



COMMENTS FROM THE
NATURAL RESOURCES DEFENSE COUNCIL

TO EPA ON THE
RISK MANAGEMENT PROGRAM (RMP)
SAFER COMMUNITIES BY CHEMICAL ACCIDENT PREVENTION
PROPOSED RULE

Submitted via Regulations.gov
Docket ID No. EPA-HQ-OLEM-2022-0174
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NRDC incorporates herein by reference the following submissions to this docket:

Comments from Coming Clean and Environmental Justice Health Alliance (EJHA).

CC and EJHA represent fenceline, community, worker, environmental justice, business, conservation, science, health and other constituencies affected by chemical disasters and EPA's Risk Management Plan (RMP) regulation and program. NRDC partners with CC and EJHA.

Comments from Blue Green Alliance.

BlueGreen Alliance (BGA) is a coalition of labor unions and environmental organizations collectively representing millions of members and supporters. NRDC is a member of BGA.

The Louisville Charter for Safer Chemicals

NRDC comments are guided by the vision of a safe and sustainable chemical industry that does not harm people, the environment, or the climate outlined by the Louisville Charter for Safer Chemicals.¹ NRDC has endorsed the Louisville Charter for Safer Chemicals.

¹ Louisville Charter for Safer Chemicals. <http://www.louisvillecharter.org/>

SUMMARY

There are more than 12,000 high-risk chemical facilities across the country, frequently located close together, that manufacture, use, and store hazardous chemicals. Nearly 125 million people in America, predominantly from communities of color and low-income communities, live within three miles of dangerous chemical facilities.

Explosions, fires and other disastrous industrial incidents frequently result in injury and death to workers, first responders, and fence-line communities.² Chemical facility incidents also trigger evacuation and shelter-in-place orders, resulting in disruption and harm to communities. And, property damage and other financial tolls can be devastating for everyone, including the facility, workers, communities, surrounding businesses, insurers, and local and state governments. Rebuilding after such an incident – including both material building as well as building trust – can range from difficult and costly, to impossible.

In these comments we ask that EPA strengthen the RMP, to deliver the protections promised by the White House to Americans now in harm's way, by making required:³

1. All facilities switch to safer chemicals and processes;
2. All facilities prepare for climate hazards, including enough back-up power to safely run or shutdown the entire facility in a power outage;
3. All facilities to have real-time fence-line air monitors and multilingual emergency response plans and alerts, with enforcement mechanisms and robust penalties for intentionally removing air monitors from service;
4. Workers are at the decision-making table in all stages of the facility's RMP development and implementation, that workers can issue stop work authority at all RMP covered processes and facilities, and that anonymous worker reports go directly to the EPA;
5. EPA establish and manage an online multilingual database of all facilities regulated by the rule;
6. EPA update the list of chemicals covered by the rule, and require that where any part of the facility is currently covered, the entire facility is subject to the rule;
7. Facilities conduct a cumulative impacts assessment and take action to eliminate the hazards identified.

Thankfully, the Biden Administration's new proposal would undo much of the harm done by the Trump Administration. However, significant improvements are needed to compel laggard companies to catch up with the state of the science.

² Morbidity and Mortality Weekly Report, "Persons Injured During Acute Chemical Incidents – Hazardous Substances Emergency Events Surveillance, Nine States, 1999-2008," April 10, 2015. Available: <https://www.cdc.gov/mmwr/preview/mmwrhtml/ss6402a3.htm>

³ White House Executive Order on Tackling the Climate Crisis at Home and Abroad. January 27, 2021. <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/>

DETAILED COMMENTS

1. RMP should require that all facilities switch to safer chemicals and processes

The 2019 explosion of over five thousand pounds of hydrofluoric acid (HF) at the Philadelphia Energy Solutions (PES) refinery in Pennsylvania resulted in property damage totaling roughly \$750 million, injuries to five workers and one firefighter, and the loss of over 1,000 jobs when the company declared bankruptcy the following year. Just this month, October 2022, the Chemical Safety and Hazard Investigation Board (CSB) issued its final report, noting that over 117,000 people live within 1 mile of the PES facility that exploded: “This incident should be a wake-up call to industry to prevent a similar event from occurring in the future.”⁴ To prevent future similar incidents, the CSB final report recommends that hydrofluoric acid (HF) in the 46 remaining HF alkylation units in the U.S. be eliminated, and replaced if necessary with less hazardous chemicals that are consistent with an ‘inherently safer design’ approach.⁵

While we are pleased that the Proposed Rule also recognizes the need to replace HF, and that it requires facilities using HF to conduct a Safer Technologies and Alternatives Assessment (STAA), it falls short of requiring that HF be replaced, or requiring that facilities take corrective actions to implement inherently safer technologies.

Not only does the rule fail to require critical life-saving measures, but it also carves out an exemption that is bigger than the rule. That is, even the requirement to conduct the STAA only applies to about 5% of all RMP facilities – those with petroleum and coal products processes, and those using HF, which is only about 600 of the almost 12,000 facilities.

Conducting the STAA is the foundation of the workplace Hierarchy of Controls, enshrined in the Louisville Charter for Safer Chemicals, and detailed in industry and professional Guidelines for Inherently Safer Chemical Processes (now in its 3rd edition) issued by the Center for Chemical Process Safety (CCPS) of the American Institute of Chemical Engineers (AIChE).⁶ But, recommendations that are not implemented are meaningless - the RMP must go further.

The RMP should be strengthened to require the documented use of STAA, including inherently safer systems analysis and the hierarchy of controls, consistent with recommendations of the Chemical Safety and Hazard Investigation Board (CSB). In 2010, the CSB’s report of the Tesoro Refinery fatal explosion and fire in Anacortes WA, found that requirements for STAA could prevent future such incidents. Thus, CSB recommended that STAA requirements should be “automatically triggered for all management of change, incident investigation, and process hazard analysis reviews and recommendations, prior to the construction of a new process, process unit rebuilds, significant process repairs, and in the development of corrective actions.”⁷ The RMP proposed rule should be updated to include this recommendation as a requirement.

⁴ CSB Releases Final Report into 2019 PES Fire and Explosion in Philadelphia. CSB news release, October 11, 2022. <https://www.csb.gov/csb-releases-final-report-into-2019-pes-fire-and-explosion-in-philadelphia/>

⁵ CSB Releases Final Report into 2019 PES Fire and Explosion in Philadelphia. CSB news release, October 11, 2022. <https://www.csb.gov/csb-releases-final-report-into-2019-pes-fire-and-explosion-in-philadelphia/>

⁶ Guidelines for Inherently Safer Chemical Processes: A Life Cycle Approach. Center for Chemical Process Safety (CCPS). 3rd Edition. October 2019

⁷ CSB 2010. Tesoro Refinery Fatal Explosion and Fire. CSB report 2010-08-I-WA-1. May 2014. <https://www.csb.gov/tesoro-refinery-fatal-explosion-and-fire/>

The RMP should require facilities to adopt the goal of reducing the risk of incidents to the greatest extent practicable, to be interpreted as equivalent to As Low as Reasonably Practicable (ALARP). Adopting an ALARP standard is a means to hold facilities accountable to implementing the STAA provisions of the RMP rule. This was a recommendation from CSB to EPA in its report of the Tesoro Refinery explosion, but has yet to be adopted by EPA. EPA should include it in the RMP.

To effectively improve safety, the RMP rule must be updated to require all RMP facilities to implement safer chemicals and processes. The requirement for STAA should be extended to cover more chemicals and to cover entire facilities where only part of a facility may now be covered under the current proposed rule.

2. RMP should require that all facilities take action to prepare for climate hazards, including things like enough back-up power to safely run or shutdown the entire facility when the power goes out

Many communities at the fenceline of hazardous facilities are in areas that are also vulnerable to extreme weather, like storms and floods, due to climate change, significantly increasing the likelihood of a “double disaster”, detailed with recommendations for prevention strategies in the 2021 report, *“Preventing Double Disasters: How the U.S. Environmental Protection Agency can protect the public from hazardous chemical releases worsened by natural disasters”*.⁸ We are pleased to see this important report highlighted in the Proposed Rule.⁹

The proposed RMP requires facilities to assess for risks of climate-related hazards, but falls short of requiring that they take any actions or implement prevention strategies based on the findings of the assessment. The RMP should require facilities to assess and prepare for climate hazards.

3. RMP should require all facilities to have real-time fenceline air monitors and multilingual emergency response plans and alerts, with enforcement mechanisms and robust penalties for intentionally removing air monitors from service

The RMP proposal requires backup power for air monitors, but only recommends consideration of common-sense emergency response and incident management measures like fenceline monitoring and adequate back-up power to safely run or shutdown facilities.

Moreover, there are no penalties for facilities that shown down their monitoring during an incident, to avoid collecting the data that would show harm or risk – something EPA acknowledges that facilities do. “EPA is concerned that air monitoring and control equipment is often removed from service before

⁸ Report: Preventing "Double Disasters" - How the U.S. Environmental Protection Agency can protect the public from hazardous chemical releases worsened by natural disasters. July 2021. Submitted to the Docket No. EPA-HQ-OLEM-2021-0312-0035. Available here: <https://www.ucsusa.org/sites/default/files/2021-07/preventing-double-disasters%20FINAL.pdf>

⁹ Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act; Safer Communities by Chemical Accident Prevention; Proposed Rule, 87 Fed. Reg. 53,556 (Aug. 31, 2022). See Proposed Rule footnotes 35, 39

natural disasters to potentially prevent damage to equipment, or conceivably in some cases, evade monitoring requirements”.¹⁰

EPA should strengthen the rule so as to require expanded fenceline monitoring, and adequate backup power for air monitors to operate continuously. This should be documented in a written plan that includes the location of the monitors.

4. RMP should require that workers (including contractors) or worker-selected representatives be at the decision-making table in all stages of the facility's RMP development and implementation, that workers can issue stop work authority at all RMP covered processes and facilities, and that anonymous worker reports go directly to the EPA

The RMP proposed rule needs to be strengthened so as to build and support a ‘culture of safety.’

This was a main point of CSB comments provide to EPA on the earlier draft RMP. For example, in response to the 2008 explosion of a tank storing the pesticide methomyl at a Bayer CropScience facility in Institute WV, the U.S. Chemical Safety and Hazard Investigation Board (CSB) recommended that a study be done to evaluate the human-control system interface, to include such things as operator fatigue, and control system familiarity and training. The goal of the recommendation was to address the company’s failure to ensure that a safety culture was established, so that safety procedures were reviewed, followed, and regularly updated. In fact, safety culture is one of the most critical components of prevention strategies, and should include engagement management, active worker committees, contractors, and communities. Wherever possible, the proposed RMP rule should require – not just recommend – these critical prevention measures to support a safety culture.

Require company ‘near miss’ reporting.

The RMP rule should implement CSB recommendations that would require that facilities work with unions, contractors, and communities to implement an effective program to “promote the reporting, investigation, and analysis of incidents, near-misses, process upsets, and major plant hazards without fear of retaliation. The program should be required to track recommendations to completion and share lessons learned with the workforce.”¹¹

If facilities only track and investigate catastrophic events, they will not be able to predict and prevent incidents. It is critically important to track and investigate precursors to RMP events. EPA notes in its proposed rule that previous public comments have emphasized the need for the RMP rule to include a requirement for near-miss reporting, suggesting that EPA provide a hotline to invite anonymous reporting from workers, contractors, and anyone else with relevant information to share. Near-miss reporting is a critical safety benefit of employee participation.

Report and prevent ‘upset emissions.’

The RMP rule should be tightened to close the loophole in the Clean Air Act (CCA) that exempts reporting and regulating “upset emissions” such as those that are the too-frequent result of routine

¹⁰ Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act; Safer Communities by Chemical Accident Prevention; Proposed Rule, 87 Fed. Reg. 53,556 (Aug. 31, 2022). see p. 53571

¹¹ CSB 2007. Recommendations following the BP Texas City refinery fire that killed 15 people. Recommendation 2005-4-I-TX-16 to the BP Texas City Refinery.

process safety events, maintenance, etc. These ‘upset emissions’ are precursors to RMP incidents, and are unfortunately both under-reported, and overlooked by regulators. A 2005 study by Public Citizen reported that Texas Commission on Environmental Quality (TCEQ) took disciplinary action on less than 1 percent of the over 7,500 non-permitted air emissions incidents.¹² In many cases, unpermitted releases of toxic pollutants were far greater than permitted ones, with one facility emitting 37 times more during upset events than was permitted over a year.

Upset emissions are precursors to RMP events, and should be required to be reported and prevented. Reporting of unpermitted emissions is a critical safety benefit of employee participation; this could also be reported through an EPA hotline to invite anonymous reporting from workers, contractors, and anyone else with relevant information to share.

Expand worker participation requirements

EPA must also strengthen worker participation by ensuring that workers are involved in every stage of RMP decision-making and that anonymous worker reports go directly to EPA. Effective RMP should encourage workers to take action to protect safety and avoid incidents, ensure fast compliance deadlines for all requirements, and require more reporting to EPA on compliance.

The RMP should require an expanded role for workers and their representatives more broadly, to include implementation of corrective actions generated from hierarchy of control analyses, incident investigation, audits, and the identification, prevention, and control of all process hazards. In its final report on the Chevron Refinery fire, CSB recommends that workers and their representatives should be provided with the “authority to stop work that is perceived to be unsafe until the employer resolves the matter or the regulator intervenes”. These participation practices should be detailed and documented in writing.

Require expanded third party compliance auditing

Third party compliance auditing is a critical component of a safety culture. The RMP rule should expand requirements for third party audits, to go beyond just incident data, to include independent third-party review of all process safety management programs and risk management plans. Audits should include ensuring that plans are updated regularly, and developed in consultation with industry, labor, government, public interest and environmental organizations and experts from relevant scientific organizations and disciplines.

Strengthen enforcement capacity

Most of the RMP inspections are done by contractors who used to work in the private sector. This is an inherently government function, and should be done by government, not contractors. Additionally, inspectors should be technically qualified and able to challenge industry claims as needed.

5. RMP should require the EPA to establish and manage an online multilingual database of all facilities regulated by the rule

¹² Public Citizen 2005. Industry Upset Pollution: Who pays the Price? An Analysis of the Health and Financial Impacts of Unpermitted Industrial Emissions. Public Citizen, August 2005. https://www.citizen.org/wp-content/uploads/migration/industrial_upset_pollution_who_pays_the_price_2_aug_2005.pdf

As proposed, the RMP fails to require timely and informative community notification in multiple languages as appropriate. It could easily be amended to require multilingual access, as relevant to local communities, to better ensure that public notifications and other critical safety and health information is received in a timely manner by families, schools, and other local residents potentially affected.

6. RMP should require that EPA update the list of chemicals covered by the rule, and that where any part of the facility is currently covered, the entire facility is subject to the rule

EPA should expand the RMP to include additional chemicals, including ammonium nitrate (fertilizer), reactive chemicals, and explosive chemicals.

Ammonium nitrate is the fertilizer agrochemical that detonated in the Port of Beirut, Lebanon in 2020, producing a supersonic blast that killed over 200 people and levelled nearby residential and commercial buildings. More recently, and closer to home, in January 2022 the Winston Weaver fertilizer plant in Winston Salem NC ignited, causing a massive evacuation of 6,500 people that lived within 1 mile of the facility, polluting the air with unsafe levels of toxic chemicals, and using up over 4 million gallons of water to extinguish the fire, resulting in millions of gallons of toxic runoff into nearby waterways, killing fish and wildlife (see details in RMP Case Studies report, 2022, p. 5).¹³ The proposed RMP rule lists additional explosions involving ammonium nitrate, one in 1994 in Iowa that killed 4 workers, and another in 2013 in Texas that killed 15 people including the public and first responders (see FR 53571). In response, the Chemical Safety Board recommended to EPA that it include fertilizer grade ammonia on the List of Regulated Substances covered by RMP (see CSB 2016 final report on West Fertilizer Explosion and Fire).¹⁴

EPA should expand the RMP to cover production and storage facilities for fertilizer and other highly hazardous chemicals not currently covered. The list of covered chemicals should be updated as soon as possible, no later than the end of 2023.

EPA should expand the RMP to include chemical stockpiles.

The January 2022 fire that broke out at Majestic Industries warehouse in Passaic NJ rapidly spread to the adjoining Qualco chemical plant; both were owned by the same family. The fire came perilously close to igniting 3 million pounds of stored hazardous chemicals, including over 100 thousand pounds of chlorine pellets stored on site (see details in RMP Case Studies report, 2022, p. 15).¹⁵ Over 68 thousand people live within one mile, of which just over 80 percent are people of color, and over half are low income. Water sprinklers had to be shut off due to the risk of water mixing with the stockpiled chlorine pellets to form deadly chlorine gas. Instead, roughly 200 firefighters, mostly volunteers, worked for several days and nights to control the blaze.

¹³ RMP Case Studies Report. Preventing Disaster: Three chemical incidents within two weeks show urgent need for stronger federal safety requirements. Coming Clean and the Environmental Justice Health Alliance for Chemical Policy Reform. September 2022.

<https://comingcleaninc.org/assets/media/images/Reports/Preventing%20Disaster%20final.pdf>

¹⁴ CSB 2016. West Fertilizer Explosion and Fire. Final Report, January 18, 2016. <https://www.csb.gov/west-fertilizer-explosion-and-fire/>

¹⁵ RMP Case Studies Report. Preventing Disaster: Three chemical incidents within two weeks show urgent need for stronger federal safety requirements. Coming Clean and the Environmental Justice Health Alliance for Chemical Policy Reform. September 2022.

<https://comingcleaninc.org/assets/media/images/Reports/Preventing%20Disaster%20final.pdf>

The RMP rule must be updated to include the fire and explosion risks posed by chemical stockpiles, including from non-RMP facilities like Qualco, Inc. The RMP rule should also be updated to cover facilities in their entirety, so that the whole facility follows RMP requirements.

7. RMP should require that facilities conduct a cumulative impacts assessment and take action to eliminate the hazards identified.

The RMP rule should reflect the cumulative impacts from clusters of RMP and hazardous non-RMP facilities.

EPA has proposed requiring that facilities conduct an evaluation and document the hazards associated with their proximity to surrounding communities, but they don't require a cumulative impacts assessment or that these hazards are eliminated. This willfully ignores the tremendous body of scientific evidence demonstrating that communities of color and low-income communities face disproportionately extreme threats to their health from their environments, including high numbers of toxic "legacy" sites, large numbers and concentrations of chemical storage and industrial facilities, air pollution from traffic or ports, environmental exposure to heavy metals such as lead, workplace and take-home exposures, increased rates of drinking water violations, and heightened exposure to toxic chemicals, such as pesticides and other contamination in consumer products, food, and air (see details with citations in Pullen Fedinick et al 2021).¹⁶ The threats often converge in these communities due to historic and continuing racist and discriminatory policies and practices that perpetuate economic and health injustices, resulting in cumulative impacts on individual and population health.

EPA should amend the RMP rule to address cumulative impacts by requiring that facilities conduct a cumulative impacts assessment in all siting evaluations and further requiring that the hazards that are identified are eliminated.

The RMP should be updated to ensure that facilities are required to eliminate the hazards that account for cumulative health impacts from multiple polluting facilities and require more layers of prevention at facilities contributing to cumulative health stressors.

Thank you for consideration of these comments.

Respectfully,

A handwritten signature in cursive script that reads "Jennifer Sass". The signature is written in dark ink on a white background.

¹⁶ Pullen Fedinick K, Yiliqi I, Lam Y, Lennett D, Singla V, Rotkin-Ellman M, Sass J. A Cumulative Framework for Identifying Overburdened Populations under the Toxic Substances Control Act: Formaldehyde Case Study. Int J Environ Res Public Health. 2021 Jun 3;18(11):6002. doi: 10.3390/ijerph18116002.