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## **ABOUT THIS VOLUME**

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## Technical Paper #2

# Getting Knocked Out by the Pendulum: The 2024 EPA RMP Rule Changes and Strategies for Compliance

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### **Abstract**

*Over the last several years, facilities covered by the Environmental Protection Agency's Chemical Accident Prevention Provisions, otherwise known as the Risk Management Program, have been forced to navigate unpredictable and frequent shifts in policy. This paper is intended to familiarize readers with the most recent changes that have been made to these regulations and provide basic strategies for compliance.*



## **Introduction**

First, the reader must become familiar with a brief history of the regulations in question, including the regulatory changes over the last several years and what precipitated them. With this familiarity, the reader will be better equipped to understand where the regulations stand today, and then the reader can understand the reasons for implementing the proposed strategies to comply with these new regulations.

## **A Brief History of The Primary Regulations in Question**

If one has been involved with the ammonia refrigeration industry for any length of time, they are generally aware of the Occupational Safety and Health Administration's (OSHA) Process Safety Management (PSM) standard, which became Federally regulated on May 24, 1992 (OSHA 29CFR1910.119, 2024). In addition, the Environmental Protection Agency's (EPA) Chemical Accident Prevention Provisions, known colloquially as the Risk Management Program (RMP), became Federally regulated on June 21, 1999 (EPA 40CFR68, 2024). OSHA's PSM standard has remained unchanged in the 30+ years since, but the EPA's RMP provisions were modified to a minor extent in 2004. These modifications changed the deadlines for submitting RMP accidents and emergency contact changes and removed the requirement to summarize the Offsite Consequence Analysis in the Executive Summary. This removal was implemented due to security concerns after the terrorist attacks on September 11, 2001.

At that time, the two Federal regulations (PSM and RMP) overlapped significantly. This was intentional based on public comments received when the rules were being considered. Figure 1 shows the overlap between the two regulations as of 2013, when both OSHA and EPA began the process of updating their respective regulations.

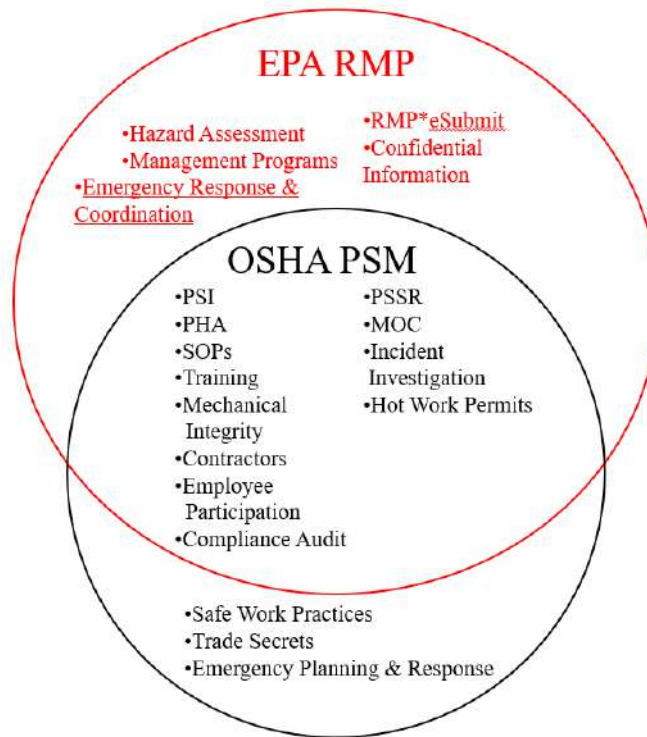


Figure 1. PSM/RMP Regulatory Overlap as of 2013.

### *The Initial Catalyst: Explosion in West, TX*

On April 17, 2013, in West, TX, a fire broke out at a facility owned by the West Fertilizer Company. Less than 20 minutes after being reported, while local firefighters attempted to fight the blaze, approximately 30 tons of fertilizer-grade ammonium nitrate detonated, killing 15 people, 12 of whom were first responders, and injuring more than 260 others. Over 150 offsite buildings, including nearby homes and businesses, were severely damaged. Many were condemned as unrepairable.



Figure 2. Video Stills of West Fertilizer Company Explosion (USCSB, 2016).

The U.S. Chemical Safety Board investigated the accident but was unable to identify the cause of the fire. The board did, however, highlight gaps in both EPA's and OSHA's regulations governing highly hazardous chemicals, as well as their reporting of such chemicals under the Emergency Planning and Committee Right to Know Act (EPCRA).

### *Presidential Action*

The incident in West, TX led then-President Obama to issue Executive Order #13650 (Exec. Order No. 13,650, 2013). Specifically, the President called upon OSHA, EPA, and the Department of Homeland Security (DHS) to improve coordination and communication. In addition, it called upon these agencies to improve coordination and communication with local first responders. Most importantly, it called upon OSHA and EPA to update the PSM and RMP regulations, respectively, and for DHS to update their Chemical Facility Anti-Terrorism Standard (CFATS) rule.

### *OSHA Response*

OSHA issued a Request for Information (RFI) to solicit public input on updates under consideration for the PSM standard on December 9, 2013 (OSHA, 2013). Following

the public comment period, OSHA conducted a Small Business Review, as required by the Occupational Safety and Health Act that created OSHA. After this, progress on regulatory changes to PSM stalled for a variety of reasons.

### *DHS Response*

DHS issued an RFI to solicit public input on updates under consideration for the CFATS rule on August 18, 2014 (DHS, 2014). Following the public comment period, progress on regulatory changes to CFATS also stalled for a variety of reasons.

### *EPA Response*

EPA issued an RFI to solicit public input on updates under consideration for the RMP rule on July 31, 2014 (EPA 2014 RFI, 2014). Following the public comment period, draft rules were issued for further comment on March 14, 2016 (EPA 2016 Proposed Rule, 2016). Final rule changes were issued on January 13, 2017 (EPA 2017 Final Rule, 2017).

### *An Overview of the January 2017 RMP Rule Changes*

There were several minor changes to the Prevention Program rules, including establishing deadlines for incident investigations, explicitly requiring that the Process Hazard Analysis (PHA) address industry accidents and that supervisors of employees working on the covered process are trained to the same standards as the employees themselves.

The rule changes also incorporated some major changes, including a requirement to have compliance audits conducted by an independent third party if a facility experienced an RMP reportable accident. In addition, a requirement to make



information available to the public upon request was included in the January 2017 update.

Finally, there were several major changes to the Emergency Response Provisions of the RMP rules. The requirement to coordinate with the Local Emergency Planning Committee (LEPC) was expanded to include specific topics to be discussed, along with requirements for documenting the coordination meetings. Additionally, any facility subject to the RMP rules must conduct annual notification exercises to ensure that personnel are trained and prepared to make the appropriate calls when local response becomes necessary or the chemical release exceeds the reporting thresholds established under the Comprehensive Environmental Response, Compensation and Liability Act, and EPCRA. In the rule changes, the EPA also stated that to be considered a “non-responding” facility, both the coordination and notification exercise requirements must be met. Furthermore, “responding” facilities were required to conduct tabletop and field response exercises with local first responders within specific timeframes, every three years for tabletop exercises and at least every ten years for field exercises.

### *Political Upheaval*

After the Trump administration took office at the end of January 2017, there were attempts to rescind the December 2017 RMP rule changes under the Congressional Review Act (CRA). This act, which is codified in 5 U.S.C. §§801-808, is designed to strengthen Congress’ oversight of Federal agencies. The CRA allows Congress to pass a joint resolution of disapproval, which, if signed by the President, or if Congress successfully overrides a Presidential veto, prevents the rule from going into effect or from continuing to be in effect. Ultimately, these attempts failed. On June 14, 2017 (EPA Delay, 2017), the EPA delayed enforcement of the rule changes indefinitely. Lawsuits were then filed against the EPA, and on December 3, 2018 (EPA Enforcement Renewal, 2018), the original dates of enforcement were reestablished.

The EPA then began a new, formal rulemaking process to “correct” many of the changes made in the January 2017 update.

### *An Overview of the December 2019 RMP Rule Changes*

With the new rulemaking process complete, a final “reconsideration” rule was issued on December 19, 2019 (EPA 2019 Changes, 2019). This “reconsideration” rescinded all of the minor Prevention Program rule changes from January 2017. It removed the third-party audit requirements. It replaced the requirement to make information available to the public upon request with a requirement to hold a public meeting if the facility experienced an RMP reportable accident with known offsite consequences. The emergency response rule changes from January 2017 remained largely intact, except for the removal of the minimum required frequency for field exercises.

### *More Political Upheaval*

With the change in administration at the end of January 2021, the Biden Administration tasked the EPA with reviewing the “reconsideration.” The EPA held public “listening” sessions in 2022 to obtain feedback and direction from public input. Draft rule changes were published on August 31, 2022, and a final “reconsideration part 2” rule was published on March 11, 2024 (EPA 2024 Final Rule, 2024).

## **The March 2024 RMP Rule Changes and Strategies for Compliance**

With the publication of these “final” rule changes in March 2024, the regulatory landscape has become less clearly defined. Figure 3 shows the overlap between the PSM and RMP regulations as of May 2024.

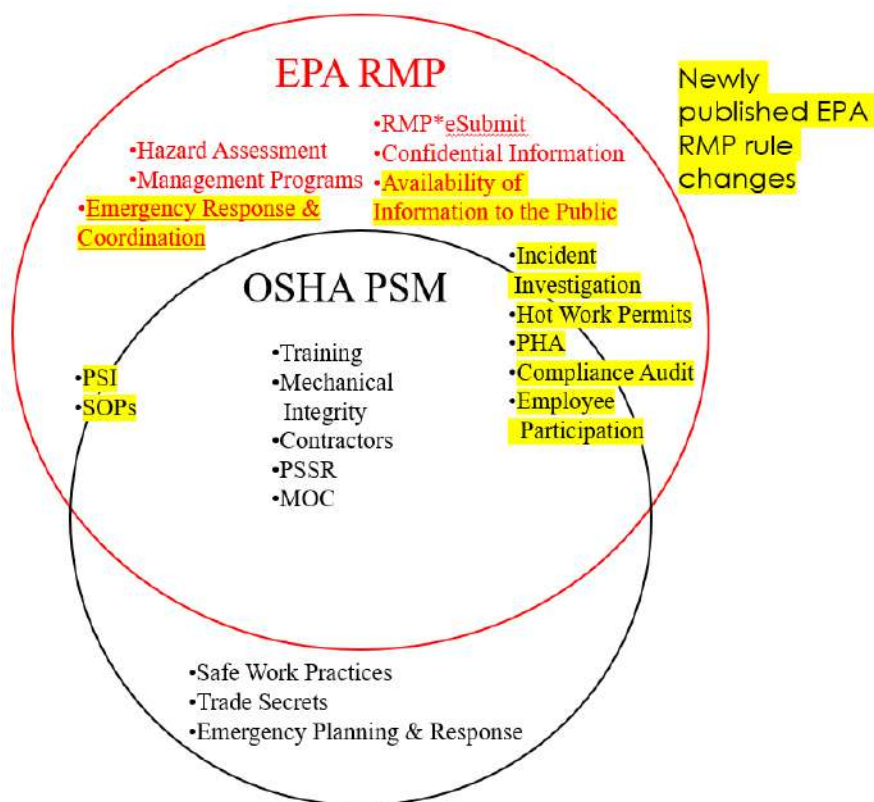


Figure 3. PSM/RMP Regulatory Overlap as of May 2024.

## Employee Participation

### Rule Changes to 40 CFR 68.83 (EPA 40CFR68 Subpart D, 2024)

Multiple changes have been made to 40 CFR 68.83. First, two additional requirements were added to paragraph (a). The first one instituted a requirement that written or electronic notices be distributed annually to employees and their representatives, indicating that the plan is readily available to view and how to access the information.

Second, training must be provided as often as necessary to ensure that the employees, representatives, and management involved in the ammonia refrigeration system are informed of the details of the plan.

An additional paragraph (paragraph (c)) was added, stating that the owner or operator shall consult with employees knowledgeable in the process of addressing, correcting, resolving, documenting, and implementing recommendations and findings of a PHA, compliance audit, and/or incident investigation.

Paragraph (d) was also added, stating that the owner or operator must establish a Stop Work Authority. Any employee knowledgeable in the process, including their representatives, must be able to recommend partial or complete shutdown to the operator in charge of the ammonia refrigeration system. Then, the qualified operator in charge must be able to partially or completely shut it down in accordance with established operating procedures based on the potential for a catastrophic release.

Finally, paragraph (e) was added, requiring the owner or operator to develop and implement a process that allows employees and their representatives to report EPA unaddressed hazards that could lead to a catastrophic release, RMP reportable accidents, and any other noncompliance with this part to either the owner or the operator, or both. This paragraph allows employees to report either anonymously or with attribution, but records of any such reports must be kept for three years.

### **Strategies for Compliance**

To comply with the changes to paragraph (a), it may be necessary to develop an awareness flyer or training session that can be used on an annual basis. A recurring reminder may be necessary to distribute or post the flyer or conduct the training annually. A training session is preferred because it can be coupled with a quiz at the end to capture an employee's understanding of their rights to access the information and how to do so. Be sure to update the Employee Participation program and clarify

how the facility is handling these new requirements for awareness. Ensure that the awareness training includes details of the new Stop Work Authority and Reporting Rights.

Many facilities are already complying with the requirements in paragraph (c). However, it is advisable to schedule recommendation review sessions, or PSM/RMP Team /Committee meetings, so that all employees who work on the ammonia refrigeration system are allowed to review and discuss open recommendations. If meetings cannot be scheduled to facilitate this, consider distributing the open recommendations to all refrigeration operators so they can review them and ask questions, or make suggestions on how to address them. Update the Employee Participation program to clarify how the facility will involve all employees in addressing recommendations.

When implementing a Stop Work Authority in compliance with paragraph (d), be sure to identify the employees who are considered “operators in charge.” Conduct documented training with all employees who work on the ammonia refrigeration system, to clarify their rights to recommend partial or complete shutdown based on hazards that could lead to a catastrophic release. In addition, make sure that these employees understand who has the authority to shut down the system. Update the Employee Participation program to establish the Stop Work Authority, explicitly listing the “operators in charge,” as well as the refrigeration operators with the authority to recommend shutdowns to those “operators in charge.”

For the reporting system that must be established to comply with paragraph (e), update the program to clarify:

1. How the employees should report unaddressed hazards to the facility owner or operators
2. How the employees may report unaddressed hazards or unreported RMP accidents to the EPA

3. That the employees may choose to anonymously report these hazards or unreported accidents
4. That the retention time of three years is required for recording such reports to the owner or operator

The deadline to establish compliance with these changes to 40 CFR 68.83 is May 10, 2027.

### *Process Hazard Analysis*

#### **Rule Changes to 40 CFR 68.67 (EPA 40CFR68 Subpart D, 2024)**

Several new topics must be discussed and included in the PHA report.

First, regarding the requirement to address the engineering and administrative controls applicable to the hazards of the ammonia refrigeration system and how one can affect the other, consideration of standby or emergency power systems must be explicitly included. In addition, 40 CFR 68.67(c)(3) now includes the following requirement: “The owner or operator shall ensure monitoring equipment associated with the prevention and detection of accidental releases from covered processes has standby or backup power to provide continuous operations.”

Second, when considering stationary source sites, otherwise known as facility locations, 40 CFR 68.67(c)(5) now includes the requirement to identify the placement of processes, equipment, and buildings within the facility, the hazards posed by proximate stationary sources, and the accidental release consequences posed by proximity to the public.

Third, 40 CFR 68.67(c) now includes items 8–10. Item 8 requires the PHA to address natural hazards that could cause or exacerbate an accidental release. Item

9 requires the PHA to address safer technologies and alternative risk management measures applicable to eliminating or reducing risk from process hazards. At this time, this provision only applies to NAICS code 324, Petroleum or Coal Products Manufacturing, and code 325, Chemical Manufacturing. Given that it does not apply to the vast majority of facilities with ammonia refrigeration systems, this paper does not address strategies for compliance with this provision. Item 10 requires the PHA to address any gaps in safety between the codes, standards, or practices to which the process was designed/constructed and the most current version of the applicable codes, standards, or practices.

## **Strategies for Compliance**

The new PHA requirements have several due dates, including some that have already passed. Covered facilities were required to comply with the following provisions as of the effective date of the changes to the regulations, which was May 10, 2024:

1. Addressing the new items included in stationary source siting
2. Addressing natural hazards that could cause or exacerbate an accidental release
3. Addressing gaps between the previous and current applicable codes and standards

To comply with provisions 1 and 2 as quickly as possible, a short PHA session can be held to address the changes in stationary source siting by reviewing other RMP facilities and determine whether or not the changes affect the facility. In this session, review the nearby public receptors, including schools, places of business, places of worship, prisons and jails, and residential neighborhoods. Finally, review a list of possible natural hazards. The following is a list of website links that may aid the team in evaluating these new topics.

- Stationary Sources
  - <https://cdxapps.epa.gov/olem-rmp-pds/>

- Nearby public receptors – 2020 census data
  - <https://ejscreen.epa.gov/mapper/>
  - <https://geopub.epa.gov/myem/efmap/>
- Natural Hazards – National Risk Index
  - <https://hazards.fema.gov/nri/map>
- Natural Hazards – Earthquakes
  - </home/webmap/viewer.html?webmap=7d987ba67f4640f0869acb82ba064228#!>
- Natural Hazards – Tornados
  - <https://mrcc.purdue.edu/gismaps/cntytor>
- Natural Hazards – Floods
  - <https://msc.fema.gov/portal/home>
- Natural Hazards – Snowfall
  - <https://www.ncei.noaa.gov/access/monitoring/snowfall-extremes/US/1>

To evaluate the gaps between the codes and standards to which the ammonia refrigeration system was constructed or modified and the currently applicable codes and standards, the applicable codes and standards must first be identified. Although most facilities have this information, many have not clearly identified the pertinent information. Once the applicable codes and standards have been identified, the next step is to conduct a gap analysis. In ammonia refrigeration, IIAR Standard 9 states the minimum safety requirements for existing systems. This standard requires a gap analysis to evaluate the compliance of the facility's system against its requirements. Owing to a lack of clarity when the standard was first published, Addendum A was published in 2024, which established a deadline of January 1, 2026, for conducting the gap analysis. Note that if a facility's system was constructed after the publication of IIAR 9 in 2020, this gap analysis is not required for the 2020 edition, but the facility must meet the requirements of IIAR 2-2014, Addendum A, or IIAR 2-2021, whichever applied to the design and construction of the system. It is also important to note that if a facility or its parent company chooses to comply fully with each new edition of IIAR 2, then IIAR 9 would also not apply to their system, but they must



perform a gap analysis with each new edition of IIAR 2. This only holds if the facility upgrades to be in full compliance with the new edition of IIAR 2, which may not be possible, depending on the specific changes in a particular edition. Once the gap analysis has been performed, it is necessary to review the gap analysis as part of the PHA and evaluate and address hazards related to the gaps.

It is important to evaluate the hazards associated with power loss and consider standby or emergency power systems. This should be considered during the PHA session described earlier. Regarding the requirement to provide standby or backup power for monitoring equipment associated with the prevention and detection of accidental releases from covered processes, several questions come to mind.

First, what is included in this requirement? Even the EPA is unclear; at least one of their inspectors has stated that the emergency ventilation system for ammonia refrigeration machinery rooms is included in this requirement. Now, it can be argued that the emergency ventilation system neither detects nor prevents an ammonia release. It remains to be seen how this will play out as facilities are inspected by regional EPA personnel. Although it is safe to say that the ammonia detectors installed within a facility are covered under this requirement, it remains necessary to determine exactly what is acceptable.

IIAR 2-212, in Section 16.1.4, states that “a means shall be provided for monitoring the concentration of an ammonia release in the event of a power failure for all systems where leak detection is required in accordance with this standard.”

In Appendix A, IIAR 2 clarifies its position by stating “One possible means of monitoring ammonia concentration resulting from a leak during a power failure is a portable ammonia monitoring device.”

Hence, IIAR 2 allows for the requirement of personal ammonia detectors to be carried or worn by employees entering areas with ammonia refrigeration equipment or piping during a power failure. Is this acceptable to the EPA? When asked, the EPA pointed

to the PHA. Thus, it is up to the PHA team to thoroughly evaluate and document the hazards during a power failure and determine if backup power in the form of batteries or generators is warranted.

Furthermore, if generators or battery backups are installed, they cannot be expected to operate indefinitely, so how long is acceptable? One place to look is NFPA72-2022, the National Fire Alarm and Signaling Code. This code defines the amount of time that a fire alarm needs to be able to detect a fire during a power failure, as well as how long its alarm devices are required to be able to operate. It is fairly safe to assume that if it is good enough for the fire alarm system, it should be good enough for ammonia detection. Regardless, any backup power installed to address this requirement must be completed by May 10, 2027.

### *Operating Procedures*

#### **Rule Changes to 40 CFR 68.69 (EPA 40CFR68 Subpart D, 2024)**

There is one addition to the operating procedures detailing the safety systems and their functions. The new requirement in the regulation states that the safety system description must include documentation when monitoring equipment associated with the prevention and detection of accidental releases from covered processes is removed due to safety concerns from imminent natural hazards.

### **Strategies for Compliance**

Some chemical facilities have disabled monitoring equipment when natural hazards arise. The easiest method to achieve compliance with this requirement, without further clarification from the EPA, is to add a statement to the Safety Systems section of each operating procedure that states: *“It is company policy NOT to disable monitoring equipment in the event of imminent natural hazards. If the natural hazard*

*causes a power failure that disables the monitoring equipment, manual monitoring using handheld detection will be used as long as it is safe to return to work.”*

Bear in mind that the facility must discuss the use of handheld detectors during power failures in their PHA and document how it deals with the possible hazards. Without such documentation, it is unlikely that an inspector will accept such a method of backup power. It may also be necessary to include a list of facility-specific backup power capabilities for detection, either within the operating procedure itself or referencing a list in the Process Safety Information.

### *Hot Work*

#### **Rule Changes to 40 CFR 68.85 (EPA 40CFR68 Subpart D, 2024)**

The new regulations add paragraph (c) to the hot work program requirements, stating that “the permit shall be retained for three years after the completion of the hot work operations.”

#### **Strategies for Compliance**

It is simple to add a sentence to the hot work program, stating that “Hot Work Permits for hot work conducted on or around the ammonia refrigeration system are retained for three years following completion of the hot work operations.” However, it would be helpful to clarify the meaning of “around.” The easy answer is to specify that anything within 35 feet of the ammonia refrigeration system or its piping is covered, considering this is the radius defined in 29 CFR 1910.252, the fire prevention precautions standard. Nonetheless, this is not always desirable, depending on the types of equipment or materials that are within the radius but not explicitly part of the ammonia refrigeration system, and on the nature of the hot work activities taking place. If a facility does not wish to include all hot work near the ammonia

refrigeration system under their PSM-RMP hot work program, they could make the following statement, “Permits for hot work conducted within 35 feet of the ammonia refrigeration system equipment or its piping are not retained unless the ammonia equipment or its piping cannot be protected by the use of a welding screen or blanket and it has been determined that no heat can be transmitted to the ammonia refrigeration system through conduction.” Note that implementing such a provision would require that a proper hazard analysis/risk assessment has been completed and documented for the hot work in question. Be sure to also update the hot work program to state where the completed permits are kept on file.

### *Emergency Response*

#### **Rule Changes to 40 CFR 68.90 (EPA 40CFR68.90, 2024)**

Several changes have been made to the requirements for identifying as a “non-responding” source, explicitly referring to items that were previously/typically inferred as being required.

The first change involves text added to the requirement stating that appropriate mechanisms must be in place to notify emergency responders when there is a need for a response; specifically, providing timely data and information detailing the current understanding and best estimates regarding the nature of the accidental release. The owner or operator may satisfy the requirement in paragraph (b)(3) through notification mechanisms designed to meet other Federal, State, or local notification requirements, provided the notification meets the requirements of paragraph (b)(3), as appropriate.

The second change involves an additional requirement for being considered a “non-responding” Source. 40 CFR 68.90(b)(6) states: “The owner or operator maintains and implements, as necessary, procedures for informing the public and the

appropriate Federal, State, and local emergency response agencies about accidental releases and partnering with these response agencies to ensure that a community notification system is in place to warn the public within the area potentially threatened by the accidental release. Documentation of the partnership shall be maintained in accordance with § 68.93(c).”

## **Strategies for Compliance**

To comply with these changes, the facility’s Emergency Action Plan (EAP) must be reviewed and possibly updated. First, ensure that all agencies that may need to be notified are included in the emergency notification list. This includes the National Response Center, the State Emergency Response Commission (SERC), as defined in each state, and the LEPC, as defined by each state and often by each county or city. It is important to consider that if a facility is located close to a border, there may be multiple SERCs or LEPCs that need to be notified. Some states have additional reporting requirements, often involving the Department of Natural Resources or another environmental agency. Additionally, the triggers for notifying the U.S. Chemical Safety Board (CSB) and how to do so should be included. A flowchart detailing the triggers for CSB notification is shown in Figure 4.

Second, when to call must also be clearly defined in the EAP. It may be possible to simply identify the triggers set by the Federal government for calling the NRC and by the state for calling the SERC and LEPC. For instance, the EAP for a facility could state that the NRC must be called if the incident has released more than 100 pounds of ammonia in less than 24 hours. If the facility is in Massachusetts, the state and local calls would be triggered if more than 10 pounds of ammonia was released in less than 24 hours.

How should we determine those amounts? It is often difficult, if not impossible, to have an accurate idea of how much has been released. Therefore, the EAP may specify the need to call every time ammonia is released. However, these calls are

public record, and thus it would not reflect well on the facility's owner or operator if every leak was reported. A better option would be to create easy-to-follow guidelines to ensure that all reportable releases are reported while limiting the reports of incidents that do not require notification.

Some example criteria that could be used to trigger notifications are listed as follows:

- Measured ppm over the IDLH or the rated limits of the facility's personal protection equipment, whichever is lower
- Pool or spray of liquid ammonia
- Visible cloud of ammonia (not including wisps from valve packing)
- Leak does not meet the above criteria but lasts longer than a pre-determined number of minutes

Other criteria that could be added to the above list based on the difficulty of determining a release amount:

- Any safety relief valve that is lifted to atmosphere
- Condenser tube leak

Finally, be sure to include in the EAP a list of personnel who are authorized and trained to make the notifications, and include a statement in the EAP indicating that the local first responders will notify the public, if they deem it is warranted, in the event of an accidental release.

With these new requirements, be sure to comply with the coordination requirements in 40 CFR 68.93, or at least document the annual attempts to do so, and conduct the notification exercise required under 40 CFR 68.96(a) on an annual basis. The recent changes are due May 10, 2027, but the coordination requirement was first due in 2018, and the deadline to conduct the first notification exercise was December 19, 2024.

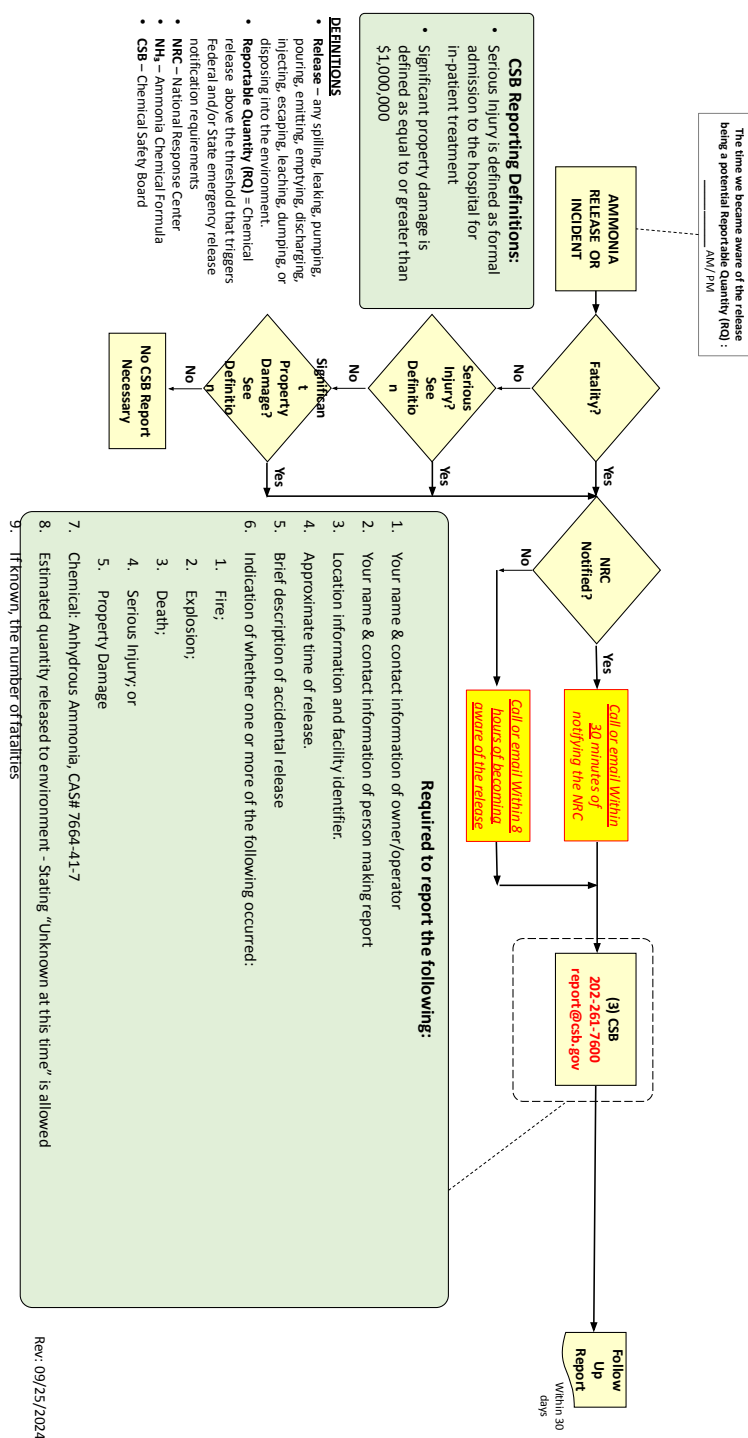


Figure 4. USCSB Notification Flowchart.

## Rule Changes to 40 CFR 68.95 (EPA 40CFR68.95, 2024)

Several changes have been made to the requirements for “responding” sources.

First, 40 CFR 68.95(a)(1)(i) required the inclusion of “procedures for informing the public and the appropriate Federal, State, and local emergency response agencies about accidental releases,” but now includes the additional requirement of “partnering with these response agencies to ensure that a community notification system is in place to warn the public within the area potentially threatened by the accidental release. Documentation of the partnership shall be maintained in accordance with § 68.93(c).”

Another change is the addition of the same text found in the section on the requirements for “non-responding” sources. The regulations note that “responding” facilities’ ERPs “shall include providing timely data and information detailing the current understanding and best estimates of the nature of the release when an accidental release occurs and be coordinated with the community emergency response plan developed under 42 U.S.C. 11003. The owner or operator may satisfy the requirement of this paragraph (c) through notification mechanisms designed to meet other Federal, State, or local notification requirements, provided the notification meets the requirements of this paragraph (c), as appropriate.”

## Strategies for Compliance

With these new requirements, it is necessary to ensure that the plan includes the appropriate release notification mechanisms, as previously discussed.

Additionally, similar to the “non-responding” sources, be sure to comply with the coordination requirements in 40 CFR 68.93, or at least document the annual attempts to do so, and conduct the notification exercise required under 40 CFR 68.96(a) on an annual basis. If the local response agencies agree to coordinate with the facility, be



sure to discuss methods of notifying the public and ensure that the ERP is updated to reflect the results of that conversation. As previously mentioned, the recent changes are due May 10, 2027, but the coordination requirement was first due in 2018, and the deadline to conduct the first notification exercise was December 19, 2024.

### **Rule Changes to 40 CFR 68.96 (EPA 40CFR68.96, 2024)**

With the new regulatory changes, “responding” sources are once again required to conduct field exercises with the local response agencies at least once every ten years, with the first one due by March 15, 2027.

40 CFR 68.96(b)(1) also states that if the local emergency response agencies feel that such frequency is impractical, they must document it in writing. In addition, if local emergency response agencies agree, “the owner or operator shall consult with local emergency response officials to establish an alternate appropriate frequency for field exercises.”

### **Strategies for Compliance**

Be sure to comply with the coordination requirements in 40 CFR 68.93 or at least document the annual attempts to do so. If the local response agencies do not wish to conduct field exercises at least once every ten years, then it must be documented in writing, and an appropriate frequency for such exercises should be determined.

Note that local responders are unlikely to state that such exercises have no merit and do not need to be conducted. It is more likely that the response agencies will state their desired frequency. It is also likely that as deadlines approach, the frequency of such exercises may slip. Should this happen, documentation must be provided by the response agencies to help the facility avoid possible citations.

The best method of ensuring that field exercises, as well as tabletop exercises, are conducted with the required frequency is to build a relationship with the local response agencies. The best way to achieve this is to join the LEPC and participate in the meetings.

### *Incident Investigation*

#### **Rule Changes to 40 CFR 68.81 (EPA 40CFR68 Subpart D, 2024)**

The new regulations have established several incident investigation requirements when the incident meets the accident history reporting requirements under §68.42, which include onsite injuries, deaths, and significant property damage, and known offsite deaths, injuries, property damage, environmental damage, evacuations, or shelters-in-place.

First, such reports must be completed within 12 months of the incident, unless the implementing agency (e.g., EPA) approves of an extension, in writing. Second, the report must include the root causes of the incident.

### **Strategies for Compliance**

Compliance with this change requires that the incident investigation program is updated to define the due dates for the report and the criteria that trigger those due dates. In addition, a root cause analysis technique, such as the 5-why technique, should be selected and identified in the program.

The final step to complying with this change in requirements is to train facility or corporate personnel who are responsible for conducting incident investigations on the use of the selected root cause technique. The deadline for compliance with this part is May 10, 2027.

## *Compliance Audits*

### **Rule Changes to 40 CFR 68.79 (EPA 40CFR68 Subpart D, 2024)**

The new regulations return to the third-party audit requirement from the 2017 changes, with minor modifications. The next required compliance audit must be a third-party audit when the facility experiences an RMP reportable accident, as defined in §68.42(a) or “when an implementing agency requires a third-party audit due to conditions at the stationary source that could lead to an accidental release of a regulated substance, or when a previous third-party audit failed to meet the competency or independence criteria of §68.80(c).” Appeals to the third-party audit requirement are possible. The appeals process is detailed in 40 CFR 68.79(g). Although the regulation allows for the third-party audit to be completed in the timeframe corresponding to the next regular compliance audit, the implementing agency may require that it be conducted sooner.

### **Rule Changes to 40 CFR 68.80 (EPA 40CFR68 Subpart D, 2024)**

The third-party audit team must be led by a third-party auditor meeting the competency and independence requirements outlined in paragraph (c). Any team members working for the third-party auditor’s firm must also meet the independence requirements of paragraph (c)(2).

The third-party auditor must be knowledgeable in the 40 CFR Part 68 regulations, experienced with ammonia refrigeration system audits regarding the recognized and generally accepted good engineering practices, and trained or certified in proper auditing techniques. The owner or operator of the facility being audited must determine and document that the third-party auditor meets these requirements.

The third-party auditors must act impartially when auditing the facility and developing the audit report. They must receive no financial benefit from the outcome of the audit, apart from payment for the auditing services. All third-party personnel involved in the audit must sign and date a conflict-of-interest statement, documenting that they meet the independence criteria. The regulations do allow for retired employees of the company being audited to qualify as independent if their sole continuing financial attachments to the owner or operator are employer-financed retirement and/or health plans.

The third-party audit firm must have written policies and procedures to ensure that all personnel comply with the competency and independence requirements. Furthermore, the firm must ensure that all third-party personnel involved in the audit do not accept future employment with the owner or operator of the stationary source for at least two years following submission of the final audit report. However, they are allowed to conduct additional third-party audits in the two-year timeframe, should the owner or operator need them.

The audit report must include the policies and procedures that the third-party audit firm has put in place to ensure competency and independence are maintained. It must also include summaries of the qualifications for all team members, along with information demonstrating that all third-party auditors meet the competency requirements. Finally, any significant revisions between the draft and final versions of the report must be summarized in the final report.

40 CFR 68.80(e) defines specific certification language that must be included in the report:

“I certify that this RMP compliance audit report was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information upon which the audit is based. I further certify that the audit was conducted and this report was prepared

pursuant to the requirements of subpart D of 40 CFR part 68 and all other applicable auditing, competency, independence, impartiality, and conflict of interest standards and protocols. Based on my personal knowledge and experience, and inquiry of personnel involved in the audit, the information submitted herein is true, accurate, and complete.”

Once the final audit report is received, the owner or operator must develop a findings response report as soon as possible, but no later than 90 days after receiving the final audit report. This report must contain:

- A copy of the final audit report
- An appropriate response to each of the audit report findings
- A schedule for promptly addressing deficiencies
- Certification of the owner or operator of the facility, signed and dated by a senior corporate officer or an official in an equivalent position

This certification must also use the language specified in the regulations:

“I certify under penalty of law that I have engaged a third party to perform or lead an audit team to conduct a third-party audit in accordance with the requirements of 40 CFR 68.80 and that the attached RMP compliance audit report was received, reviewed, and responded to under my direction or supervision by qualified personnel. I further certify that appropriate responses to the findings have been identified and deficiencies were corrected, or are being corrected, consistent with the requirements of subpart D of 40 CFR part 68, as documented herein. Based on my personal knowledge and experience, or inquiry of personnel involved in evaluating the report findings and determining appropriate responses to the findings, the information submitted herein is true, accurate, and complete. I am aware that there are significant penalties for making false material statements, representations, or certifications, including the possibility of fines and imprisonment for knowing violations.”

The owner or operator must implement the schedule to address deficiencies identified in the audit finding-response report and must document the action taken to address each deficiency, including the date that the action was completed.

The finding-response report and documentation detailing how the findings were addressed must be submitted to the audit committee of the owner or operator's Board of Directors, or another comparable committee or individual, if applicable.

The two most recent third-party audit reports, their associated finding-response reports, and the documentation of actions taken to address deficiencies must be kept on hand.

### **Strategies for Compliance**

Update your Compliance Audit Program, detailing the triggers for conducting a third-party audit, as well as the requirements for conducting such audits. This should include how to evaluate a third-party auditor's competency and independence, a list of the documentation required in the audit report, and how to develop a finding-response report. It should also include details on required communication related to the third-party audit, including submission of the documentation to the senior corporate officer for certification, submission of the certified documentation to the implementing agency, and communication with the audit committee of the Board of Directors, or a comparable committee or individual.

Note that the senior corporate officers and the audit committee of the Board of Directors, as well as Facility Management, must understand their responsibilities when third-party audits are conducted. This training should also include the criteria for RMP reportable accidents and the importance of avoiding them. The deadline to comply with this part is May 10, 2027.

## *Availability of Information to the Public*

### **Rule Changes to 40 CFR 68.210 (EPA 40CFR68.210, 2024)**

A requirement to make information available to the public was first introduced in the 2017 changes. With the 2024 changes, there are some new requirements.

First, the RMP must be made available to the public. This has been implemented by the EPA using a website, as presented above. Second, the public meeting requirement, as implemented in the 2019 changes, is still triggered by an RMP reportable accident with known offsite consequences. Third, the owner or operator must now make the following information available to any member of the public residing, working, or spending a significant time within six miles of the fence line of the stationary source:

1. *Regulated substances information.* Names of regulated substances held in a process
2. *Safety Data Sheets.* Descriptions for all regulated substances located at the facility
3. *Accident history information.* Provide the five-year accident history information required under § 68.42
4. *Emergency response program.* The following information concerning the stationary source's compliance with § 68.10(f)(3) and the emergency response provisions in subpart E of this part, as applicable:
  - a. Whether the stationary source is a responding stationary source or a non-responding stationary source
  - b. Names and phone numbers of local emergency response organizations with which the owner or operator last coordinated emergency response efforts, under § 68.180

- c. For stationary sources subject to § 68.95, procedures for informing the public and local emergency response agencies about accidental releases
- 5. *Exercises.* A list of scheduled exercises, excluding dates, occurring within one year from the date of request, as required under § 68.96
- 6. *LEPC contact information.* Include LEPC name, phone number, and web address, as available
- 7. *Declined recommendations and justifications.* Include declined recommendations and justifications required under §§ 68.170(e)(7) and 68.175(e)(7) through (9)

The information must be made available in English or at least two other languages commonly spoken by the population potentially affected.

The owner or operator must provide ongoing notification on a company website, social media platform, or through other publicly accessible means, to ensure the following:

- 1. Information specified in paragraph (d) of this section is available to the public residing, working, or spending significant time within 6 miles of the stationary source, upon request. The notification shall:
  - a. Specify the information elements identified in paragraph (d) of this section that can be requested
  - b. Provide instructions for how to request the information, including verification of their presence within 6 miles (e.g., email, mailing address, and/or telephone or website request)
- 2. Identify where to access information on community preparedness, if available, including shelter-in-place and evacuation procedures.



This information must be provided within 45 days of receiving a request. Records of requests must be kept for five years. The deadline for implementing this system is May 10, 2027.

## **Strategies for Compliance**

Implementation of a system to comply with this part can take numerous directions, and it is outside the scope of this paper to fully evaluate each of the possible means of implementing each part of this requirement. However, some serious questions must be addressed so that answers can be developed with enough time to implement a compliant system.

Here are some of the questions that need to be asked:

1. How will requests be submitted?
2. Who will manage the requests?
  - a. Facility personnel
    - i. New job responsibility for an existing position?
    - ii. Do the personnel with the knowledge to field the requests have the availability for the additional responsibility, especially if there is a flood of requests?
    - iii. New position?
  - b. Corporate role
    - i. New job responsibility for an existing position?
    - ii. New position?

3. Where will the information be kept?
4. How will the information be kept up to date?
5. How will requests be vetted to determine whether they come from a requestor that meets the criteria?
6. What is “significant time” and how is that determined?
7. How will the information be provided?
8. How are the available languages determined?
9. How are the language translations going to be accomplished?

As evident from the list of questions, multiple stakeholders must be involved to implement a program and comply with this requirement. This includes personnel from operations, risk, engineering, environmental, health and safety, IT, legal, and senior c-suite executives.

### *RMP eSubmit*

#### **Rule Changes to 40 CFR 68.160-175 (EPA 40CFR68 Subpart G, 2024)**

To wrap up the changes, several new items will be required in the RMP submission. The following list of items must be submitted prior to May 10, 2028:

1. Method of communication and location of the notification that chemical hazard information is available to the public residing, working, or spending significant time within 6 miles of the stationary source, under § 68.210(d)
2. Inherently safer technology or design measures implemented since the last PHA, if any, and the technology category (substitution, minimization, simplification,

and/or moderation) – not applicable to most facilities with ammonia refrigeration

3. Recommendations declined regarding natural hazards, power losses, and siting hazard evaluations, along with justifications
4. Recommendations declined regarding safety gaps between codes, standards, or practices to which the process was designed/constructed and the most current version of applicable codes, standards, or practices
5. Date of the most recent compliance audit and the expected date of completion of any changes resulting from the compliance audit, including identification of whether the most recent compliance audit was a third-party audit, under §§ 68.79 and 68.80, as well as findings declined from third-party compliance audits, along with justifications

Note that if a facility's RMP resubmission is due prior to the deadline of May 10, 2028, two resubmissions may be required. It is recommended to implement as many of the new requirements prior to their next scheduled resubmission.

## **Conclusion**

Considering the myriad of changes to the RMP provisions and the relatively short timeframe available for implementing complicated requirements, each owner or operator must start the process as soon as possible: review each new requirement, identify the party responsible for each section's update, create teams to address a requirement, identify the tasks required to complete the requirements and comply with each section, develop a schedule to complete the tasks, and hold people accountable and reach out for help if progress is stalled.

## References

DHS. (2014, August 18). *[Docket No. DHS-2014-0016] 6 CFR Part 27 Chemical Facility Anti-Terrorism Standards Proposed Rules*. Retrieved from Federal Register: <https://www.govinfo.gov/content/pkg/FR-2014-08-18/pdf/2014-19356.pdf>

EPA 2014 RFI. (2014, July 31). *[EPA-HQ-OEM-2014-0328; FRL-9911-62-OSWER] Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, Section 112(r)(7) Proposed Rules*. Retrieved from Federal Register: <https://www.govinfo.gov/content/pkg/FR-2014-07-31/pdf/2014-18037.pdf>

EPA 2016 Proposed Rule. (2016, March 14). *[EPA-HQ-OEM-2015-0725; FRL-9940-94-OLEM] 40CFR68 Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act Proposed Rules*. Retrieved from Federal Register.

EPA 2017 Final Rule. (2017, January 13). *[EPA-HQ-OEM-2015-0725; FRL-9954-46-OLEM] 40CFR68 Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act Rules and Regulations*. Retrieved from Federal Register: <https://www.govinfo.gov/content/pkg/FR-2017-01-13/pdf/2016-31426.pdf>

EPA 2019 Changes. (2019, December 19). *[EPA-HQ-OEM-2015-0725; FRL-10002-69-OLEM] 40CFR68 Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act Rules and Regulations*. Retrieved from Federal Register: <https://www.govinfo.gov/content/pkg/FR-2019-12-19/pdf/2019-25974.pdf>

EPA 2024 Final Rule. (2024, March 11). *[EPA-HQ-OLEM-2022-0174; FRL-5766.6-OLEM] 40CFR68 Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act; Safer Communities by Chemical Accident Prevention*. Retrieved from Federal Register: <https://www.govinfo.gov/content/pkg/FR-2024-03-11/pdf/2024-04458.pdf>

EPA 40CFR68. (2024, October 01). *40 CFR Part 68, Chemical Accident Prevention Provisions*. Retrieved from National Archives Code of Federal Regulations: <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-68?toc=1>

EPA 40CFR68 Subpart D. (2024, October 01). *40 CFR Part 68, Subpart D, Level 3 Prevention Programs*. Retrieved from National Archives Code of Federal Regulations: <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-68/subpart-D>

EPA 40CFR68 Subpart G. (2024, October 01). *EPA 40CFR68 Subpart G, Risk Management Plan*. Retrieved from National Archives Code of Federal Regulations: <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-68/subpart-G>

EPA 40CFR68.210. (2024, October 01). *40CFR68.210, Availability of Information to the Public*. Retrieved from National Archives Code of Federal Regulations: <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-68/subpart-H/section-68.210>

EPA 40CFR68.90. (2024, October 01). *40CFR68.90, Emergency Response, Applicability*. Retrieved from National Archives Code of Federal Regulations: <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-68/subpart-E/section-68.90>

EPA 40CFR68.95. (2024, October 01). *40CFR68.95, Emergency Response, Emergency Response Program*. Retrieved from National Archives Code of Federal Regulations: <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-68/subpart-E/section-68.95>

EPA 40CFR68.96. (2024, October 01). *40CFR68.96, Emergency Response, Emergency Response Exercises*. Retrieved from National Archives Code of Federal Regulations: <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-68/subpart-E/section-68.96>

EPA Delay. (2017, June 14). [EPA-HQ-OEM-2015-0725; FRL-9963-55-OLEM] *40CFR68 Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act; Further Delay of Effective Date*. Retrieved from Federal Register: <https://www.govinfo.gov/content/pkg/FR-2017-06-14/pdf/2017-12340.pdf>

EPA Enforcement Renewal. (2018, December 03). [EPA-HQ-OEM-2015-0725; FRL-9987-23-OLEM] *40CFR68 Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act*. Retrieved from Federal Register: <https://www.govinfo.gov/content/pkg/FR-2018-12-03/pdf/2018-26224.pdf>

Exec. Order No. 13,650. (2013). Retrieved from <https://www.govinfo.gov/app/details/CFR-2014-title3-vol1/CFR-2014-title3-vol1-eo13650>

OSHA. (2013, December 9). [Docket No. OSHA-2013-0020] *29 CFR 1910.119 Process Safety Management and Prevention of Major Chemical Accidents Proposed Rules*. Retrieved from Federal Register: <https://www.govinfo.gov/content/pkg/FR-2013-12-09/pdf/2013-29197.pdf>

OSHA 29CFR1910.119. (2024, October 01). *29 CFR 1910.119 Process Safety Management of Highly Hazardous Chemicals*. Retrieved from National Archives Code of Federal Regulations: <https://www.ecfr.gov/current/title-29/subtitle-B/chapter-XVII/part-1910/subpart-H/section-1910.119>

USCSB. (2016). *West Fertilizer Company Fire and Explosion*. U.S. Chemical Safety Board.

[illegible]

[illegible]