



ERSG/Prod/Serv/FS/013/09

**SUBJECT:**  
**PROCESS SAFETY  
MANAGEMENT AUDITS**

**OUR SERVICES COVER THE  
FOLLOWING AREAS:**

- Process Hazard Analysis
- Enterprise Risk Management
- Project Management
- RUBI-Software
- Business Continuity Systems
- Process Safety Management
- Risk Training Solutions



# PROCESS SAFETY MANAGEMENT AUDIT

## Introduction

*Risk Management Solutions for  
Dynamic and Progressive  
Industry*

**Process Safety Management (PSM)** systems audits are necessary to track and monitor safety systems and procedures implementation. PSM Systems Audits identify opportunities where systems can be strengthened. The ERSG PSM system has 14 major elements and many sub-elements that can guide the monitoring of the system. **The PSM System is based on the OSHA 1910.119 Process Safety Management System standard.** PSM compliance audits should be undertaken by a 3rd party on a 3 yearly basis.

## Services

**Process safety audits provide increased assurance that facilities are being operated and maintained in a way that properly protects the safety and health of the employees, the environment, the surrounding community, plant assets and continuity of operations. These audits cover items such as:**

- Correct materials of construction
- Correct codes, standards and engineering practices
- Operating and maintenance procedures

Safety audits examine and assess in detail the standards of facets of a particular activity. They extend from complex technical operations and emergency procedures to job descriptions and attitudes. Management system audits are crucial to loss prevention and it is essential that this system itself be monitored. This is for ensuring that company/plant procedures are being implemented.

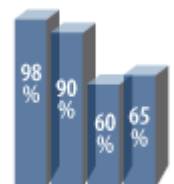
## ERSG USES THE FOLLOWING METHODS AND SOFTWARE

### Methodology

ERSG uses the **AS/NZS 19011:2003 Guidelines for Auditing** as the audit methodology and RABQSA accredited lead auditors to lead the process. Audit teams consist of at least one Lead Auditor and one technical auditor with related experience to conduct audits. The process consists of the steps as depicted in the list of audit activities below.

#### Audit activities

- 1.1 General activities
- 1.2 Initiating the audit
- 1.3 Conducting document review
- 1.4 Preparing for the on-site audit activities
- 1.5 Conducting on-site audit activities
- 1.6 Preparing, approving and distributing the audit report
  - 1.6.1 Preparing the audit report
  - 1.6.2 Approving and distributing the audit report
- 1.7 Completing the audit
- 1.8 Conducting audit follow-up



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### PSM AUDIT SOFTWARE TOOL

The **RUBI™ Audit Module** allows a company to create and implement custom audits throughout the organization. The Audit Module can be used for SHEQ, ISO, COSO, GARP, PSM, or any other audit protocol that may be required within the organization.

**Requirements:** Unspecified



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**PROCESS HAZARD  
ANALYSIS AUDITING**

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# PROCESS SAFETY MANAGEMENT AUDITS

## PSM Elements

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The ERSG Process Safety Management (PSM) system audit protocol consists of 14 elements and is aligned with the OSHA 1910. 119 Process Safety Management standard as follows:

### Element 1: 1910.119 (c) Employee Participation

Establish a PSM Team, Develop a Written Plan of Action, Prioritize Goals, Assign Responsibilities, Have scheduled meetings

### Element 2: 1910.119 (d) Process Safety Information

Maintain a Library for: Manufacturer's Data Reports, Maintenance Manuals, P&ID'S (Piping and Instrumentation Diagrams), Codes and Standards, Block Flow Diagrams.

### Element 3: 1910.119 (e) Process Hazard Analysis (PHA)

Due Every Five-Years or if the Process Changes

### Element 4: 1910.119 (f) Operating Procedures

Initial Start-up, Normal Operations, Temporary Operations, Emergency Shutdowns and Operations, Normal Shutdown, Start-up following shutdowns

### Element 5: 1910.119 (g) Training of Personnel

- Refresher PSM Training
- Operators In Operating Procedures
- Management of Change
- Contractors
- Emergency Response

### Element 6: 1910.119 (h) Contractors

#### PRE-QUALIFICATION

Review Safety Records, Employee Certifications and Insurance Records

Perform On-Site Safety Orientation

For Employers and Employees

#### Documentation

### Element 7: 1910.119 (i) Pre-Start-up Review

Must be performed prior to introducing new equipment to the system.

Operators Trained? PHA Performed? P&ID'S Up-dated? i.e. Management of Change

### Element 8: 1910.119 (j) Mechanical Integrity Inspection and Testing

*"Following recognized and generally accepted good engineering practices"*

IIAR Bulletin 110, API-510, Pressure Vessels, API-570, Piping, ASME Section VIII, Div. 1, ASME, B.31.5, Ammonia Piping, ASHRAE 15, NBIC-65, ASNT-TC-1A, Personnel Qualifications

### Element 9: 1910.119 (k) Hot Work Permit

Be sure that CONTRACTORS are aware of your Hot Work Procedures prior to beginning work.

### Element 10: 1910.119 (l) Management of Change

Involves Plant Engineer, Safety Manager, Refrigeration Operators, and Maintenance i.e. PSM TEAM

### Element 11: 1910.119 (m) Incident Investigation

Accidents and Near Misses: MUST BE REPORTED, (Investigation within 48 Hours), Make corrective actions to avoid future occurrences; you could save someone's life.

### Element 12: 1910.119 (n) Emergency Planning & Response

Off-Site Response, On-Site Response, Emergency Evacuation Posters, Alarm Systems

### Element 13: 1910.119 (o) Compliance Audits

Required every 3 years. The last 2 must be kept on file.

### Element 14: 1910.119 (c) Employee Participation

Establish a PSM team, Develop a written plan of action, Prioritize goals, Assign responsibilities, Have scheduled meetings.

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