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# CAA RMP RECONSIDERATION RULE

US EPA  
Office of Emergency Management  
July 2020

# RISK MANAGEMENT PROGRAM (RMP) BACKGROUND

Clean Air Act Amendments of 1990  
Clean Air Act Risk Management Program 1996  
40 CFR Part 68 regulations

Created in response to industrial accidents

**Purpose:**

- prevent accidental releases of substances that can cause serious harm to the public and environment from short term exposure
- mitigate severity of releases that do occur

Requires sources holding specific toxic and flammable chemicals above threshold quantities in a process to develop risk management programs to prevent and mitigate chemical accidents.

**Hazard assessment** that details potential effects of an accidental release, accident history of the last five years, and evaluation of worst-case and alternative accidental releases

**Prevention program** that includes safety precautions and maintenance, monitoring, and employee training measures, etc

**Emergency response program** that spells out emergency health care, employee training measures and procedures for informing the public and response agencies should an accident occur

WHAT DOES A RISK MANAGEMENT PROGRAM INCLUDE?

# RMP AMENDMENTS RULE TIMELINE

RMP Request for Information published

**July 31, 2014**

RMP Final Amendments published

**January 13, 2017**

**March 14, 2016**

RMP Proposed Amendments Rule published

# RMP AMENDMENTS FINAL RULE

## Accident Prevention Program (40 CFR 68 Subparts C/D)

- Third party audits
- Safer technology and alternatives analysis
- Incident investigation root cause analysis

## Emergency Response Program (40 CFR 68 Subpart E)

- Enhanced local emergency coordination requirements
- Emergency exercise provisions

## Information availability requirements (40 CFR 68 Subpart H)

- Facility chemical hazard information
- Facility public meeting

# RMP AMENDMENTS FINAL RULE

## Other minor provisions

- Minor changes to accident prevention program provisions
- Technical corrections and clarifications
- Changes to risk management plan

## Compliance dates

- New local emergency coordination provisions  
March 2018
- New prevention program, exercises and information availability provisions  
March 2021
- Risk management plans update  
March 2022



BATF finding that fire and explosion in West, Texas, was caused by a criminal act rather than accident

Potential security risks with information disclosure requirements in final Amendments rule

Concerns with the costs of the Amendments rule

Concerns that EPA did not adequately coordinate with OSHA

## WHY DID EPA RECONSIDER THE RMP AMENDMENTS FINAL RULE?

<b>Maintain</b>	consistency of RMP accident prevention requirements with the OSHA Process Safety Management (PSM) standard
<b>Address</b>	security concerns
<b>Reduce</b>	unnecessary regulations and regulatory costs
<b>Revise</b>	some compliance dates to provide necessary time for program changes.

**RECONSIDERATION  
RULE'S AIM**

# RMP RECONSIDERATION FINAL RULE TIMELINE

EPA's Administrator signed final rule to delay effective date of the RMP rule amendments until February 19, 2019

**June 9, 2017**

DC Circuit Court's vacatur/mandate to make Amendments rule effective

**September 21, 2018**

**May 30, 2018**

Proposed RMP Reconsideration Rule published

**December 19, 2019**

Final RMP Reconsideration Rule published

RMP  
RECONSIDERATION  
FINAL RULE  
**ACCIDENT  
PREVENTION  
PROGRAM**

Rescinded **third party audits**



Rescinded **safer technology and alternatives analysis**



Rescinded **root cause analysis incident investigation**



Retained **minor provisions**: Program 2 incident investigation team requirements and 'reports' term; safety information 'SDS' term

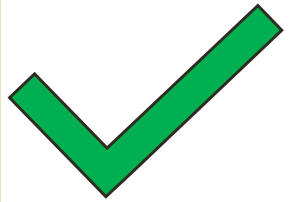


Rescinded all other **minor provisions**

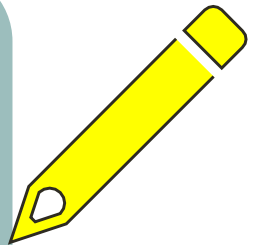


RMP  
RECONSIDERATION  
FINAL RULE  
**EMERGENCY  
RESPONSE  
PROGRAM/  
EMERGENCY  
COORDINATION**

Retained **annual coordination** with local response organizations and documentation of coordinated activities



Modified provision to enable emergency response planners to **obtain information “necessary for”** planning and implementation of local emergency response plans



RMP  
RECONSIDERATION  
FINAL RULE  
**EMERGENCY  
RESPONSE  
PROGRAM/  
EMERGENCY  
EXERCISE**

Retained **annual notification drills**



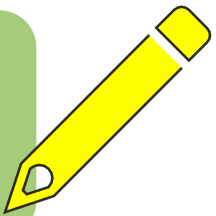
Retained requirement to **perform field and tabletop exercises**



Retained **tabletop exercises frequency, every 3 years**



Modified **field exercises frequency** by removing minimum frequency requirement (owner or operator must still consult with response officials on frequency)

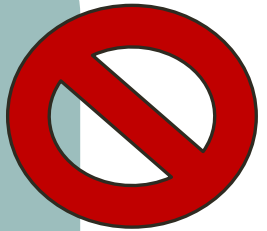


Modified **documentation requirements** by only recommending items for exercise reports

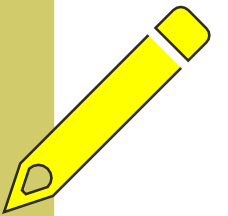


RMP  
RECONSIDERATION  
FINAL RULE  
**INFORMATION  
AVAILABILITY**

Rescinded requirement to  
provide chemical hazard  
information to public  
on request



Modified public meeting  
requirement to require meeting  
within 90 days only for  
accidents with off-site impacts



# December 19, 2019 RMP Reconsideration Final Rule Compliance Dates

<b>What</b>	<b>Due Date</b>
<b>Public meetings</b>	Within 90 days of any qualifying accident that occurs after March 15, 2021
<b>Develop Emergency Response Program</b>	Within three years of owner or operator determining that facility is subject to the provisions
<b>Develop exercise plans and schedules</b>	December 19, 2023
<b>Conduct first notification drill</b>	December 19, 2024
<b>Conduct first tabletop exercise</b>	December 21, 2026
<b>Conduct first field exercise</b>	According to the exercise schedule established by the owner or operator in coordination with local response agencies
<b>Submit RMP with new information elements</b>	The owner or operator would provide new information elements with any initial RMP or RMP resubmission made after December 19, 2024
<b>Comply with new emergency coordination requirements</b>	Already in effect as of September 21, 2018
<b>Comply with remaining minor accident prevention provisions</b>	Already in effect as of September 21, 2018



# Chemical Accident Risk Reduction National Compliance Initiative

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IMPLICATIONS FOR AMMONIA REFRIGERATION AND STORAGE



# National Compliance Initiatives

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EPA selects National Compliance Initiatives (NCIs) every four years to focus resources on national environmental problems where there is significant non-compliance with laws, and where federal enforcement efforts can make a difference.

National Compliance Initiatives are in addition to EPA's core enforcement work, including protecting safe drinking water, reducing air pollution, and protecting safe and healthy land.

The initiatives are chosen with input from the public and from stakeholders across EPA's state, local and tribal agency partners.



# Chemical Accident Risk Reduction Initiative

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## Goal

Reduce the risk to human health and the environment by minimizing the likelihood of chemical accidents

## Objectives

Ensure facilities properly manage their risks

Address wide-spread noncompliance

Reduce the effect of releases

Improve coordination between facilities and emergency responders



# Legal Authorities

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Risk Management Program -- 40 CFR Part 68, implementing CAA 112(r)(7), the Chemical Accident Prevention Provisions

General Duty Clause (GDC) -- CAA 112(r)(1)



# RMP Regulations

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Applies to stationary sources that produce, handle, process, distribute, or store chemicals listed in the regulations

Total quantity of a regulated chemical in a process must exceed a threshold quantity. For example, for anhydrous ammonia the threshold is 10,000 lbs

Facilities implement a risk management program and submit a written plan to EPA

Approximately 12,000 regulated facilities



# General Duty Clause

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Owners or operators have a general duty to:

- Identify hazards which may result from accidental releases
- Design and maintain a safe facility
- Minimize the consequences of accidental releases that do occur



# Implications for Ammonia Refrigeration

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Facilities with more than 10,000 pounds of ammonia are subject to the RMP regulations

Facilities with less than 10,000 pounds of ammonia are subject to the General Duty Clause requirements

Ammonia has known benefits in energy efficiency and climate change considerations. The purpose of this Initiative is to encourage its safe use, not to restrict it in any way



# Key Safety Measures

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## *Identifying Hazards*

Hazard Addressed: Releases or safety deficiencies that stem from a failure to identify hazards in design/operation of system

- Facility has completed a process hazard analysis or review.

## *Operating Activities:*

Hazard Addressed: High risk of release from operating or maintenance activity

- System has self-closing/quick closing valves on oil pots.
- Facility has written procedures for maintenance and operation activities.
- Only authorized persons have access to machinery room and the ability to alter safety settings on equipment.





# Key Safety Measures

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## *Maintenance/Mechanical Integrity:*

- Hazard Addressed: Leaks/releases from maintenance neglect
  - A preventative maintenance program is in place to, among other things, detect and control corrosion, deteriorated vapor barriers, ice buildup, and pipe hammering, and to inspect integrity of equipment/pipe supports.
  - All piping system openings except the relief header are plugged or capped, or valve is locked.
  - Equipment, piping, and emergency shutdown valves are labeled for easy identification, and pressure vessels have legible, accessible nameplates.
  - All atmospheric pressure relief valves have been replaced in the last five years with visible confirmation of accessible pressure relief valves [note – replacement every five years is the general rule but there are two other options in IIAR Bulletin 110, 6.6.3].



# Key Safety Measures

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## *Machinery Room and System Design*

Hazard Addressed: Inability to isolate and properly vent releases

- The System(s) has/have emergency shut-off and ventilation switches outside each machinery room.
- The machinery room(s) has/have functional, tested, ventilation. Air inlets are positioned to avoid recirculation of exhaust air and ensure sufficient inlet air to replace exhausted air.
- Documentation exists to show that pressure relief valves that have a common discharge header have adequately sized piping to prevent excessive backpressure on relief valves, or if built prior to 2000, have adequate diameter based on the sum of the relief valve cross sectional areas.



# Key Safety Measures

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## *Emergency Actions*

Hazard Addressed: Inability to regain control and reduce release impact

- Critical shutoff valves are accessible, and a schematic is in place to show responders where to access them.
- EPCRA Tier II reporting is up to date.



# South Jersey Ice and Cold Storage, Vineland, NJ

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# South Jersey Ice

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Dangerous ice buildup on refrigeration coils – increased load beyond breakpoint

Serious concerns about ice buildup stress on building integrity

**“I have been in the refrigeration business for 52 years of my life and this is the worst building I have ever been in. It is a disaster waiting to happen.”** President, Arctic Refrigeration





**3 stories plus basement**

**> 5 million lbs frozen product, mostly seafood**

**One 1-pallet freight elevator**

**Facility owner developing closure plan**







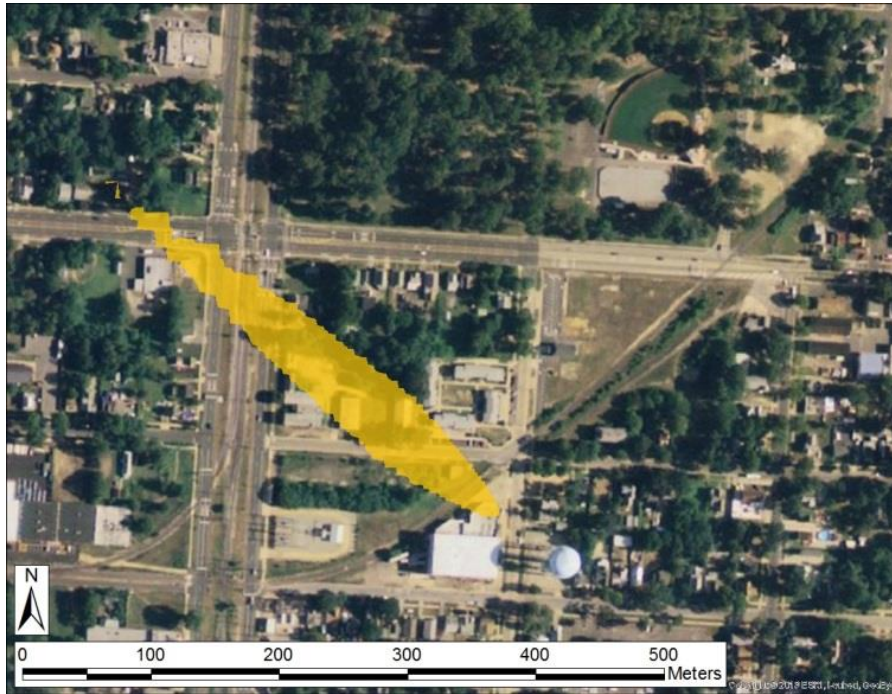




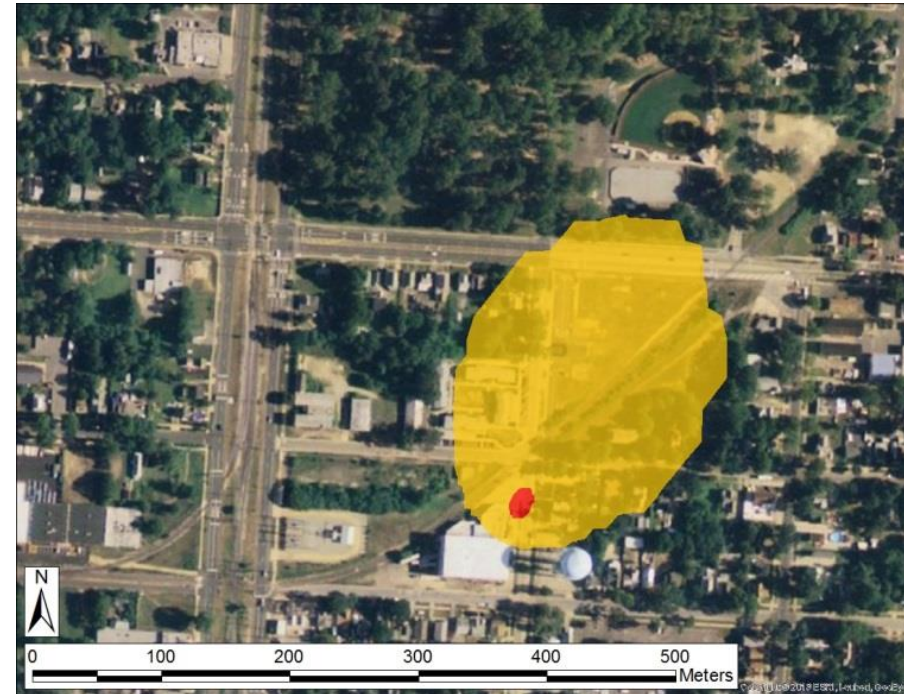








Minimum Population Affected – 42

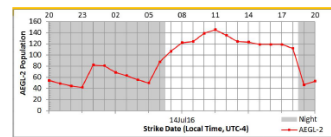


Maximum Population Affected – 146

Value
AEGL-3
AEGL-2

FACTS
Vineland, NJ
Location: 39.429696°N/75.023344°W
Beginning Incident Time: 0000 EST 14JUL2016
Hazard: Ammonia (NH <sub>3</sub> )
Amount: 4,700 lb
Incident: Continuous release
Weather: 12 km NAM
Model: HPAC 6.3
Static Population Estimates: LandScan 2014

Ammonia – Estimated AEGL-2 Populations



Day Night

Exposure to high concentrations of ammonia in air causes immediate burning of the nose, throat and respiratory tract. This can cause bronchiolar and alveolar edema, and airway destruction resulting in respiratory distress or failure. Inhalation of lower concentrations can cause coughing, and nose and throat irritation.

	Strike Date / Time (Day/Night)	Estimated AEGL-2 Population
Min	14JUL2016 / 03:00 EST (Night)	42
Max	14JUL2016 / 15:00 EST (Day)	145



# Questions?

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For more information on the regulations  
<https://www.epa.gov/rmp>

