency preparedness and response

OHSAS 18001 ELEMENTS

4.5 Checking and corrective action

4.5.1 Performance measurement and monitoring

4.5.2 Accidents, incidents, non-conformances and corrective and preventive action

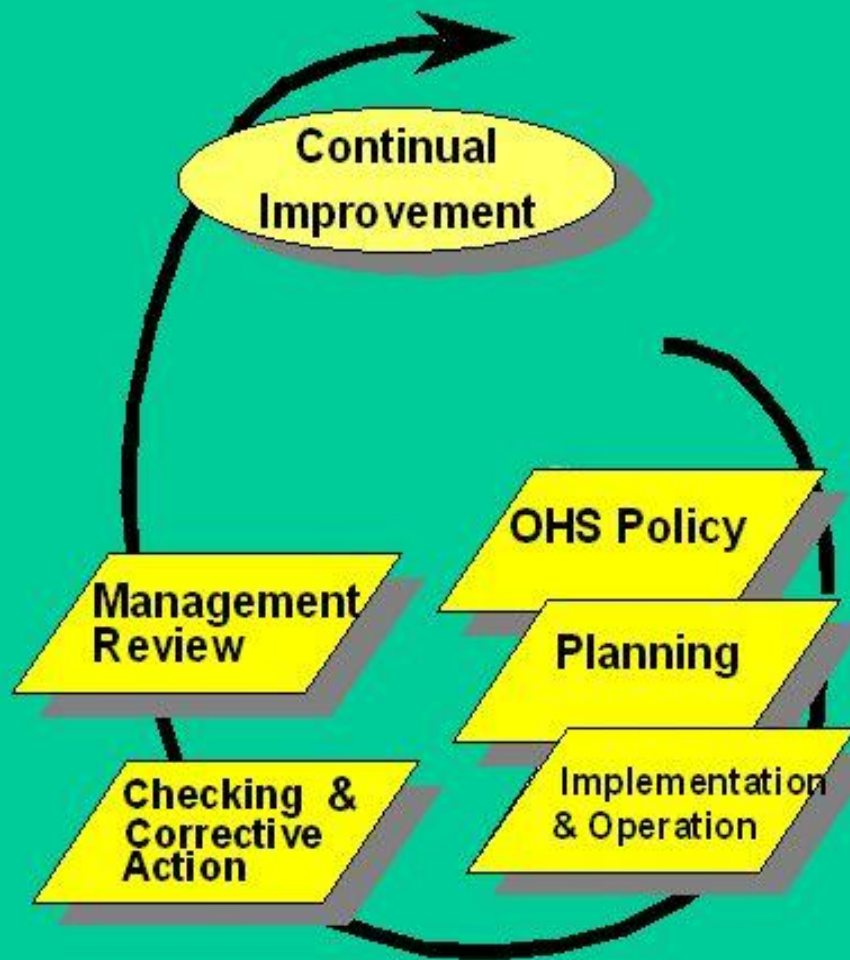
4.5.3 Records and records management

4.5.4 Audit

4.6 Management review



OHSAS 18001



1. **OH&S Policy**
 - 1.1. The Health & Safety Policy
2. **Planning**
 - 2.1. Planning for hazard identification, risk assessment and control
 - 2.2. Legal and other requirements
 - 2.3. Objectives
 - 2.4. OH&S management programme(s)
3. **Implementation and Operation**
 - 3.1. Structure and responsibility
 - 3.2. Training, awareness and competence
 - 3.3. Consultation and Communication
 - 3.4. Documentation
 - 3.5. Document and data control
 - 3.6. Operational Control
 - 3.7. Emergency preparedness and response
4. **Checking and Corrective Action**
 - 4.1. Performance measurement and monitoring
 - 4.2. Accidents, incidents, non-conformances and corrective and preventative action
 - 4.3. Records and record management
 - 4.4. Audit
5. **Management Review**
 - 5.1. Management Review

International Labour Organization

Occupational Safety and Health Management Systems (OSH-MS)



Guidelines on Occupational Safety and Health Managements Systems ILO-OSH 2001

International guidelines that contribute to protection of workers from hazards and elimination of work-related injuries, ill health, diseases, incidents and deaths.

At national level, guidelines used by countries to:

- (a) establish national framework for OSH management systems (preferably supported by national laws and regulations)
- (b) develop voluntary arrangements to strengthen compliance with regulations and standards leading to continual improvement
- (c) develop both national and tailored guidelines on OSH management systems to respond appropriately to real needs of *organizations*, according to size and nature of activities.

Occupational Safety and Health Management Systems in the organization



WHAT OHSAS 18001...

WHAT ANSI Z10...

WHAT VPP...

**ELEMENTS DOES YOUR
ORGANIZATION
ALREADY HAVE?**

HANDOUT

**Key Features of:
VPP,
OHSAS 18001,
ANSI/AIHA Z10,
ILO 2001**

HANDOUT

- Source: North Carolina State University
<http://osha.ies.ncsu.edu/reference/reference.cfm>
- Some variation, mostly due to subject matter
- Requirements from one standard would not harm other standard's requirements
- Integration of ISO 14001 and Z10 standards CAN occur and should certainly be encouraged

DIS/ISO 45001 Standard

Draft International Standard (DIS) for Occupational Health and Safety Management



DIS/ISO 45001

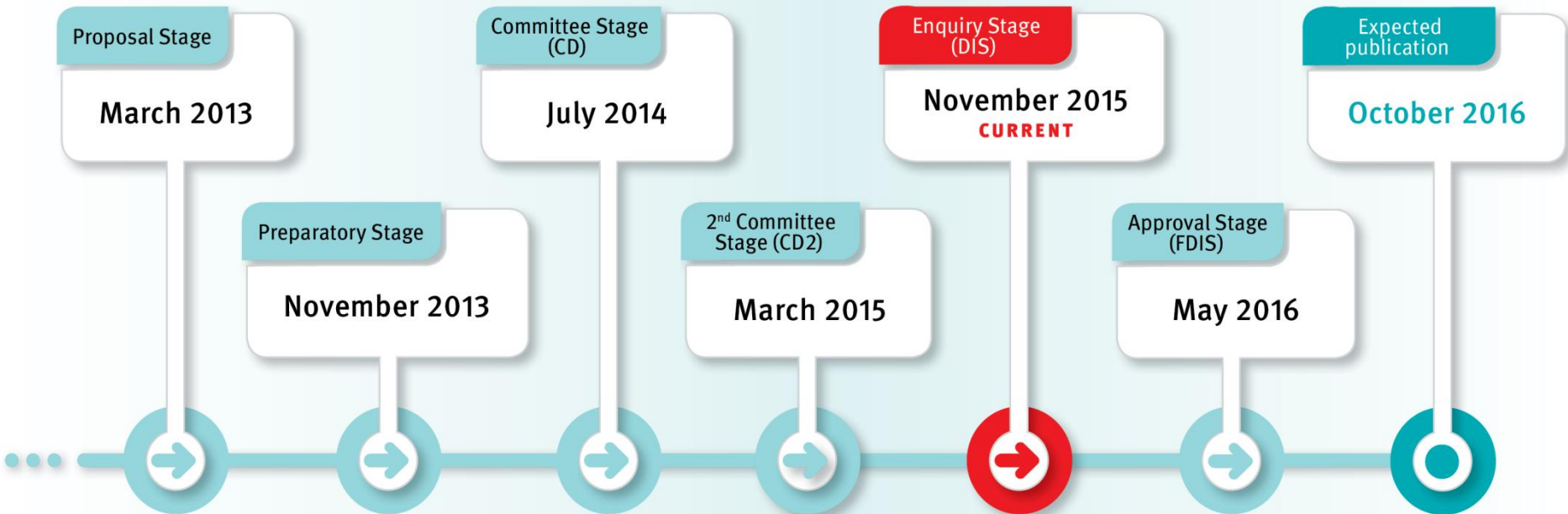
Introduction

- 2013 - ISO created Project Committee 283 (PC 283) and a U.S. Technical Advisory Group (TAG) to ISO PC 283
- Scope - develop a global occupational health and safety (OH&S) standard to provide effective, real-world solutions for worker safety
- Historic work to protect not only America's workers, but also that of the global workforce
- It will continue to shape H&S profession and directly impact how we manage and deliver health and safety both in and out of workplace

DIS/ISO 45001 Background

- OHSAS "Standards and Certificates Survey" has shown rapid rise in rate of use of OHSAS 18001 and equivalent standards, such as ANSI Z10 OHSMS over the past 10 years
- OHSMS standards now being used in 127 countries globally with over 100,000 certificates issued
- Benefit society by:
 - Reducing number of incidents and accidents
 - reducing disruptions to operational processes
 - Reducing need for emergency medical care provision
 - Reducing costs of incidents and accidents or of disruptions

DIS/ISO 45001 Standard



DIS/ISO 45001 Standard

- Public review ends March 25th
- March 10-11, 2016 - [ASSE Virtual Symposium](#)
- ASSE: most significant occupational safety and health voluntary national consensus to ever be promulgated
- Provides a framework for a consistent OSH standard for all organizations across supply chain
- OHSAS 18001/Z10 can jump start anticipated future conformance with DIS/ISO 45001 - Occupational health and safety management systems

Scope of Proposed Standard

(Source: ASSE PPT)

This International Standard specifies requirements for an occupational health and safety (OH&S) management system, to enable an organization to control its OH&S risks and improve its OH&S performance. It does not state specific OH&S performance criteria, nor does it give detailed specifications for the design of a management system. This International Standard is applicable to any organization that wishes to:

- a) establish an OH&S management system to eliminate or minimize risks to personnel and other interested parties who could be exposed to OH&S hazards associated with its activities;
- b) implement, maintain and continually improve an OH&S mgmt system;
- c) assure itself of its conformity with its stated OH&S policy;
- d) demonstrate conformity with this International Standard.

Scope of Proposed Standard

(Source: ASSE PPT)

The International Standard is intended to provide

- organizations with the elements of an effective OHSMS that can help organizations achieve OH&S and economic objectives.
- alignment the revisions of ISO 9001 and ISO 14001 and the application of Annex SL, Appendix 2 of the *Supplement to ISO Directives Part 1 (High level structure, identical core text and common terms and core definitions for use in Management Systems Standards)*
- requirements that can be incorporated into any OH&S management system. The extent of the application will depend on such factors as the OH&S policy of the organization, the nature of its activities and the risks and complexity of its operations.

This International Standard is not intended to address other health and safety areas such as employee wellbeing/wellness programs, product safety, property damage or environmental impacts.

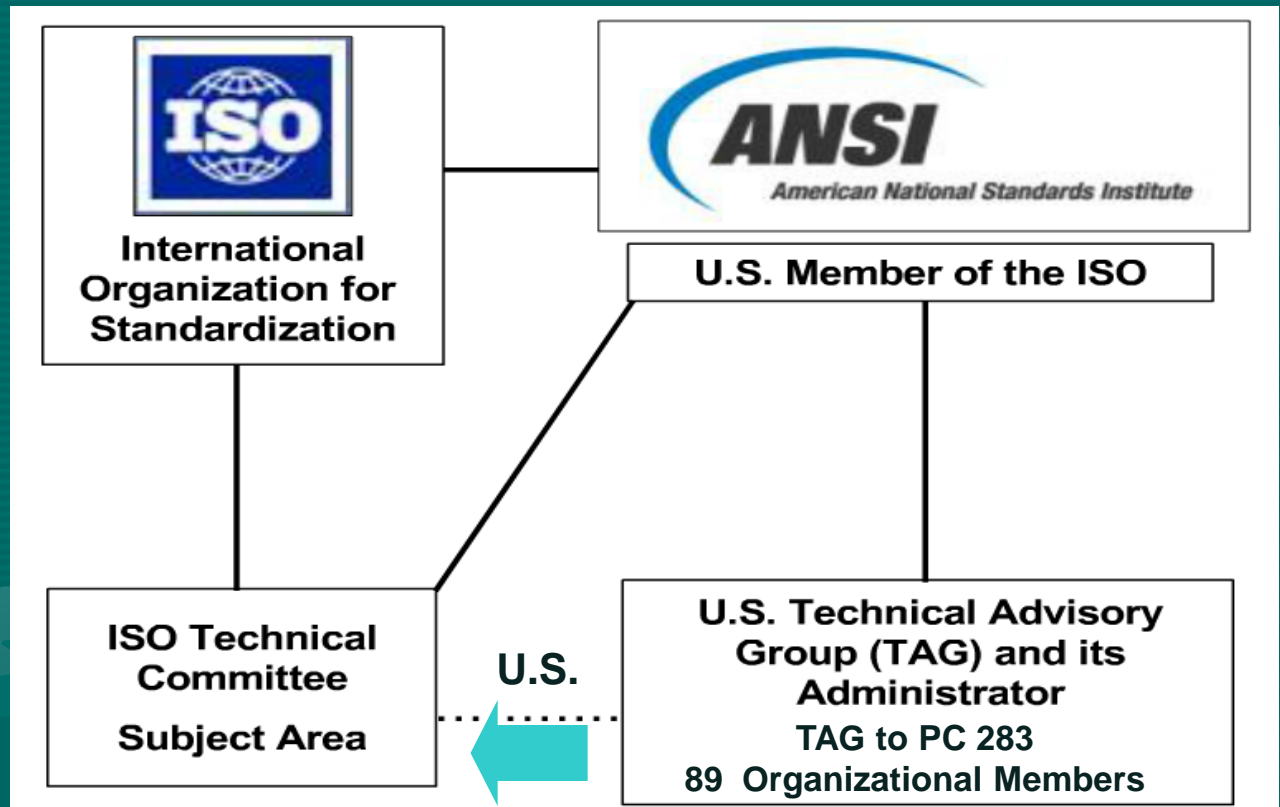
International Organizational Relationships

(Source: ASSE PPT)

ISO 45001
Occupational Health & Safety Management Systems



PC 283
43 Member countries
15 Observing countries
6 Liaison Members



Who is Involved

43 Participating Countries
and
15 Observing Countries



Participating Countries

(Source: ASSE PPT)

Secretariat: United Kingdom

Argentina	Austria	Belgium	Botswana	Burundi
Canada	Chile	China	Colombia	Costa Rica
Czech Rep.	Denmark	Egypt	Finland	France
Germany	Ghana	Iraq	Ireland	Israel
Italy	Japan	Malaysia	Morocco	Namibia
Netherlands	Norway	Poland	Portugal	Romania
Rwanda	Singapore	S. Africa Sprain	Sri Lanka	
Sweden	Switzerland	Thailand	Turkey	Uganda
UK	United States	Uruguay		

Observing Countries

(Source: ASSE PPT)

Armenia

Cyprus

Indonesia

Korea

Saint Lucia

Belarus

Hong Kong

Iran

New Zealand

Serbia

Brazil

India

Jordan

Papua New Guinea

Slovakia

U.S. PC 283 Committee Roster

(Source: ASSE PPT)

AIG Casualty Loss Control

Altria Client Services

American Board of Industrial Hygiene

American Society of Safety Engineers

Amway Corp.

Ashland Inc.

Booz Allen Hamilton

Capital Safety

Center for Safety & Health Sustain.

Climbtech

Dotson Group, LLC

Eastern Kentucky University

AIHA Guideline Foundation

Aluminum Association

American Chemistry Council

American Sugar Refining

Arcadis

The Boeing Company

Brazosport Community College

Cargill Meat Solutions

Clarion Safety Systems

Cummins

Deep Down Inc.

Environmental Compliance System

U.S. PC 283 Committee Roster (cont')

(Source: ASSE PPT)

Erachem Comilog Inc.

Fisher & Phillips

Flour Corporation

Gloal SHE Solutions

Honda North America Services

Institute for Safety & Health Mgmt.

JC Safety & Environmental Inc.

Kerry Ingredients & Flavours, Inc.

Konecranes, Inc.

Lockheed Martin Corporation

Mercer/Orchse

Natl Comm. On Occupat. S&H Network

ESIS Health, Safety, & Env.

Flexible Packaging Association

Georgia Tech Env. Sustain. Serv.

Green Counselor

Icarus Environmental Inc.

Intl. Safety Equipment Association

Keene State College

Keystone Engineering Inc.

Lewellyn Technology

Master Lock Company

Momentive Specialty Chemicals

National Consumers League

U.S. PC 283 Committee Roster (cont')

(Source: ASSE PPT)

Natl. Instit. for Occup. S&H (NIOSH)

National Institutes of Health

Natl. Roofing Contractors Assoc.

North Carolina Dept. Of Transport.

Oberon Company

Omnex Engineering & Mgmt.

Penske Logistics

Philip L. Colleran, CSP

Risk Mgmt. & Insurance Society

Safety Compliance Mgmt, Inc.

Sage Products

Span International Training LLC

Natl. Instit. Of Standards and Tech

National Retail Federation

National Safety Council

Nucor Corporation

OSHA

Parsons

Pfizer (pending)

PJ Brennan & Associates

ROC One, LLC

Safety-Wise, LLC

Siemens N. American Healthcare

SRI Quality System Registrar

U.S. PC 283 Committee Roster (cont')

(Source: ASSE PPT)

Toyota Motor Engineering & Manufacturing North America, Inc.

Transreg LLC

Tyson Foods EHS Services

United Auto Workers Intl. Union

United States TAG ISO TC262

University of Alabama

Univ. of WI – Whitewater (pending)

Walmart Stores, Inc.

Willis Group

Zurich Services Corporation

TUV SuD America

UL

United Food Commercial Workers

United Steelworkers Intl. Union

University of Utah

Walt Disney Parks & Resorts

Weir

Z10 Accredited Stand. Committee

What does the draft look like so far....ISO 45001

- Section 1: Scope
- Section 2: Normative References
- Section 3: Terms and Definitions
- Section 4: Context of the Organization
- Section 5: Leadership
- Section 6: Planning
- Section 7: Support
- Section 8: Operation
- Section 9: Performance Evaluation
- Section 10: Improvement

What does the draft look like so far....ISO 45001

Followed by Annex A – Informative

Likely will see references to:

- ANSI Z10: Occupational Health and Safety Management Systems
- ANSI/ASSE Z590.3 – 2011: Prevention through Design Guidelines for Addressing Occupational Hazards and Risks in Design and Redesign Process
- OHSAS 18001: Occupational Health & Safety Management System

ISO Standards

- It is worth noting that development of ISO 45001 takes into account consistency with:
 - ISO 9001
 - ISO 14001



CONDUCTING A SAFETY MANAGEMENT SYSTEM AUDIT



BRAUN SAFETY ASSOCIATES, LLC

Management System Audits

ConocoPhillips Alaska – North Slope contractors

Spectranetics – medical devices

Trinidad Benham – beans, rice, popcorn, foil

City of Sioux Falls, SD – approx. 500+ employees

Enbridge – O&G pipeline construction



Performing a SMS Audit

1. Principles
2. Auditor Qualifications
3. Analytical Tools
4. Conducting the Audit
5. Report
6. Common Pitfalls and Problems



Principles of Auditing

ANSI/AIHA/ASSE Z10

6 Evaluation and Corrective Action

- Monitoring and measurement
- Audits
- Records
- Incident investigation
- Corrective and preventive actions
- Feedback to the planning process

Management
Review

Checking and
Corrective
Action



Policy

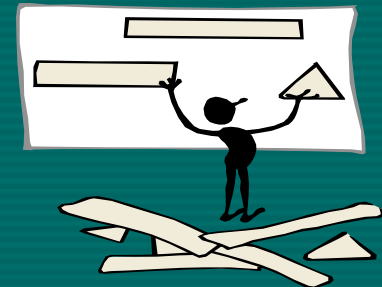
Planning

Implementation
and
Operations

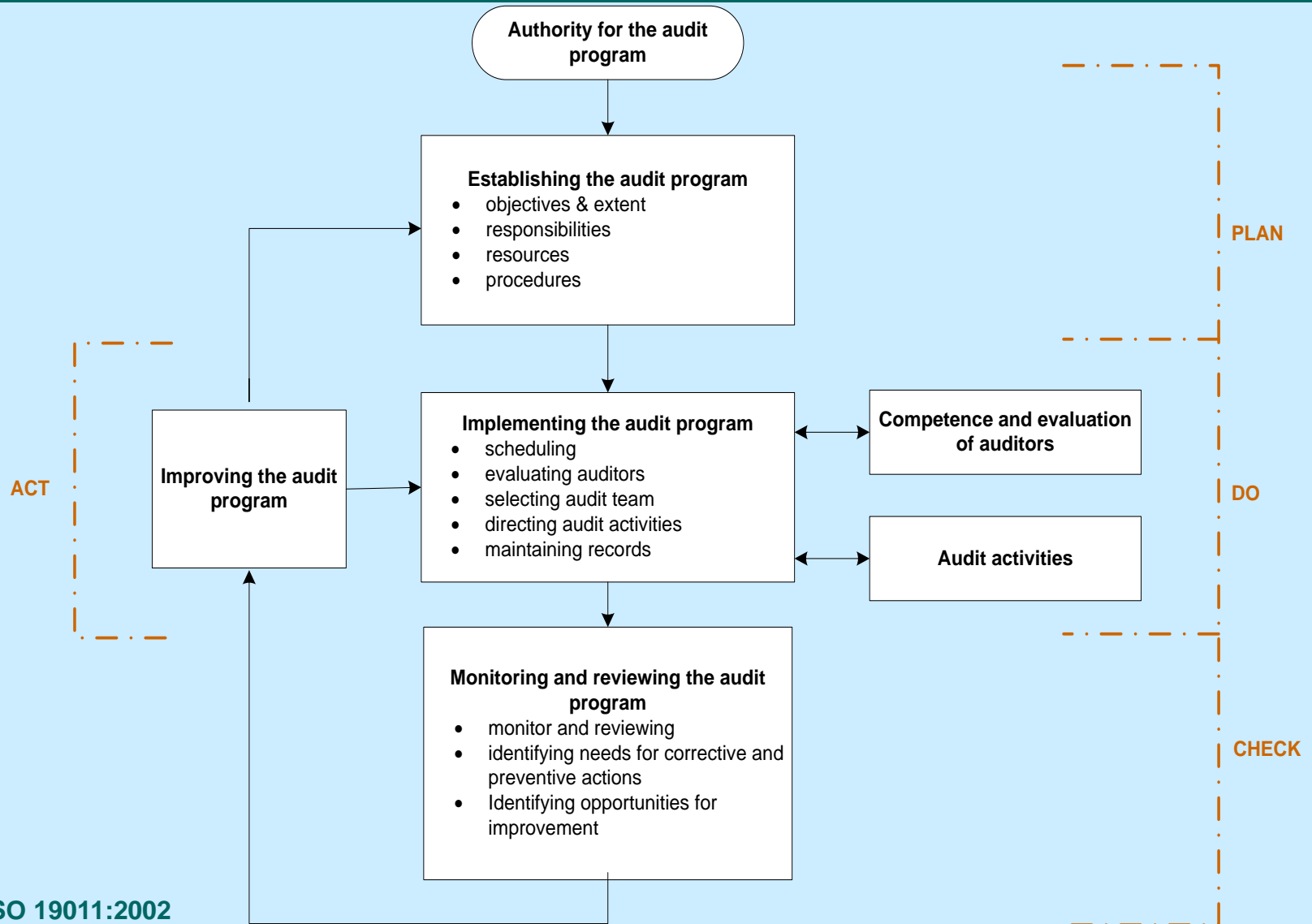
SMS Audit Program

1. Written audit protocol
2. Systematic, consistent, objective approach
3. Fair presentation (obligation to report truthfully and accurately)
4. Evidence-based (audit evidence is verifiable)
5. Ethics, due professional care, application of diligence and judgement in auditing

ISO 19011
Guidelines for management
systems auditing



Essential Audit Program Elements



From ISO 19011:2002

What is a SMS Audit?

- Objective assessment, performed at defined intervals and sufficient frequency, of a company's SMS system to operate against a given criteria
 - Systematic
 - Independent
 - Documented



What is a SMS Audit?

- Audits are not a quick look
- Audits are *preventive*, not detective
- Audits are planned, organized, and coordinated
- Audits are carried out for the benefit of company, not the auditor
- Not punitive
- Clear in scope



What is a SMS Audit?

- Factual, unfiltered information to manage SMS
- Tool for use by management
- Regulatory requirement (FDA, ISO, etc.)
- Help minimize risk
- A single audit will not find all noncompliant issues or potential problems



Auditor Qualifications

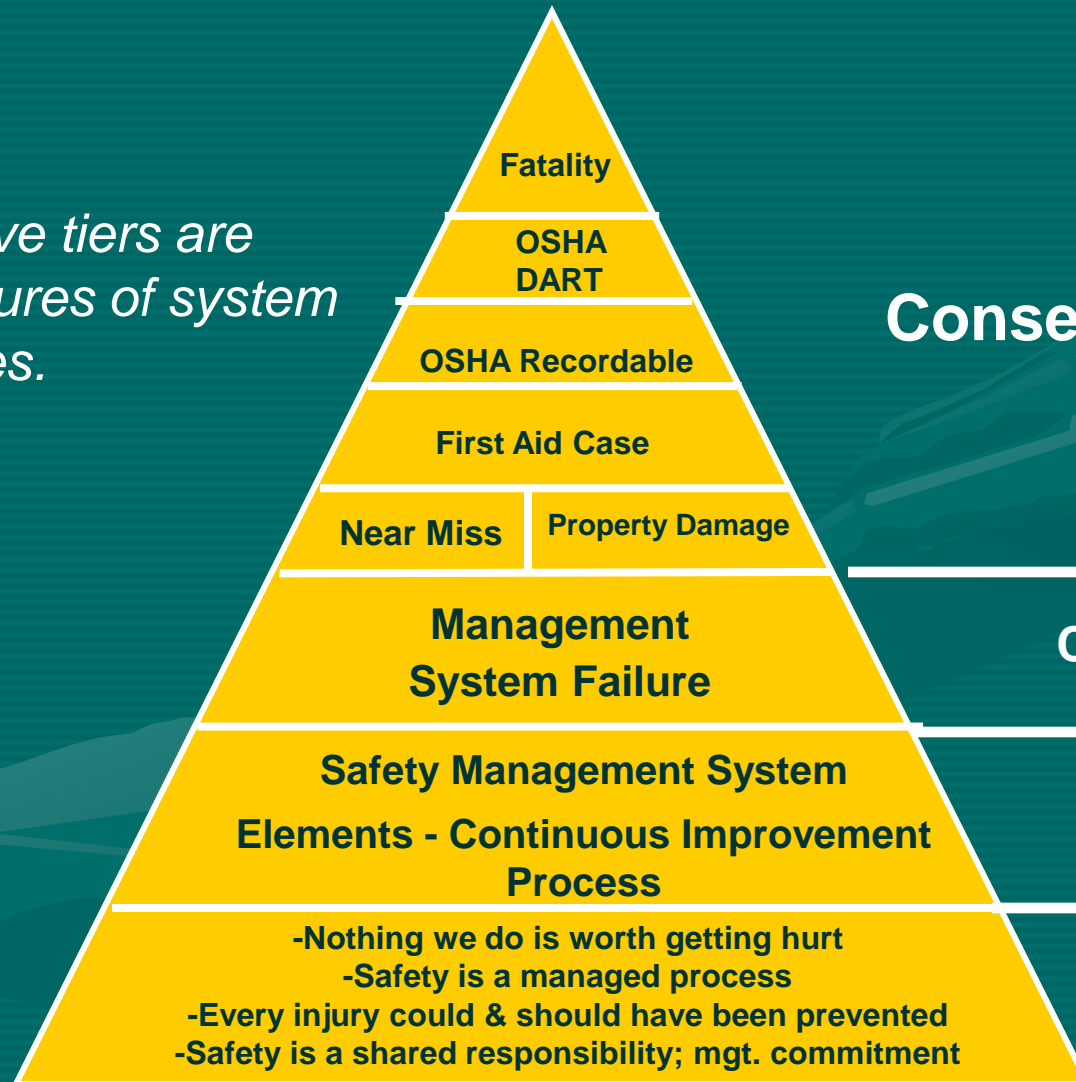
- Analytical Skills
 - Able to assimilate data and determine how it relates to audit criteria
 - Analyze information and report results
- Able to identify noncompliance
- Good communication, technical, interpersonal skills
- Understanding of management systems



Safety System Foundation

(Source: National Safety Council)

Top five tiers are measures of system failures.



Consequences

Cause

Control

Values

Auditor Qualifications

- Interviewing Skills
 - Intelligent and pertinent questions
 - Listen attentively
 - Show respect, make no assumptions
- Ability to think inside *and* outside box
- Understanding of business operating structure
 - Inputs/outputs of various systems
 - Interactions of departments
 - Other management systems and improvement programs in place (e.g., FDA, ISO 9001, SQF, Kaizen, TQM)



Auditor Qualifications

- Training and Experience
 - Standards, regulations, auditing techniques
 - Interviewing skills
 - Audit management skills
 - Part of performance review
 - Document training
 - Intuition - experience



Auditor Qualifications

- Ethical in conduct
- Objective, fair and impartial
- Self confident
- Honest and firm, unbiased
- Focused
- Observant
- Versatile and flexible
- Not easily influenced but respected by all
- Able to quickly establish good rapport with people at all levels
- Team player
- Tactful
- Discreet
- Analytical and logical
- Open to alternative ideas
- Pleasant, friendly character
- Have a good memory
- Well groomed

**ICAO SAFETY
OVERSIGHT**

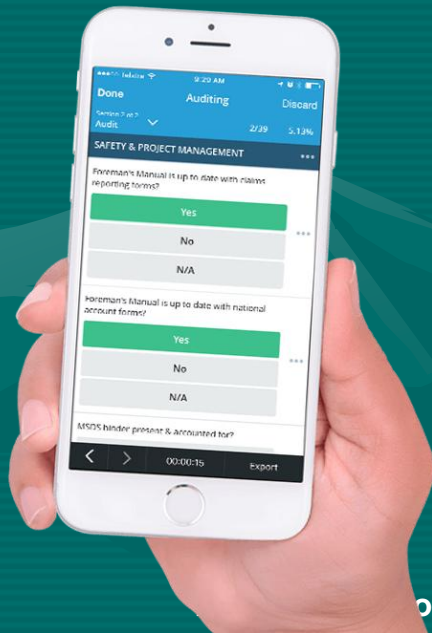
Analytical Tools

- What system criteria are you using?
- Make audit tool easy to use
 - Prepare your own format
 - Easy to read & find info
- Consider the report format, depth/detail
- Review document – budget your time



Analytical Tools

- Assess and measure the performance of the SMS
- Checklists – format, scoring, level of detail, quality and technical evaluation criteria
- Scorecard
- Software – leading brands



Analytical Tools

- OSHA
- New Mexico OSHA
- OGP
- NSC
- Worksafe - BC, AS/NZ
- Bsigroup.com
- Malcolm Baldrich



Analytical Tools

- Checklists
- Software

What software
do you use?



INTELEX

Form.com

velocityEHS

rivo

iAuditor

Dakota
SOFTWARE

What checklists or
spreadsheets do you
use?

www.capterra.com

OHSAS 18001

www.ohsas-18001-occupational-health-and-safety.com

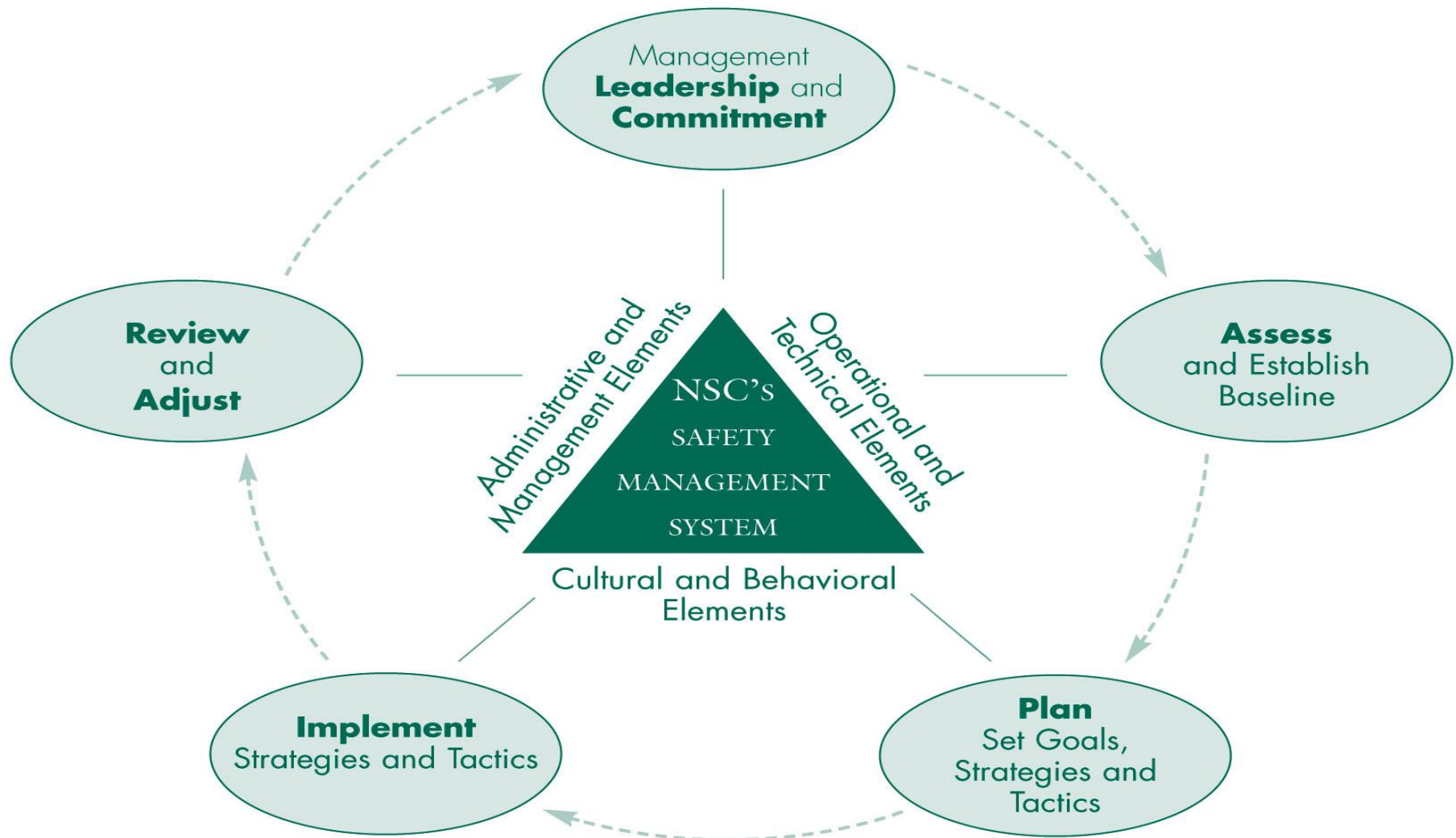
OHSAS Electronic Toolkit

<http://www.ohsas-18001-occupational-health-and-safety.com/ohsas-18001-kit.htm>

**Our work is never
so urgent or
important that we
cannot take time
to do it safely.**

Analytical Tools

National Safety Council - 9 Elements of SMS



Analytical Tools

National Safety Council - 9 Elements of SMS

Elements	Rating
<p>Element 5: Workplace Design and Engineering</p> <p>Safety and health hazards are most effectively and economically addressed in the planning and design stage through involvement of safety and health professionals and others in planning facilities, processes, materials, and equipment.</p> <ul style="list-style-type: none"> • Safe workplace design reflects optimum physical and psychological compatibility between the employee and process, methods of operation, equipment, materials, and machinery. • Workplaces designed and constructed with employees in mind will have a favorable impact on productivity, quality, and safety and health. • Policies should be established to ensure workplace design takes issues into account. 	
<p>Element 6: Operational Safety Programs</p> <p>Too often regulatory compliance is the only driving force behind many safety and health programs. But, a successful safety management system must focus beyond mere compliance and concentrate on managing risk to worker's safety and health along with regulatory compliance issues. In order to accomplish this:</p> <ul style="list-style-type: none"> • Regulatory compliance policies should be established for required occupational safety programs based on the needs of the organization. • Management must determine the scope and nature of the organization's occupational health program and allocate resources to provide appropriate services. Management should develop program goals and establish functions, programs, procedures, and activities to meet the organization's occupational health goals. • Successful safety and health programs must effectively manage and control external exposures. External exposures include any influences on risk that arise outside the boundaries of company property or are caused by a third party. 	
<p>Element 7: Employee Involvement</p> <p>Employee involvement in all phases of a safety management system benefits employees and management through performance improvements and increased acceptance and support of policies.</p> <ul style="list-style-type: none"> • Management can facilitate a cooperative effort to improve a safety system through employee involvement in proactive safety activities and participation in the decision-making process. • Management commitment to meaningful employee involvement can be demonstrated by establishing a policy for ongoing and meaningful employee involvement in proactive activities that focus efforts on recognition, evaluation and control or elimination of workplace hazards. 	

Analytical Tools

A	B	C	D	E	F
ANSI Z10 Requirements					
Clause #	Clause Title	#	Requirement	Yes, No or Partial	Notes / Evidence / Observations
3.0	Management Leadership and Employee Participation				
3.1	Management Leadership				
3.1.1	OHSMS	1	Has Top management directed the organization to establish, implement and maintain an OHSMS in conformance with this standard that is appropriate to the nature and scale of the organization and its occupational health and safety risks?		
3.1.2.	Policy	1	Has Top Management established a policy?		
		2	Does the Policy contain a commitment to employee health and safety and continual improvement of?		
		3	Does the Policy contain a commitment to effective employee participation?		
		4	Does the Policy contain a commitment to conformance with the organizations health and safety requirements?		
		5	Does the Policy contain a commitment to compliance with laws and regulations?		
		6	Is the policy available to all employees?		
		7	Is policy communicated to all employees?		
		8	Is the policy dated ?		
		9	Is the policy signed (or otherwise officially issued) by Top Management ?		
3.1.3	Responsibility and Authority	1	Has Top Management assumed responsibility for the - implementation, maintenance and performance of the OSHMS?		
		2	Has Top Management provided - appropriate financial resources to plan, implement, operate, check, correct and review OHSMS?		
		3	Has Top Management provided - appropriate human resources to plan, implement, operate, check, correct and review OHSMS?		
		4	Has Top Management provided - appropriate organizational resources to plan, implement, operate, check, correct and review OHSMS?		
		5	Has Top Management defined - roles, assigned responsibilities, established accountability, and delegated authority to implement the OHSMS effectively and enable continual improvement ?		
		6	Has Top Management - integrated the OHSMS into the organization's other business systems and processes?		
		7	Have employees taken personal responsibility for health and safety aspects they have control over? (this includes conformance with the organization's health and safety rules and requirements)		
3.2	Employee Participation				
3.2	Employee Participation	1	Is there a process for effective OHSMS participation by its employees at all levels of the organization?		
		2	How has the organization implemented the processes outlined in 3.2.17?		
		3	Has the organization provided its employees the mechanisms, time and resources necessary to participate in the processes of - planning ?		
		4	Has the organization provided its employees the mechanisms, time and resources necessary to participate in the processes of Implementation ?		

Analytical Tools

Contractor HSE Competency Assessment Questionnaire

For the purpose of this questionnaire "Executive Management" is defined as top level management (President, VP, General Manager, etc.)

Weight	HSE Requirement	HSE System Management Proficiency - Assessment Questions	Yes / No
1.0 Management Commitment, Leadership and Communications			
10	Management Commitment and Leadership	<p>1. Is executive management visibly committed and engaged in setting performance expectations, leading incident prevention efforts, and achieving continuous HSE performance improvement?</p> <p>Describe how and cite examples.</p> <p>Interviews indicate that executive management is visibly committed to HSE, as exemplified by the President/General Manager's personal interest in the program and the people. <u>ALL</u> interviewees noticed a major change in the level of commitment with the new General Manager.</p>	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
		<p>2. Is executive management with employees on a regular (what frequency) basis, walking among them and talking with them?</p> <p>President has made approx. 10-12 visits to Prudhoe Bay, and has been on the job less than one year. Attends and speaks at meetings.</p>	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
		<p>3. Is executive management accessible and do they answer questions and encourage feedback about concerns?</p> <p>Employees indicated that the CEO/General Manager is very accessible and very people-oriented. He upholds the company's "open door" policy.</p>	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
		<p>4. Are leadership competence and skills identified and measured for executive management?</p> <p>How is this documented?</p> <p><u>Do</u> interviews show leadership understands skills and competence? Yes</p> <p>How measured?</p> <p><u>Subgoals</u> to meet main company goals; business control plan with Key Performance Indicators (KPI's), KPI's tallied quarterly and reviewed by managers</p>	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
		<p>5. Does management at all levels serve as an HSE role model?</p> <p>Cite examples:</p> <p>CEO makes effort to talk with employees; local management is driving force behind audits, meetings, <u>awareness</u>. Responses by interviewees uphold policy statement in HSE Manual.</p>	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no

Weight	HSE Requirement	HSE System Management Proficiency - Assessment Questions	Yes / No
		<p>6. Is there a documented HSE Policy?</p> <p>The company maintains a "HSE Manual" as well as an Environmental Management System (EMS) on the company's intranet. Both the HSE Manual and the EMS contain a HSE policy statement. The HSE Manual and EMS are not well coordinated.</p> <p>A policy statement is contained within the HSE Manual, the latest revision of which is June 2004, as indicated on the "Program Authorization and Maintenance Record". The EMS system also has a policy statement regarding HSE.</p>	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
		<p>7. Does the policy require:</p> <ul style="list-style-type: none"> Protection and continual S&H improvement? yes Require effective employee participation? yes Require conformance with company requirements? yes Require compliance with applicable laws and regulations? yes <p>Vision/mission clear? Yes, very clear.</p>	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
		<p>8. Is the policy available and communicated to employees?</p> <p>How? Primarily through safety meetings</p>	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
		<p>9. Is the policy reviewed annually?</p>	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
		<p>10. Is the policy signed by Executive Management?</p>	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
		<p>11. Do employee interviews support the answers above?</p>	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
2	Communications	<p>12. Does management personally conduct HSE forums or perform other visible HSE communications? If yes, how often? weekly</p> <p>Examples: safety meetings, safety circles, meetings are held at different work locations</p> <p>How is HSE covered in management meetings? Operations Review Team meetings occur monthly. CEO speaks at these when he is on the North Slope.</p>	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
		<p>13. Are HSE bulletins, alerts, or other written communications periodically distributed to all employees? Frequency?</p> <p>A weekly company communications bulletin is sent out via email to employees; bulletin includes budget and operations info, as well as North Slope info.</p>	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
		<p>14. Is there a defined (documented) process for soliciting and addressing employee concerns or suggestions?</p>	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no

Sample SMS Scorecard

HSE MANAGEMENT SYSTEM RATING SUMMARY					
% Possible	Element Assessed	Effectively Implemented	Established	Not Established or Effective	Rating
15	1.0 Management Commitment, Leadership & Communications				
15	2.0 Management Of HSE Continuous Improvement				
5	3.0 Roles, Responsibilities & Accountabilities				
10	4.0 Training & Competency				
10	5.0 Employee Engagement & Ownership				
10	6.0 Performance Verification & Assurance				
10	7.0 Hazard / Risk Assessment & Mitigation				
5	8.0 Engineering Controls				
10	9.0 Administrative Controls				
10	10.0 Job Planning				
100		100%	50%	0%	
				OVERALL RATING	

Highly Proficient	Average	Needs Improvement
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Effectively Implemented - process in place, expects continuous improvement and promotes gap identification and Management. System is measurable, definable and implemented.

Established - documented but not well implemented and does not invoke continuous improvement.

Not Established or Effective - process missing or ineffectively implemented

Conducting the Audit

1. Prepare

Logistics – location

Documents

Interview schedule

Phone calls

Stats, reports, website

PPE



Conducting the Audit

2. Opening meeting

Intros, brief, site schedule,
Interview schedule,
PPE, logistics, positive tone

3. Conduct the Audit

4. Closing meeting

High level review, high priority



Conducting the Audit

- Observations
- Interviews
- Document review



Conducting the Audit



Conducting the Audit



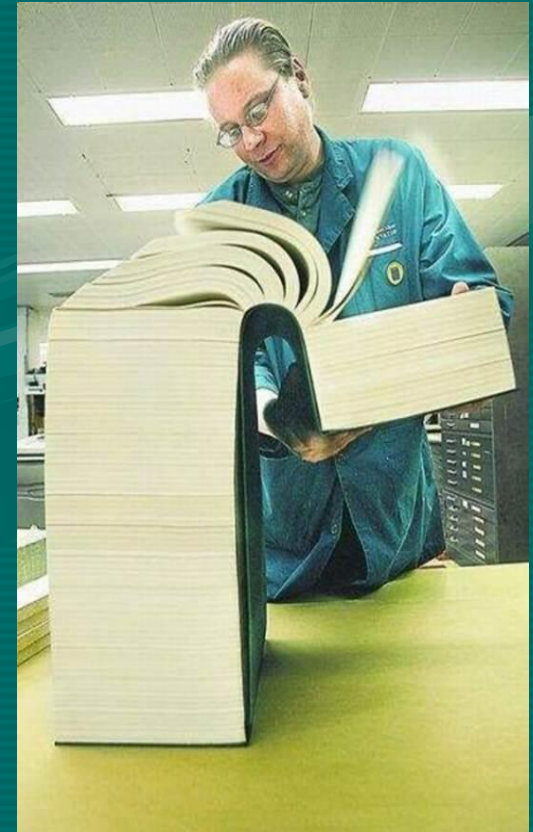


Common Pitfalls and Problems

- **Technical & Interpersonal Skills**

Technical Skills

- “Surprise” factor – auditee unaware
- Document review – depth
- Not systems thinking
- Not probing deep enough
- Not budgeting time for adequate depth of D/O/I (documents, observations, interviews)



Common Pitfalls and Problems

Technical Skills

- Frequency – not performed on scheduled basis
- Results not always communicated
- Not having a CA tracking document in place
- Poor technical writing skills



Finding/ Citation	Corrective Action	Implementation Plan/Dates	Status	Closure/ Initials
1.				
2.				

Reports

Executive Summary

Section I. Background/facility info

Section II. Scope and objectives

Section III. Findings – imminent danger,
compliance, SMS elements

Section IV. Recommendations, solutions,
corrective actions (long term, short term, interim)

Section V. Summary

Section VI. Follow-up tracking

Attachments



Common Pitfalls and Problems

- Not everyone can be a good auditor
- Success of the auditing program depends significantly upon selection of right people for task
- Right personnel from cross-functional groups
- Wear PPE, follow rules
- Touch base with fellow auditors



Common Pitfalls and Problems

Interpersonal Skills

- Interviews – selection not representative of all levels of employees
- Interviews – cop approach
- Style of asking questions



Common Pitfalls and Problems

Interpersonal Skills

Essential auditor attributes and/or qualities:

- Enthusiastic, constructive, objective, inquisitive and analytical state of mind
- Patient, good listener who can communicate at all levels without arguing
- Strong but diplomatic personality
- Able to make unpopular decisions, and yet maintain respect, based on sound judgments

Summary

Can You...

- ...state the purpose and benefits of auditing the SMS?
- ...identify ANSI Z10, OHSAS 18001, and VPP system elements?
- ...examine the design of your organization's SMS against national and international standards?

Summary

Can You...

- ...identify phases of a SMS audit (plan, execute, report, follow-up, closure)?
- ...explain roles and responsibilities of the auditor, including technical and interpersonal skills?
- ...analyze tools (checklists/software) to assess and measure SMS performance?

Braun Safety Associates, LLC

THANK YOU!

Presented by:



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