

Risk Management Program (RMP) – Emergency Preparedness Changes for Safer Communities

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Agenda



Refresher: US EPA / OSHA Regulations

Inform: RMP Changes

Share: Outlook and Potential Implications

Regulations – US EPA and OSHA (refresher)

- Facility Chemical Accident Prevention
 - Occupational Safety and Health Administration (OSHA)
 - Environmental Protection Agency (EPA)

- **Employer Safety**



- **Community Safety**



- High Hazards Chemicals Key Regulations
 - EPA Emergency Planning and Community Right to Know Act (EPCRA)
 - OSHA Process Safety Management (PSM) Standard
 - EPA Risk Management Program (RMP) Rule
- PSM and RMP are mostly identical with some additional RMP requirements outside the fence line

A screenshot of the EPA website page titled "Risk Management Program (RMP) Rule". The page features a blue header with the EPA logo and navigation links. The main content area includes a sidebar with a "Guidance and Fact Sheets" menu, a main heading "Risk Management Program Guidance and Fact Sheets", and a list of links under "On this page:" and "Fact Sheets".

United States Environmental Protection Agency

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Risk Management Program (RMP) Rule CONTACT US

RMP Home

About RMP

Guidance and Fact Sheets

Guidance for Facilities

Guidance for Implementing Agencies

Guidance for Inspections

Submitting an RMP

Accessing RMP Information

General Duty Clause

Risk Management Program Guidance and Fact Sheets

This page contains guidance documents and fact sheets for the Risk Management Program rule.

On this page:

- [Fact Sheets](#)
- [Guidance for Facilities](#)
- [Guidance for Inspectors and Implementing Agencies](#)
- [RMP Policies](#)
- [Frequent Questions](#)

Fact Sheets

[Fact Sheet: Clean Air Act Section 112\(r\); Accidental Release Prevention / Risk Management Plan Rule](#)

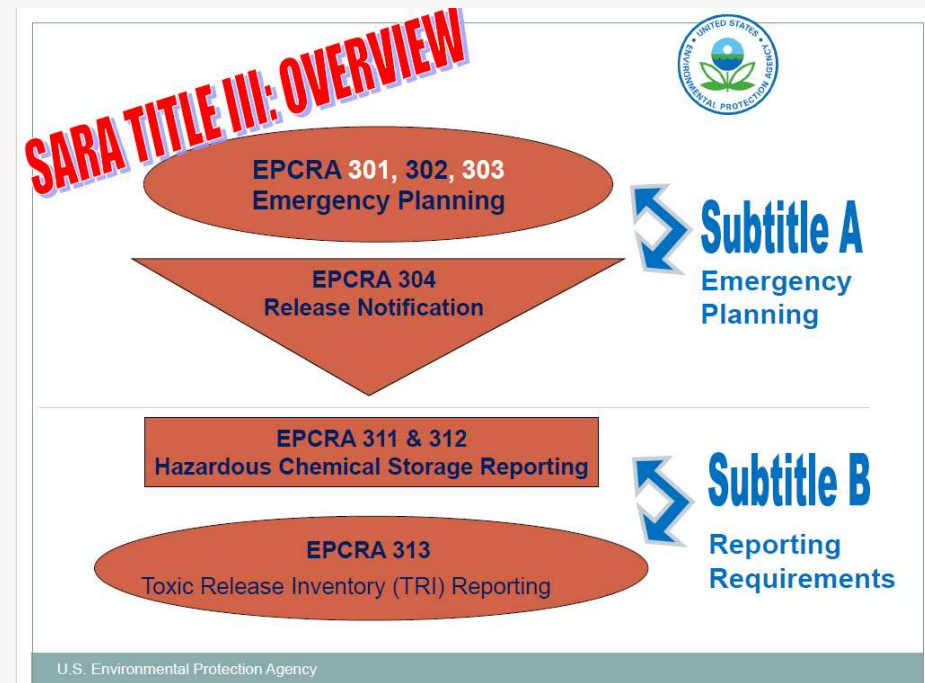
[The General Duty Clause Fact Sheet](#)

[Small Business and the Risk Management Program](#)

[Chemical Emergency Preparedness and Prevention on Tribal Lands](#)

US EPA – First Came EPCRA (refresher)

- Emergency Planning and Community Right-to-Know Act (EPCRA), SARA Title III
 - Passed in response to continuing community concern regarding hazardous materials and chemical release tragedies (recall: Union Carbide-Bhopal).
- Requirements:
 - Emergency Planning
 - Release Notification
 - Hazardous Chemical Inventory Reporting
 - Toxic Release Inventory Reporting



US OSHA – Then Came PSM (refresher)

- Process Safety Management Standard
 - Passed in response to several catastrophic chemical-release incidents that occurred worldwide.
- Requirements:
 - Performance-based standard with some specification requirements for the general and construction industries,
 - Requires a management system with 14 specific elements



US EPA – Finally RMP was Passed (refresher)

- Risk Management Program Rule
 - Passed in response to prevent accidental releases of regulated substances and reduce the severity of those releases that do occur under the Clean Air Act Amendments Section 112(r)
- Requirements:
 - Submit a risk management plan*
 - identify the potential effects of a chemical accident,
 - identify steps the facility is taking to prevent an accident, and
 - spell out emergency response procedures should an accident occur.

Risk Management Program (RMP) Rule CONTACT US

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RMP*eSubmit

Change to Registration Process for RMP*eSubmit Certifying Officials

Effective February 24, 2023, 6:00 p.m. EST, the registration process for RMP*eSubmit Certifying Officials is changing to use additional Central Data Exchange (CDX) registration features. Certifying Officials will now be required to identity proof and sign a standard CDX Electronic Signature Agreement (ESA) as part of CDX the registration process. The CDX ESA is different than the facility ESA generated within RMP*eSubmit, which will no longer be required. If you require assistance, please contact the RMP Reporting Center at 703-227-7650 or RMPRC@epacdx.net.

Facilities should use RMP*eSubmit for online Risk Management Plan (RMP) reporting. RMP*eSubmit improves data quality and enables you to access your RMP 24 hours day, 7 days a week. See the [RMP*eSubmit User's Manual](#) for additional information.



Source: *EPA launched RMP*eSubmit for facilities to use for online Risk Management Plan (RMP) reporting on March 13, 2009.
<https://www.epa.gov/epcra/epcra-milestones-through-years-text-version>

Regulation Timeline – Historical

(Highly Hazardous Chemicals)



Sources: <https://www.epa.gov/epcra/epcra-milestones-through-years-text-version> and <https://www.epa.gov/emergency-response/key-incident-and-milestones> and <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-68>

US EPA – RMP Basics

(refresher)

- You need to identify what actions you must take to comply.
 - Covers facilities* with one or more of the 140 regulated substances above a threshold quantity (TQ)
 - Three (3) Program levels based on processes' potential for public impacts and the effort to prevent accidents
- Program 1
 - No public receptors in worst case scenario zone
 - No accidents w/offsite impacts in last 5 years
- Program 2
 - Facilities not in Program 1 or Program 3
- Program 3
 - Not eligible for Program 1
 - If Already covered by **OSHA PSM standard**, or
 - A Process in 1 of 10 specified NAICS codes

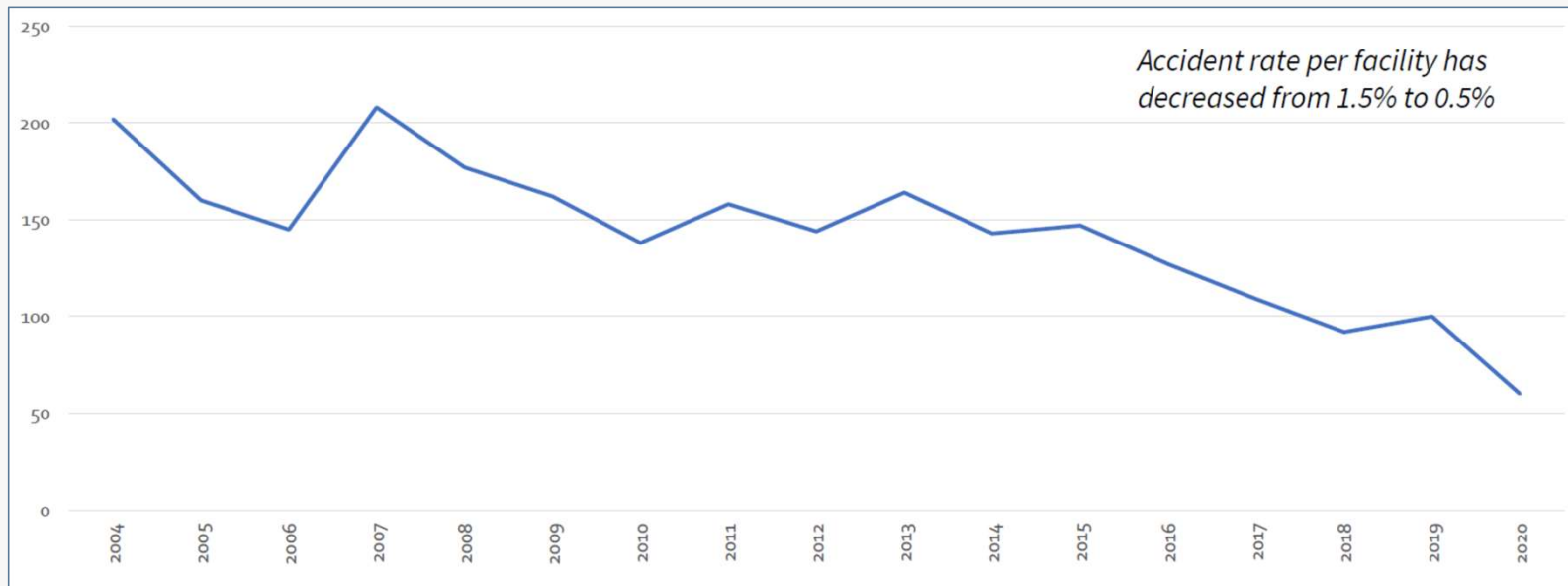


West Texas Explosion Radius at the West Fertilizer Company

Source: <https://www.tshaonline.org/handbook/entries/west-tx>

RMP Historical Trends

(Highly Hazardous Chemicals)



- 97% of Facilities had no Reportable Accidents,
- Most Accidents involved Complex Processes*,
- RMP facility accidents occur more frequently in predominately minority communities,
- Major and other serious RMP accidents have continued to occur...

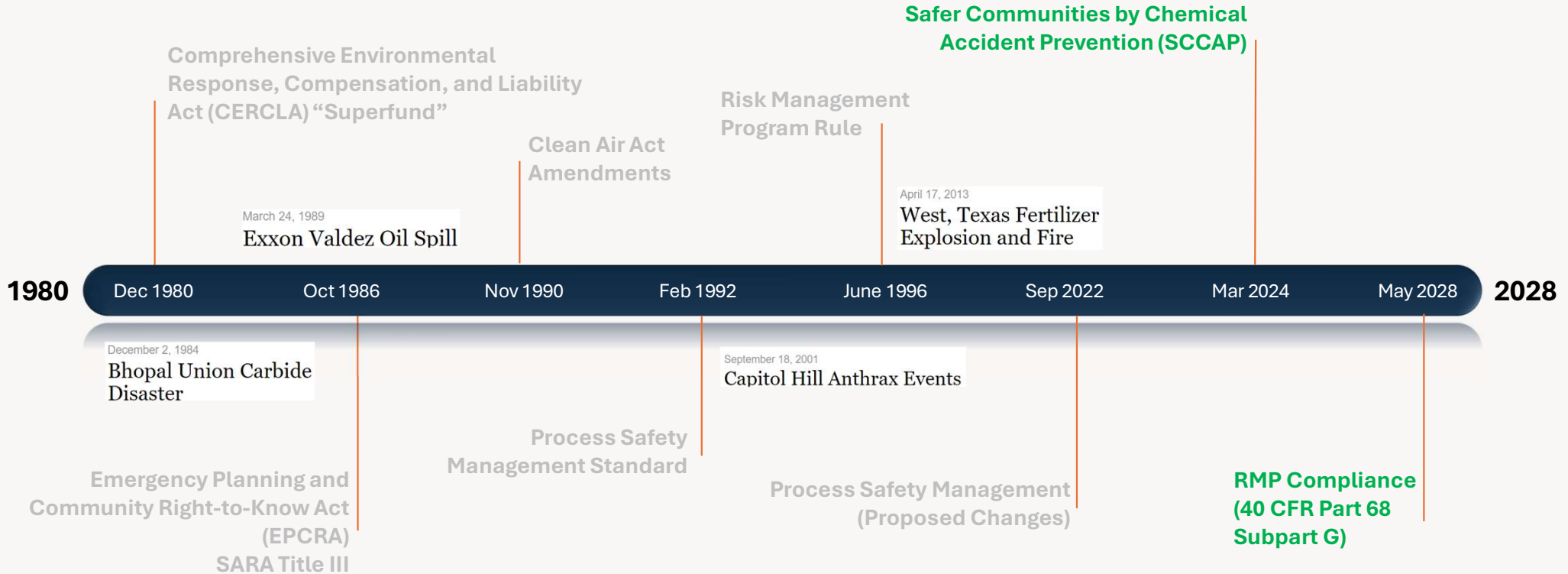


Sources: <https://www.epa.gov/rmp/risk-management-program-safer-communities-chemical-accident-prevention-proposed-rule>

*As of February 2015, these were industries with NAICS codes 322, 324, and 325 that account for 49% of all RMP reportable accidents.

Regulation Timeline – Inform about RMP Changes

(Highly Hazardous Chemicals)



RMP Changes – Safer Communities by Chemical Accident Prevention (SCCAP) Rule New March 1, 2024

- Applicability
 - Approximately 11,740 facilities.
 - Petroleum refineries and large chemical manufacturers;
 - Also: Water and wastewater treatment systems; chemical and petroleum wholesalers and terminals; food manufacturers, packing plants, and other cold storage facilities with ammonia refrigeration systems; agricultural chemical distributors; midstream gas plants; and a limited number of other sources
- Key Elements*:
 1. Safer Technology and Alternatives Analysis ("STAA")
 2. Natural Hazards and Power Loss
 3. Third-Party Audits
 4. Root Cause Analysis
 5. Public Information Availability
 6. Employee Participation
 7. Emergency Response
- Nothing impacts the scope and applicability of the General Duty Clause (GDC) in CAA section 112(r)(1)



West Texas Blast Cloud at the West Fertilizer Company
Source: <https://www.tshaonline.org/handbook/entries/west-tx>

RMP Changes – Safer Technology and Alternatives Analysis (“STAA”) (New)

- Applies to a subset of Program 3 processes at refineries and types of chemical plants (NAICS codes; 324 and 325)
- There are three (3) STAA-related requirements:
 1. Conduct an STAA for covered processes;
 2. *Conduct a practicability assessment for the “inherently safer technologies or designs” (“IST/ISD”); and
 3. *Implement at least one passive measure or IST/ISD, or a combination of active and procedural measures equivalent to or greater than the risk reduction of a passive measure.
- * These two criteria apply if the processes:
 - are located within one mile of another petroleum or specified chemical manufacturing facility;
 - are at petroleum refineries with processes using hydrofluoric acid alkylation; or
 - have had a reportable accident within the last five years.

Table 2—Summary of Estimated Annualized Costs [Millions, 2022 dollars] over a 10-year

| Cost Elements | Total Undiscounted | Total Discounted (3%) | Total Discounted (7%) | Annualized (3%) | Annualized (7%) |
|---|--------------------|-----------------------|-----------------------|-----------------|-----------------|
| Third-party Audits | \$75.2 | \$64.2 | \$52.8 | \$7.5 | \$7.5 |
| Root Cause Analysis | \$7.3 | \$6.2 | \$5.1 | \$0.7 | \$0.7 |
| Safer Technology and Alternatives Analysis (STAA) | | | | | |
| <i>Initial Evaluation</i> | \$176.4 | \$158.2 | \$138.3 | \$18.5 | \$19.7 |
| <i>Practicability Study</i> | \$256.9 | \$230.2 | \$201.0 | \$27.0 | \$28.6 |
| <i>Implementation</i> | \$1,700.4 | \$1,438.9 | \$1,172.6 | \$168.7 | \$204.9 |
| Backup Power for Perimeter Monitors | \$3.3 | \$2.8 | \$2.3 | \$0.3 | \$0.3 |
| Employee Participation Plan | \$114.7 | \$97.9 | \$80.6 | \$11.5 | \$11.5 |
| RMP Justifications | | | | | |
| <i>No Backup Power</i> | \$0.2 | \$0.1 | \$0.1 | \$0.0** | \$0.0** |
| <i>Natural Hazards</i> | \$0.4 | \$0.4 | \$0.3 | \$0.0** | \$0.0** |
| <i>Facility Siting</i> | \$0.4 | \$0.4 | \$0.3 | \$0.0** | \$0.0** |
| <i>RAGAGEP</i> | \$0.3 | \$0.2 | \$0.2 | \$0.0** | \$0.0** |
| Community Notification System | \$39.7 | \$33.9 | \$27.9 | \$4.0 | \$4.0 |
| Information Availability | \$127.6 | \$108.8 | \$89.6 | \$12.8 | \$12.8 |
| Rule Familiarization | \$50.9 | \$49.5 | \$47.6 | \$5.8 | \$6.8 |
| Total Cost* | \$2,554.0 | \$2,191.7 | \$1,818.9 | \$256.9 | \$296.9 |

The STAA has drawn considerable criticism...

By EPA’s own estimate, these changes will account for roughly 85% of the Rule’s nearly \$300 million annualized compliance cost.



Source: [RMP Final Rule](#)

Regulatory Impact Analysis (RIA): Safer Communities by Chemical Accident Prevention: Final Rule. This document is available in the docket for this rulemaking ([EPA-HQ-OLEM-2022-0174](#)).

RMP Changes – Natural Hazards and Power Loss

(New)

- The Rule revises definitions to include meteorological, environmental and geological phenomena that could negatively impact facility,
- Both natural hazards and the loss of power are hazards that must be addressed in Program 2 hazard reviews and Program 3 process hazard analyses*,
- Natural hazards, includes those caused by climate change,
- Facilities must consider facility siting hazards posed by proximate facilities and accidental release risks posed by proximity to the public,
- Requires back-up power for release monitoring equipment.



CCPS Monograph:
Assessment of and planning for
natural hazards



This monograph addresses the assessment of and planning for natural hazards. It is based on lessons learned by various CCPS member companies.



Source: [RMP Final Rule](#) and [EPA Fact Sheet](#)

*The risk of power failure includes, standby or emergency power systems. A good resource for natural hazards is the 2019 [CCPS Monograph](#) pictured, although climate risk is not sufficiently addressed.

RMP Changes – Third-Party Audits

(New)

- Requires a third-party audit during the next scheduled triannual compliance audit if there was an RMP-reportable accident,
- Requires a justification when audit recommendations are not adopted,
- Are performed by competent and independent professionals*,
- Third-party audit reports are provided directly to the audit committee of the Board of Directors (or the equivalent governance committee).



Source: MLI Environmental

RMP Changes – Root Cause Analysis

(New)

- Requires a root cause investigation for RMP-reportable incidents,
- Using a recognized root cause investigation method,
- Within 12 months of the occurrence,
- At least one member of the investigation team should be knowledgeable in the selection and use of root cause analysis techniques,
- Not required to be Public Information.



Source: System Improvements Inc.

RMP Changes – Employee Participation

(New)

- Employees and their representatives can participate in resolving process hazard analyses, compliance audit and incident investigation recommendations and findings,
- Requires procedures to allow an operation or process to be partially or completely shut down (stop work authority) for Program 3 plans,
- Adds anonymous reporting of RMP-reportable accidents or other related RMP non-compliance issues for Program 2 and 3 plans,
- Requires training.



Source: EHSSoftware.io

RMP Changes – Emergency Response (New)

- Mechanisms are in place to notify emergency responders when there is a need for a response,
- Requires facilities to develop procedures for informing public of accidental releases,
- Provide release notification data to local responders,
- Partner with local responders to ensure community notification system is in place,
- Mandatory reporting requirements for exercises
- Conduct a field exercise before March 15, 2027, and at a minimum at least once every ten years thereafter (unless local responders deem infeasible).



Source: The Denver Gazette

RMP – Outlook and Potential Implications

(New)

- Outlook

- The Final Rule provides three (3) years to comply many of the new requirements.
- Regulated sources will have to comply by May 10, 2027.
- Facilities will have until May 10, 2028, to update and resubmit risk management plans.

- Potential Implications

- EPA may seek to impose interim enforcement of the new obligations in the Rule before the formal compliance deadlines through negotiated consent decree during enforcement proceedings. EPA has used this strategy across a range of regulations, including prior RMP regulation,
- Owners and operators should proceed cautiously when investigating root cause, when considering knowing and willful conduct. The Rule defines root cause as a “fundamental, underlying, system-related reason why an incident occurred that identifies correctable failure(s) in management systems and, if applicable, in process design.”
- Keep a watchful eye with your organizational governance and regulatory tracking. By requiring Third-Party Audit Reports to be given to the committee of the board of directors, notably, this obligation appears to mark EPA’s first step into corporate governance and board-level reporting.
- Determine how you will integrate the safer technologies and alternatives analysis (STAA) within your process hazard analysis (PHA). You may already do some of this if you have a robust HAZOP, LOPA, FMEA, etc. Follow a hierarchy of controls approach; inherently safer technology (IST) or inherently safer design (ISD), passive measures, active measures, and procedural measures, or a combination of the these reduce risk.



Source: [RMP Final Rule](#)
EPA Chemical Safety Alert, [EPA 550-F-15-003](#)

Questions

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