

Process Safety Management (PSM) Inspections & Expectations

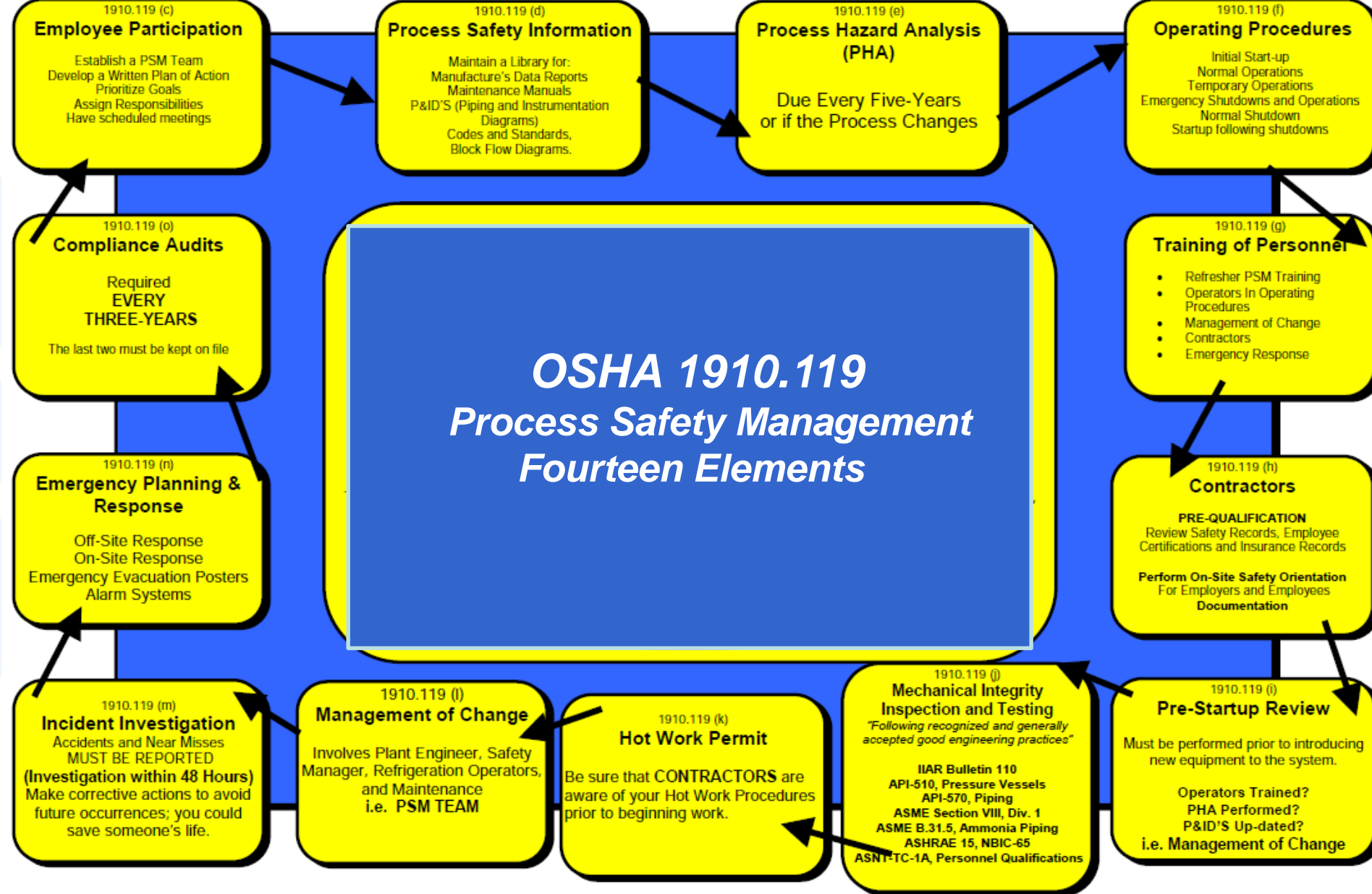
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Process Safety Management (PSM) Enforcement Process Background

- Performance Based
- Follows Recognized and Generally Accepted Good Engineering Practices (RAGAGEP)
- A comprehensive analysis of a complex safety program that is dependent on each element of the standard...(14 elements)





What is the purpose of the PSM Management of Highly Hazardous Chemicals?

To control and prevent the consequences from a release of toxic, reactive, flammable or explosive chemicals.

- Highly Hazardous Chemicals (**HHCs**) are found in Appendix A of 29 CFR 1910.119
- Flammable liquids and gases **in process** above the Threshold Quantity (**TQ**) of 10,000 pounds.
- Manufacturing of explosives and pyrotechnics.



History of PSM -NEP

- 1992 – PSM inspections
 - Program Quality Verification (CPL 02-02-045)
 - Resource intensive
- 2007- Updated Refinery NEP
 - Still very resource intensive
- 2009 – Pilot NEP all PSM facilities
 - Different methodology
 - Increase inspection / fewer resources
- 2011 – Implemented Pilot
- 2017 – Undated CPL (CPL 03-00-021)



Who is covered?

OSHA Jurisdiction

Region 7

- Private-Sector and Federal Employers in Kansas, Nebraska, Missouri.
- Within Iowa, Private and Public Sectors are covered by State Plan OSHA and Federal Employers are covered by Federal OSHA.



Who is not covered?

- **Not covered by the OSH Act:**
- Self-employed;
- Immediate family members of farm employers that do not employ outside employees; and
- Workplace Hazards regulated by another Federal agency (for example, the Mine Safety and Health Administration, the Federal Aviation Administration, the Coast Guard).



How Does OSHA Schedule Inspections?

Fatalities / Catastrophes

Unprogrammed

- Complaints (Employee / General Public)
- Referral from state/local agencies/Media
- Incidents/ Accidents (RRI)

Programmed Inspections

- PSM Covered Chemical Facilities National Emphasis Program (% of sites on list per region)
- Other Emphasis Programs

<https://www.osha.gov/enforcement/directives/nep>



What happens during an inspection?

- Credentials
- Opening conference
- Tour of the covered process
- Employee and Management interviews
- Closing Conference

Opening Conference

- Verify covered facility
 - Does not fall under any exemptions
- Will ask for general documents
 - Will probably ask for more later

Attendees – Safety and Health Director, Process Safety manager, person that can explain PSM program, union if union facility



Covered Process

- Threshold Quantities (TQs) are always expressed in pounds and are found in 29 CFR 1910.119 Appendix A.
- A company may use, store, manufacture, handle or have on-site movement of the chemicals.



Initial Documents

- 300 logs
- List of units
 - Maximum intended inventories
- Summary description of PSM program
- Unit process flow diagram
- Contract or temporary employees?
- Emergency Action Plan

During the onsite inspection Document:

- Be prepared to provide written documentation such as but not limited to: (provide as soon as possible)
 - Recent flow diagrams of the covered process(es)
 - Process safety information
 - Maintenance records
 - Mechanical integrity program, audit or compliance audits and testing information
 - Training
- OSHA has up to 6 months to complete the onsite inspection and issue citations.



Walkaround

Get a general feel of the facility

- Select one or more units to do more complete evaluation
- Plain view violations

May come back to some certain areas of the facility

GOOD HOUSEKEEPING PRACTICES.....

- Engine Rooms must be clean and in order
- Equipment- vessels, pipes, valves, engines – labeled and clearly identified.



Watch out.... RED FLAGS.. Corrosion



Interview

- Employees (formal and informal)
- Management
- PSM personnel
- Maintenance

Dynamic list of questions (not available)

Sample questions – previous CPL

What to do during an OSHA inspection?

- Plan ahead and prepare
 - Do not procrastinate!
- Get familiarized with your covered process(es)
- Organize & maintain all your information available.



Enforcement Considerations

- Is the process covered by RAGAGEP sections of PSM
- Multiple RAGAGEP apply
 - All acceptable if are as protective
 - But must pick one (can not mix and match)
- Use of inapplicable RAGAGEP can result in poor hazard control and can be grounds for citations.
- If no RAGAGEP still expected to provide adequate protection - possible internal standards.

Definition of RAGAGEP

Center for Chemical Process Safety's (CCPS)
Guidelines or Mechanical Integrity Systems

RAGAGEP:

- The basis for engineering, operation, or maintenance activities and are themselves based on established codes, standards, published technical reports or recommended practices (RP) or similar documents.
- RAGAGEP detail generally approved ways to perform specific engineering, inspection or mechanical integrity activities, such as fabricating a vessel, inspection a storage tank, or servicing a relief valve.



RAGAGEP in CFR 1910.119 – PSM Enforcement

- Where REGAGEP is directly referenced in PSM Standard
 - **(d)(3)(ii):** Employers must document that all **equipment** in PSM-covered processes complies with RAGAGEP
 - **(j)(4)(ii): Inspections and tests** are performed regarding mechanical integrity requirements in accordance with RAGAGEP
 - **(j)(4)(iii): Inspections and test frequency** follows mfg. recommendations, good engineering practice, and more frequent if indicated by operating experience.

Enforcement Considerations

- Mechanical Integrity: Correct deficiencies before further use or assure safe operation in the interim
- Updated RAGAGEP
 - Does not mandate employer upgrade equipment
 - OSHA expects employers to address issues raised in a timely manner



OSHA Standards Related to Process Safety, Hazardous Chemicals, Emergency Response

- Process Safety Management, 29 CFR 1910.119
- Hazardous Waste Operations and Emergency Response, 1910.120
- OSHA Hazard Communication Standard with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), 1910.1200
- Confined Spaces 29 CFR 1910.146
- Emergency Action Plans 29 CFR 1910.38
- Fire Prevention, 29 CFR Subpart L



Hazardous Waste and Emergency Response Operations OSHA Standard 1910.120

Emergency Response Plan (ERP) 1910.120(q)(2)

The emergency response plan must include the following elements:

- Pre-emergency planning and coordination with outside parties,
- Personnel roles, lines of authority, training, and communication,
- Emergency recognition and prevention,
- Safe distances and places of refuge,
- Site security and control,
- Evacuation routes and procedures,
- Decontamination,
- Emergency medical treatment and first aid,
- Emergency alerting and response procedures,
- Critique of response and follow-up, and
- PPE and emergency equipment



OSHA Standards for Emergency Planning

OSHA standards can interface with HAZWOPER depending on the specific hazards on the site and the work being performed. A few of these other standards may include:

Subpart E – Means of Egress

- 37.Means of egress
- 38.Employee emergency plans and fire prevention plans- Appendix Means of Egress

Subpart I – Personal Protective Equipment

- 132.Personal Protective Equipment
- 133.Eye and face protection
- 134.Respiratory protection
- 135.Head protection
- 136.Foot protection
- 138. Hand protection

Subpart J – Environmental Controls

- 146. Permit-required confined spaces
- 147. Control of hazardous energy sources

Subpart K – Medical and First Aid

- 151, Medical services and first aid

Subpart L – Fire Protection

- 146. 1910.155-156 Fire protection and fire brigades 1910.157-163 Fire suppression equipment
- 147. Fire detection systems
- 148. Employee alarm systems Appendices A-E of Subpart L



OSHA Hazardous Communication Standard (HSC)

29 CFR 1910.1200

On September 30, 2009 OSHA issued a proposed rule to align the OSHA Hazard Communication Standard (HCS) with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

▪ **On March 20, 2012:** OSHA issued the Final Rule aligning the HCS to the GHS.

• **What you need to do and when:**

- **Chemical users:** Continue to update safety data sheets when new ones become available, provide training on the new label elements and update hazard communication programs if new hazards are identified.
- **Chemical Producers:** Review hazard information for all chemicals produced or imported, classify chemicals according to the new classification criteria, and update

Effective Completion Date	Requirement(s)	Who
December 1, 2013	Train employees on the new label elements and SDS format.	Employers
June 1, 2015*	Comply with all modified provisions of this final rule, except:	Chemical manufacturers, importers, distributors and employers
December 1, 2015	Distributors may ship products labeled by manufacturers under the old system until December 1, 2015.	
June 1, 2016	Update alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.	Employers
Transition Period	Comply with either 29 CFR 1910.1200 (this final standard), or the current standard, or both.	All chemical manufacturers, importers, distributors and employers



NEW



Retail Exemption

29 CFR 1910.119(a)(2)(i)

New Memo – April 30, 2018

- OSHA will not issue citations under PSM for NAICS codes
 - 424510 – Grain & Field Bean Merchant Wholesalers
 - 424590 – Other Farm Product Raw material Merchant Wholesalers
 - 424910 – Farm Supplies Merchant Wholesalers
- BUT, must continue to comply with other applicable OSHA standards
 - Anhydrous ammonia, HAZWOPER, HAZCOM, etc.



Retail Exemption
29 CFR 1910.119(a)(2)(i)
New Memo – April 30, 2018

- For all other industries subject to PSM coverage, CSHO's should exercise enforcement discretion in accordance with the following explanation from the preamble to the PSM standard:
 - With respect to the exclusion of retail facilities... OSHA believed that such facilities did not present the same degree of hazard to employees as other workplaces covered by the proposal. Therefore, OSHA should not require a comprehensive PSM system in addition to other applicable OSHA standards addressing flammable & combustible liquids, compressed gases, hazard communication, etc., for retail facilities



Reference Documents

PSM Covered Chemical Facilities National Emphasis Program – CPL 03-00-021 (January 17, 2017)

PSM Covered Concentrations Policy (June 8, 2015)

PSM RAGAGEP Policy (May, 11, 2016)

OSHA Response to Significant Events of Potentially Catastrophic Consequences – CPL 02-00-094 (July 22, 1991)



Questions?

Now is the time to ASK 😊

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