



OSHA PSM

A brief overview of OSHA PSM and how it correlates to EPA's Risk Management Program



OSHA PSM Legal Authority

- The OSHA Process Safety Management (PSM) standard (29 CFR 1910.119) was promulgated in **1992**
- Focuses on worker protection



OSHA PSM vs. EPA CAA 112(r) Thresholds

- CAA 112(r) has 27 chemicals not listed in PSM
- PSM has about 79 chemicals not listed in CAA 112(r)
- Thresholds
 - Most CAA 112(r) threshold quantities (TQs) are higher than OSHA's, with some exceptions
 - Methyl chloride: EPA—10,000 lbs.; OSHA—15,000 lbs.
 - EPA has lower concentrations (e.g., aqueous ammonia)



Common Regulated Substances at Ethanol Facilities

	<u>EPA</u> (lbs.)	<u>OSHA</u> (lbs.)
□ Anhydrous ammonia	10,000	10,000
□ Aqueous ammonia (>20%, <44%)	20,000	
□ Aqueous ammonia (>44%)	20,000	15,000
□ Chlorine	2,500	1.500
□ Ethylene oxide	10,000	5,000
□ Flammable mixture (denaturant)	10,000	10,000
▣ C3 to C5		
▣ Propane, butane/isobutane, pentane/isopentane		

Note: OSHA's definition of flammable is different than EPA's.



Comparable EPA & OSHA References

Program 3 Prevention Program	EPA RMP 40 CFR	OSHA PSM 29 CFR
Process Safety Information (PSI)	§ 68.65	§ 1910.119(d)
Process Hazard Analysis (PHA)	§ 68.67	§ 1910.119(e)
Operating Procedures	§ 68.69	§ 1910.119(f)
Training	§ 68.71	§ 1910.119(g)
Mechanical Integrity	§ 68.73	§ 1910.119(j)
Management of Change (MOC)	§ 68.75	§ 1910.119(l)
Pre-Startup Review	§ 68.77	§ 1910.119(i)
Compliance Audits	§ 68.79	§ 1910.119(o)
Incident Investigation	§ 68.81	§ 1910.119(m)
Employee Participation	§ 68.83	§ 1910.119(c)
Hot Work Permit	§ 68.85	§ 1910.119(k)
Contractors	§ 68.87	§ 1910.119(h)



Comparable OSHA & EPA Terms

OSHA TERM	EPA TERM
Highly Hazardous Chemical	Regulated substance
Employer	Owner or operator
Facility	Stationary source
Standard	Rule or part





OSHA PSM Exemptions

- Even if process qualifies for OSHA PSM exemption, it may not qualify for Risk Management Program exemption and vice-versa.





OSHA PSM Exemptions

- ❑ Retail facilities
- ❑ Substances used solely as fuel if such substances are not part of process containing another regulated substance
- ❑ **Flammable liquids stored in atmospheric storage tanks (e.g., <0.5 psig)**
- ❑ Oil and gas well-servicing operations
- ❑ Normally unoccupied remote facilities



Differences from EPA CAA 112(r)(7)

- No hazard assessment
- No management system requirements
- No emergency planning/program requirements
 - ▣ Under OSHA regs, emergency planning/response are stand-alone requirements
- No submittal



Inspection Findings

- ❑ Facilities think PSM and CAA 112(r)(7) are the same
 - ❑ Atmospheric storage of flammables
 - Refineries & ethanol plants
 - ❑ Differences in listed chemicals or thresholds
 - Aqueous ammonia 20% vs. 44%
 - ❑ Miss other program elements (management system, hazard assessment)



Questions?