Navigating Potential PSM Standard Changes and RMP Final Rule Compliance

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Missouri Air Seminar
November 6, 2024

Chemical Accident Prevention Regulatory Timeline

- OSHA 1992 Process Safety Management (PSM) Standard
  - 29 CFR 1910.119
- 1990 Clean Air Act Amendments
  - Section 112(r)(1) – General Duty Clause
  - Section 112(r)(7) – Accident Prevention
- EPA 1996 Accident Prevention Regulations
  - 40 CFR Part 68
  - June 1999 RMP

2024 Chemical Accident Rule

- Safer Communities by Chemical Accident Prevention Rule (SCCAP)
- EPA finalized February 27, 2024
- Federal Register - March 11, 2024, 89 Fed. Reg. 17622
- Final rule effective May 10, 2024

17622 **Federal Register** / Vol. 89, No. 48 / Monday, March 11, 2024 / Rules and Regulations

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 68

[EPA–HQ–OLEM–2022–0174; FRL–5766.6–02–OLEM]

RIN 2050–AH22

Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act; Safer Communities by Chemical Accident Prevention

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is amending its Risk Management Program (RMP) regulations as a result of Agency review. The revisions include several changes and amplifications to the accident prevention program requirements, enhancements to the emergency preparedness requirements, improvements to the public availability of chemical hazard information, and several other changes to certain regulatory definitions or points of clarification. As major and other serious and concerning RMP accidents continue to occur, the record shows and EPA believes that this final rule will help further protect human health and the environment from chemical hazards through advancement of process safety based on lessons learned. These amendments seek to improve chemical process safety; assist in planning, preparedness, and response to Risk Management Program-reportable accidents; and improve public awareness of chemical hazards at regulated sources. While many of the provisions of this final rule reinforce each other, it is EPA's intent that each one is merited on its own, and thus severable.

DATES: This final rule is effective on May 10, 2024.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–HQ–OLEM–2022–0174. All documents in the docket are listed on the *https://www.regulations.gov* website. Although listed in the index, some information is not publicly available, *e.g.*, Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available electronically through *https://www.regulations.gov*.

FOR FURTHER INFORMATION CONTACT: Deanne Grant, Office of Emergency Management, Mail Code 5104A, Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460; telephone number: 202–564–1096; email: *grant.deanne@epa.gov*.

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. EPA uses multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, EPA defines the following terms and acronyms here:

List of Abbreviations and Acronyms

ANSI American National Standards Institute
API American Petroleum Institute
CAA Clean Air Act
CAAA Clean Air Act Amendments
CBI Confidential Business Information
CCPS Center for Chemical Process Safety
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
CFATS Chemical Facility Anti-Terrorism Standards
CFR Code of Federal Regulations
CISA Cybersecurity & Infrastructure Security Agency
CSB Chemical Safety and Hazard Investigation Board
CSISSFRRA Chemical Safety Information, Site Security and Fuels Regulatory Relief Act
CVI Chemical-terrorism Vulnerability Information
DHS Department of Homeland Security
DOJ Department of Justice
DOT Department of Transportation
EHS Extremely Hazardous Substances
EJ Environmental Justice
E.O. Executive Order
EPA Environmental Protection Agency
EPCRA Emergency Planning and Community Right-To-Know Act
FBI Federal Bureau of Investigation
FOIA Freedom of Information Act
FR Federal Register
GDC General Duty Clause
HF hydrofluoric acid
HHC highly hazardous chemical
ICR Information Collection Request
IIAR International Institute of Ammonia Refrigeration
IPAWS Integrated Public Alert & Warning System
ISD inherently safer design
IST inherently safer technology
LEPC Local Emergency Planning Committee
LOPA Layers of Protection Analysis
NAICS North American Industry Classification System
NASTTPO National Association of SARA Title III Program Officials
NECI National Enforcement and Compliance Initiative
NJDEP New Jersey Department of Environmental Protection
NRC National Response Center
NRI National Risk Index
NTTAA National Technology and Transfer Advancement Act
OCA offsite consequence analysis
OMB Office of Management and Budget
OSHA Occupational Safety and Health Administration
PES Philadelphia Energy Solutions
PHA process hazard analysis
PHMSA Pipeline and Hazardous Materials Safety Administration
PRA Paperwork Reduction Act
PSI process safety information
PSM process safety management
RAGAGEP recognized and generally accepted good engineering practices
RCA root cause analysis incident investigation
RFA Regulatory Flexibility Act
RIA Regulatory Impact Analysis
RMP Risk Management Program or risk management plan
SARA Superfund Amendments and Reauthorization Act
SCCAP Safer Communities by Chemical Accident Prevention
SDS Safety Data Sheet
SERC State Emergency Response Commission
STAA safer technology and alternatives analysis
TCPA Toxic Catastrophe Prevention Act
TMA trimethylamine
TQ threshold quantity
UMRA Unfunded Mandates Reform Act

The contents of this preamble are:

Topics

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Potential PSM Standard Changes in wake of EPA's Safer Communities by Chemical Accident Prevention (SCCAP) Final Rule

01

Potential PSM Standard Changes in wake of EPA’s SCCAP Final Rule

Timeline

- **August 18, 2022:** SCCAP proposed rule announced by EPA
- **October 12, 2022:** OSHA held informal stakeholder meeting regarding rulemaking project for PSM standard following the August 2022 SCCAP proposed rule by EPA
- **March 11, 2024:** EPA publishes SCCAP to the Federal Register after public comment and stakeholder meetings in 2023

What is OSHA doing?

OSHA:

- Has yet to announce its alignment strategy with EPA's RMP changes
- Will likely observe the outcomes of these rule changes before considering harmonization with the EPA RMP
- Issued a directive that became effective January 26, 2024, which establishes OSHA’s enforcement policy for PSM
  - The OSHA directive and EPA SCCAP final rule can be used by industry to understand OSHA’s intent for the PSM standard until a decision is made on changes

02

SCCAP Final Rule and Recommendations for Compliance

What are you currently required to do?

PHA Consideration of Natural Hazards[1]

- Consider natural hazards that could cause or exacerbate accidental releases
  - Climate change
  - Flooding
  - Cold Waves
  - Heat waves
  - Hurricanes
- EPA will require justification in RMP when hazard evaluation recommendations are not adopted; however, that is not required until May 10, 2028

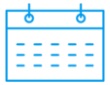
[1] Provisions also being considered by OSHA for the PSM standard

Recommendations for implementation

PHA Consideration of Natural Hazards

Amend existing PHAs by reviewing and documenting a node for natural hazards if not recorded already.

The PHA team should review publicly available sources to identify appropriate natural hazards for the area, particularly extreme weather events. Data sources should be included in the PHA report to support natural hazard risk determination.



Develop plan for compliance for 2024 requirement.

Start planning for implementation of the May 2028 regulatory requirement around six (6) months out from the due date.

Consider applying this process to PSM-covered areas as well since it is likely that OSHA will amend their PSM standard to codify these requirements.

Resources include:

- Federal Emergency Management Agency (FEMA) disaster reports and data sources
- National Oceanic and Atmospheric Administration (NOAA) flood information
- United States Geological Survey (USGS) seismic hazard tools

What are you currently required to do?

Facility Siting

- Defines facility siting requirements as inclusion of the placement of processes, equipment, and buildings within the facility, and **hazards posed by proximate stationary sources, and accidental release consequences posed by proximity to the public and public receptors**
- EPA will require justification be submitted in a facility's RMP when facility siting hazard recommendations are not adopted; however, that is not required until May 10, 2028

Recommendations for implementation

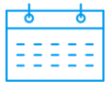
Facility Siting

Amend existing PHAs by reviewing and documenting additional siting requirements for:

- Hazards posed by proximate stationary sources
- Accidental release consequences posed by proximity to the public and public receptors

The PHA team should review:

- Publicly available data to identify other proximate stationary sources that may pose a hazard to the facility
- The facility's RMP offsite consequence analysis (OCA) data to assess risk posed by the facility to the public.



Develop plan for compliance for 2024 requirement.

Start planning for implementation of the May 2028 regulatory requirement around six (6) months out from the due date.

Resources include:

- USEPA Environmental Justice (EJ) Screening and Mapping Tool ("EJ Screen")
- 2020 US Census Data
- Google Maps or equivalent mapping source for public receptor identification

What are you currently required to do?

Loss of Power

- PHA must explicitly address risk of power failure, standby power, emergency power
- Not requiring emergency power systems to the covered process “at this time”, but explain decisions not to implement
- Air pollution control and monitoring equipment used to prevent/detect accidental releases must be equipped with standby/backup power by May 10, 2027

Recommendations for implementation

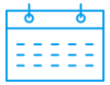
Loss of Power

Amend existing PHAs by reviewing and documenting additional requirements for loss of power to:

- The covered process
- Air pollution control and (fenceline) monitoring equipment associated with the covered process

The PHA team should review:

- If power supplies are sufficiently adequate
- Reasons why back up power to Air pollution control and (fenceline) monitoring equipment might not be implemented.



Start planning for implementation of the May 2027 regulatory requirement around six (6) months out from the due date.

Approach this review by:

- Conducting a PHA session to review risks associated with existing equipment configuration compared to emergency or standby power to affected systems
- Generate recommendations as appropriate to address gaps in addressing loss of power, if any

What are you currently required to do?

Recognized and generally accepted good engineering practices (RAGAGEP) gap analysis[1]

Examples include:

ASME SETTING THE STANDARD

API American Petroleum Institute

NFPA®

Review any gaps in safety between the codes, standards, or practices to which the process was designed and constructed and the most current version of applicable codes, standards, or practices

[1] Provisions also being considered by OSHA for the PSM standard

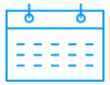
Recommendations for implementation

RAGAGEP Gap Assessment

Amend existing PHAs by reviewing and documenting gaps associated with design RAGAGEP revisions if any applicable.

Recommend conducting the code review as part of the process safety information (PSI) gathering in prep for the PHA session to make efficient use of the team's time.

The PHA team can then review risks associated with gaps with the latest code or standard's design requirements, particularly those that may be retroactive for an existing system.



Develop plan for compliance for 2024 requirement.

Consider implementing this with PSM-covered processes as well since it is likely that OSHA will amend their PSM standard to codify these requirements.

Approach this review by:

- Gathering PSI, which includes:
  1. Identifying which design codes and standards have been revised since initial design or previous PHA
  2. Review the latest updates to the revised codes and standards (standard agencies may publish a redlined copy)
  3. Determine what revisions are applicable to the facility's process(es)
- Conduct a PHA session to review risks associated with existing equipment design compared to the latest RAGAGEP requirements
- Generate recommendations as appropriate to address gaps in safe design, if any

What are you currently required to do?

Technical Clarifications for PSI and RAGAGEP, and Expanded Requirements for Hot Work and Operating Procedures

- Maintain up-to-date PSI
- Ensure and document the process is designed and maintained in compliance with RAGAGEP
- Retain hot work permits for at least three (3) years
- In operating procedures, address removal of monitoring equipment associated with prevention and detection of accidental releases due to safety concerns from imminent natural hazards

Recommendations for implementation

- Technical Clarifications for PSI and RAGAGEP, and Expanded Requirements for Hot Work and Operating Procedures

Update facility practices and policies to align with the requirements, especially for record retention

- Train appropriate personnel on the new or modified policies

Utilize the management of change (MOC) process and RAGAGEP gap assessments to ensure and document equipment is **designed** in accordance with RAGAGEP

Utilize your mechanical integrity (MI) program to ensure and document equipment is **maintained** in accordance with RAGAGEP (i.e., your MI procedures or equivalent documentation must detail RAGAGEP followed for inspection and testing of in-service equipment)

What about compliance with the future requirements?

Root Cause Analysis (RCA)

- RCA is a best practices for incident investigations, so consider implementing sooner
- Examples of recognized RCA methods include 5 whys, failure mode and effects analysis (FMEA), fault tree analysis (FTA)
- Resource: CCPS Guidelines for Investigation of Process Safety Incidents

STAA[1, 2]

- EPA intends to publish guidance for STAA, so once materials are complete, get familiar with the recommended resources (Federal Register Vol. 89, No 48 3/11/2024 Rules and Regulations, page 14)
- Resources:
  - CCPS Guidelines for Inherently Safer Chemical Processes
  - NJDEP Inherently Safer Technology Review

Third-party Compliance Audits[1]

- Update audit policies and procedures to address when third-party audits are required and how to handle.
- Important to include independence criteria for third-party auditors and additional reporting requirements.

[1] Provisions also being considered by OSHA for the PSM standard

[2] Required for North American Industry Classification System (NAICS) codes 324 and 325 that meet one or more of the following criteria: (1) are located within one mile of another stationary source having a covered process in NAICS code 324 or 325; (2) have had one RMP reportable accident since the most recent process hazard analysis under this section; and/or (3) NAICS code 324 with hydrofluoric acid alkylation covered processes.

Safer Technologies and Alternative Analysis (STAA)

- STAA evaluation for subset of Program 3 facilities
- Practicability assessment of inherently safer technologies/design (IST/ISD) for certain facilities
- Implementation of STAA for certain facilities
- Justification in RMP if STAA recommendations not adopted

STAA – Consider and Document

- Applicability of facilities that must consider and document
  - NAICS 324 (Petroleum Refining)
  - NAICS 325 (Chemical Manufacturing)

- Hierarchy of Controls
  - IST/ISD
  - Passive control measures
  - Active control measures
  - Procedural measures

STAA – Practicability Assessment

- Facilities in NAICS 324 and 325 that:
  - Geographic proximity within one mile of another 324/325 facility, **or**
  - Refinery with HF acid alkylation process, **or**
  - RMP reportable accident since most recent PHA

- Must examine and document practicability of IST/ISD
  - "Practicability" based on reasonable time, including environmental, legal, social, technological, and economic factors.

STAA Implementation

- Must implement at least one of the three following:
  - practicable passive control measure, **or**
  - IST/ISD, **or**
  - combination of active **and** procedural measures that are equivalent to or greater than the risk reduction of passive measures.

Third-Party Compliance Audits

- Required when:
  - RMP reportable accident via inclusion on 5-Year Accident History, or
  - EPA/agency demands
- Competency requirements
- Independence requirements
- Documentation and certification obligations
  - Full audit team views
  - Corrective action plans within 90 days and certification by Senior Corporate Offical
  - Submit audit report to Board of Directors' Audit Committee
- Justification in RMP if Third-Party audit recommendations not adopted

What about compliance with the future requirements?

Employee Participation[1]

- Best practice to have employees involved in findings resolution and providing plant personnel with stop work authority, so consider implementing sooner
- Consider resources for anonymous RMP incident or issue reporting (e.g., QR code linked to forms)

Emergency Response[1]

- Non-responders: Start discussing community notification mechanisms during your annual emergency response coordination exercises. Some LEPCs may handle this (e.g., CAERS in Lake Charles, LA)
- Responders: Start discussing field exercise requirements with local response agencies. Develop forms to document the exercises and lessons learned.

Information Availability for the Public

- Consider identifying how these requests will be processed:
  - Who will receive and process requests?
  - How will requests be tracked for at least five years?

[1] Provisions also being considered by OSHA for the PSM standard

Public Information Availability

- Public can request – 6-mile radius of facility
  - Living, working, or spending significant time

- Information to be provided:
  - Chemicals in processes;
  - Safety Data Sheets (SDS)
  - 5-Year Accident History
  - Emergency response status
  - Scheduled exercises
  - LEPC contact information

- Declined recommendations and justifications

Public Information Availability

- Companies must provide ongoing notice:
  - Company website
  - Social media
  - Or other public means

- Verification of 6-Mile radius

Emergency Planning and Response

- Community notification of RMP accidents:
  - Non-responding RMP facilities to develop procedures to inform public
  - Requiring release notification data to local responders
  - Community notification system requirement

- Emergency response exercises
  - Field exercises at least once every 10 years
  - Mandatory scope and reporting for exercises

Employee Participation

- Mandatory employee participation in resolving PHAs, compliance audits, and incident investigations recommendations and findings
- Stop work authority and procedures
- Anonymous reporting
- Training on employee participation plans

03

SCCAP Compliance Dates and EPA Expectations

03

SCCAP Compliance Dates and EPA Expectations

Compliance Deadlines

- **RMP regulated** facilities will be required to comply within the timeframes established by the rule, with a few requirements that became effective **May 2024** and most of the remaining having compliance dates in **May 2027 and 2028**
- Full compliance schedule and tables on following slides

Key Expectations from EPA

- EPA communicated in the RMP Rule preamble their expectation that the new SCCAP requirements effective May 10, 2024, should already have been in place at facilities

When will compliance be required?

Requirements Effective May 10, 2024

Applicable to RMP Program Level (PL) 2 and/or PL 3 Processes

Technical clarifications and expanded requirements for recognized and generally accepted good engineering practices (RAGAGEP), process safety information (PSI), operating procedures, and hot work

- Ensuring and documenting process(es) is/are **designed and maintained** in compliance with RAGAGEP
  [§§ 68.48(b) and 68.65(d)(2)]
- Maintaining **up-to-date** safety information (PL2) or PSI (PL3), whichever is applicable
  [§§ 68.48(b) and 68.65(a)]
- **Operating procedure updates** to address removal of monitoring equipment associated with prevention and detection of accidental releases due to safety concerns from imminent natural hazards
  [§§ 68.52(b)(9) and 68.69(a)(4)]
- Maintain hot work permits for **three years** [§§ 68.85(c)]

Expanded hazard evaluation requirements

- Addressing **natural hazards** in facility hazard reviews (PL2) or PHAs (PL3), whichever is applicable
  [§§ 68.50(a)(5) and 68.67(c)(8)]
- Addressing **facility siting** meeting the RMP Final Rule definition
  [§§ 68.50(a)(6) and 68.67(c)(5)]
- Addressing **RAGAGEP gap analysis** in facility PHA (PL 3 only)
  [§§ 68.67(c)(10)]

When will compliance be required? (1/2)

Requirements Effective 2027 and 2028	
Requirement	Compliance Deadline
Expanded emergency response exercise requirements [for responding facilities only] Emergency response field exercise [in § 68.96(b)(1)(ii)]	March 15, 2027 **or** within 10 years of the date of an emergency response field exercise conducted between March 15, 2017, and August 31, 2022 in accordance with 68.96(b)(1)(ii)
Expanded hazard evaluation requirements Standby or backup power for continuous operation of monitoring equipment associated with prevention and detection of accidental releases from a covered process [in §§ 68.50(a)(3) and 68.67(c)(3)]	May 10, 2027
New safer technology and alternatives analysis (STAA) provisions for refineries and chemical manufacturers [1] STAA provisions [in § 68.67(c)(9) and (h)]	May 10, 2027
Expansion of incident investigation reporting requirements, including root cause analysis (RCA) for RMP-reportable accidents [applicable to PL2 and PL3 facilities] Incident investigation root cause analysis provisions [in §§ 68.60(h) and 68.81(h)]	May 10, 2027

[1] Required for North American Industry Classification System (NAICS) codes 324 and 325 that meet one or more of the following criteria: (1) are located within one mile of another stationary source having a covered process in NAICS code 324 or 325; (2) have had one RMP reportable accident since the most recent process hazard analysis under this section; and/or (3) NAICS code 324 with hydrofluoric acid alkylation covered processes.

When will compliance be required? (2/2)

Requirements Effective 2027 and 2028	
Requirement	Compliance Deadline
Requirement to conduct third-party compliance audit after RMP-reportable accident [applicable to PL2 and PL3 facilities] Third-party audit provisions [in §§ 68.58(f) through (h), 68.59, 68.79(f) through (h), and 68.80] RMP reportable accident is an accidental release from a covered process that resulted in deaths, injuries, or significant property damage on site, or known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage	May 10, 2027
Expanded employee participation requirements [applicable for PL2 and PL3 facilities] Employee participation provisions [in §§ 68.62 and 68.83]	May 10, 2027
Refined community notification requirements for RMP accidental releases Emergency response provisions [in §§ 68.90(b) and 68.95(a)]	May 10, 2027
Enhanced information availability for the public Availability of information provisions [in § 68.210(d) through (h)]	May 10, 2027
Expanded RMP reporting criteria for prevention programs Risk management plan provisions [subpart G]	May 10, 2028

Litigation Status

- Lawsuits filed in D.C. Circuit Court of Appeals
- State challenge
  - Oklahoma, Alabama, Arkansas, Georgia, Kansas, Kentucky, Mississippi, Missouri, Montana, Nebraska, South Carolina, Texas, Utah, and the Arizona Legislature
- Industry challenge
  - National Association of Chemical Distributors
  - American Chemistry Council
  - American Fuel & Petrochemical Manufacturers
  - American Petroleum Institute
  - Chamber of Commerce
  - Society of Chemical Manufacturers

Key items to remember

Review requirements effective now and develop strategy to get into compliance

Start planning for implementation of future RMP regulatory requirements around six (6) months out from the due date if no regulatory changes occur for compliance deadlines

Consider earlier implementation of some future requirements to align with industry best practices, such as RCA and employee participation

If your site is only PSM covered, use the 2024 OSHA PSM directive and 2024 EPA SCCAP final rule to understand OSHA's intent for the PSM standard until a decision is made on changes

Questions?

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