Comments submitted in response to Federal Register Notice
"Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, Section 112(r)(7); Proposed Rule"

Docket Number EPA-HQ-OEM-2015-0725

May 13, 2016

The 122 organizations, and additional individuals, listed below, representing the Coalition to Prevent Chemical Disasters, submit these comments on May 13, 2016 in response to Docket EPA-HQ-OEM-2015-0725.

Table of Contents

I. INTRODUCTION

President Obama's August 1, 2013 Executive Order (EO) #13650 on Chemical Facility Safety and Security directs federal Agencies to modernize chemical plant safety and security policies in order to protect workers and communities. Almost three years have passed since the EO was issued, and federal Agencies have yet to adopt new policies that will prevent chemical disasters. It is critical that this Administration modernize existing policies before leaving office.

We continue to urge the Environmental Protection Agency (EPA) to use its existing authority under the 1990 Clean Air Act to prevent chemical disasters as soon as possible. Solutions exist and the best way to prevent disasters is to require chemical facilities to assess alternatives and use safer chemicals and processes whenever available, effective, and affordable. The best way to ensure identification of and conversion to safer chemicals is to exercise the Clean Air Act's "Bhopal" provisions in sections 112 (r)(1) and 112 (r)(7)(A). By employing its full authority, the EPA can require dangerous chemical facilities to use the safest cost-effective chemical process available to eliminate the potential for catastrophic chemical releases.

In issuing the EO, President Obama made it clear that existing federal and state programs were not protecting the safety and security of the workers or residents of West, Texas or any other community. The existing Risk Management Program (RMP) has failed because none of the existing rules or safety standards require facilities to identify or adopt inherently safer technologies and systems, because critical information has been kept from at-risk communities, and because EPA has focused entirely on disaster response rather than prevention. Current programs are limited to "managing" or "mitigating" risks rather than eliminating unnecessary hazards or dramatically reducing their inherent danger.

Specifically, the EPA's Risk Management Program (RMP) lacks fundamental requirements to protect public health and the environment from catastrophic chemical releases through common sense prevention measures. For example, although the current RMP rules require chemical facilities to report their worst-case disaster scenarios to the EPA and make preparations for future disasters, facilities are not required to identify whether safer chemicals or processes are available that could reduce or remove the underlying hazard.

The risks to Americans are extraordinarily large and disproportionate to many. In an analysis of the EPA's RMP, the Congressional Research Service found that 466 chemical facilities pose a catastrophic hazard to 100,000 or more people. Together these facilities put more than 100 million people in the U.S. at risk of a chemical disaster, each of which could be far more deadly than the West, Texas explosion.[1]

[1] https://www.americanprogress.org/issues/security/report/2008/11/19/5203/chemical-security-101/

EPA's current RMP program and related policies and activities have failed to address the disproportionate impacts of hazardous chemical facilities in communities of color and low-income communities, as evidenced by the fact that the percentage of Blacks in the fence-line zones (1/10 the size of the full worst-case scenario disaster zone) around 3,433 RMP facilities is 75% greater than for the U.S. as a whole, the percentage of Latinos is 60% greater, and the poverty rate is 50% higher.[2] The Agency is effectively denying those communities and populations the benefits of the RMP program and allowing discrimination to continue.

The EPA has unambiguous authority to issue new requirements in the form of regulations, guidance and standards, and a statutory obligation to maximize prevention of unplanned releases. The agency acknowledged its authority in an August 1, 2013 letter from the EPA to Congress.[3]

In taking final action, EPA should strengthen the rule to fully meet its statutory obligations, to ensure that it does not arbitrarily and capriciously exclude facilities and communities from protection or fail to fulfill Environmental Justice policies and practices to address disproportionate harm, and to adopt commonsense measures to prevent chemical disasters.

We recommend EPA finalize all of the important protections contained in the proposed rule and also that EPA make the following specific changes to the proposed rule as detailed below, including:

- Require that all RMP facilities conduct Safer Technology Alternatives Assessments (STAA)s;
- Ensure that summary information from STAAs is publicly available;
- Require more extensive documentation of the feasibility of safer alternatives in Process Hazard Analyses (PHAs);
- Require that STAAs include certain basic elements;
- Require implementation of safer alternatives when feasible;
- Require compliance with STAA requirements sooner than 5 years;
- Adopt a strong, clear definition of "feasible" that builds on OSHA's definition;
- Require facilities that conduct STAAs to implement additional prevention and detection measures;
- Require emergency response field exercises more often than every 5 years;
- Ensure disclosure of critical information to enable at-risk communities to participate in their own protection;
- Include specific elements to address disproportionate impacts to already overburdened communities and ensure Environmental Justice;

---

[2] http://comingcleaninc.org/assets/media/images/Reports/Who%27s%20in%20Danger%20Report%20and%20Table%20FINAL.pdf

[3] http://www.documentcloud.org/documents/784013-epa-resps-to-pompeo-8-1-13.html

- Promote worker participation in all relevant activities.

II. EPA SHOULD REQUIRE STAA AS AN ESSENTIAL PREVENTION MEASURE

A. Legal requirements for "prevention of accidental releases"

EPA's proposed rule is based on its authority under section 112(r) of the Clean Air Act, and, in particular, its rulemaking authorities under section 112(r)(7). Section 112(r) directs EPA, first and foremost, to set requirements designed to prevent accidental releases. The title of subsection (r) is "Prevention of accidental releases." 42 U.S.C. § 7412(r).[4] Prevention is also a central part of this provision's stated purpose. Specifically, subsection (r) directs: "It shall be the objective of the regulations and programs authorized under this subsection to **prevent the accidental release** and to minimize the consequences of any such release of any substance listed pursuant to paragraph (3) or any other extremely hazardous substance." *Id.* § 7412(r)(1) (emphasis added). Elaborating on this purpose, the Senate Report accompanying this provision's enactment made clear both that prevention is an essential part of EPA action under § 7412(r), and that preventive measures actually take priority, *i.e.*, "are preferable," to post-release measures.[5]

In granting EPA broad rulemaking authority to implement this objective, the Act further emphasizes prevention, stating: "**In order to prevent accidental releases of regulated substances**, the Administrator is authorized to promulgate **release prevention**, detection, and correction requirements which may include monitoring, record-keeping, reporting, training, vapor recovery, secondary containment, and other design, equipment, work practice, and operational requirements." *Id.* § 7412(r)(7)(A) (emphasis added).

Furthermore, the provision governing the risk management program (RMP) and related regulations, subsection 7412(r)(7)(B)(i), also explicitly requires prevention as one of three key factors, stating that: "the Administrator shall promulgate reasonable regulations and appropriate guidance to **provide**, to the greatest extent practicable, **for the prevention and detection of accidental releases of regulated substances** and for response to such releases by the owners or operators of the sources of such releases." *Id.* § 7412(r)(7)(B)(i) (emphasis added).

---

[4] For purposes of § 112(r), an "accidental release" is defined as "an unanticipated emission of a regulated substance or other extremely hazardous substance into the ambient air from a stationary source." 42 U.S.C. § 7412(r)(2)(A).

[5] S. Rep. No. 101-228, at 209, 1990 U.S.C.C.A.N. 3385, 3594 ("The objectives of the proposed section … include both the prevention of accidental releases and the minimization of the consequences which may result. Systems and measures which are effective in preventing accidents are preferable to those which are intended to minimize the consequences of a release. Measures which entirely eliminate the presence of potential hazards (through substitution of less harmful substances or by minimizing the quantity of an extremely hazardous substance present at any one time), as opposed to those which merely provide additional containment, are the most preferred.").

B. To fulfill the prevention goals of the statute, EPA's rule must finalize the STAA requirements

The proposed rule contains just one measure aimed principally at primary prevention (defined as eliminating the presence of potential hazards rather than attempting to keep chemicals contained): the requirements for safer technology and alternatives analysis (STAA). The proposed rule states that it contains three types of "prevention program provisions": "auditing, incident investigation, and [STAA]." 81 Fed. Reg. at 13,646. But only the last, STAA, must actually occur *before* an accident or non-compliance. The proposed third party auditing and incident investigation and related requirements all occur only *after* an incident or evidence of non-compliance.

Commenters urge EPA to finalize the STAA requirements, as soon as possible this year. EPA has well-supported the need to require STAA based on the record. STAA is a meaningful prevention measure likely to achieve dramatic results to avoid accidental releases at facilities that use the STAA to implement safer measures and practices. Among other things, the STAA requirements will ensure that the covered facilities perform the assessment needed to fulfill their general duty to prevent accidental releases under the Act. The STAA requirements also will provide important information to EPA to use in enforcing the Act's requirements. The accident data EPA compiled in the rulemaking record, along with substantial evidence submitted from the Chemical Safety Board and commenters during the Request for Information, provide ample evidence that more than the existing RMP rule requirements are needed to prevent hazardous accidental releases.

C. To meet the statutory objective for prevention, EPA's rule should not exempt the majority of facilities and industries from the STAA requirements

Commenters urge EPA to extend and finalize the STAA requirements it has proposed, rather than exempting entire industries from performing these assessments.

EPA proposes to require STAA *only* for certain chemical, pulp and paper plants, and refineries (*i.e.*, only facilities within RMP level 3 processes in NAICS codes 322, 324, and 325). 81 Fed. Reg. at 13,667. Thus, the proposed rule would impose these prevention requirements on 1,455 facilities, or only 12% of the 12,542 total RMP-covered facilities. EPA-HQ-OEM-2015-0725-0037, Reg. Impact Analysis at 16, 31.

The proposed rule is unlawful, arbitrary, and capricious because it contains no STAA requirements, and thus also no pre-release prevention measures, for any of the other 10,850 covered facilities, about 88% of the facilities required to RMP report. Millions of people live, work, and go to school within the vulnerability zones of these facilities daily – and will receive zero consideration of inherently safer options under EPA's rule. EPA's rule will not require these facilities, which have the potential for serious accidental releases of hazardous substances, to perform an STAA – a basic assessment of ways to reduce the catastrophic harm that an accident could cause.

As a result, the EPA proposed rule arbitrarily prejudges which industries have worthwhile alternatives, and which facilities and surrounding communities would benefit from

STAA's that are likely to lead to more protective operational measures. Many opportunities for innovative safety improvements are thereby obscured, and EPA's exemption of certain facilities would also cause absurd results. For example:

- The proposed rule notes four companies that adopted a demonstrably safer alternative – Columbus Manufacturing, Abilene Products, Suiza Dairy, and Metal Finishing Technologies (81 Fed. Reg. at 13,664). But based on their NAICS codes, EPA would not require any similar facilities even to conduct a STAA to consider following suit, or to adopt other available safer alternatives.
- Hill Brothers Chemical manufactures bleach near Phoenix, Arizona. One mile away DPC Industries repackages chlorine gas and manufactures bleach. Each facility uses railcars of chlorine gas. Many of the same people, workers and community members alike, are at risk of a catastrophic accident at each facility. But only Hill Brothers would have to conduct an STAA.
- The Chemical Safety Board has investigated many serious incidents at facilities that would not be required to conduct an STAA – for example the aforementioned DPC Industries near Phoenix (Glendale), Arizona.

Entire industry sectors would be exempt despite well-known alternatives:

- Some 1,284 water treatment facilities have average RMP vulnerability zones of 34,951 people in areas where 33.6 million people live.[6]
- Some 686 wastewater facilities have average RMP vulnerability zones of 42,250 people in areas where 21 million people live.[7]
- Some 334 electric power generation facilities (NAICS 221) have average RMP vulnerability zones of 13,100 people in areas where four million people live.[8]
- Some 38 chlorine bleach facilities (NAICS 424) have average RMP vulnerability zones of 710,325 people, while 48 other chlorine bleach facilities (NAICS 325) have average RMP vulnerability zones of 953,683 people. Together the vulnerability zones of these 86 plants include 63 million people, but 44 percent would be exempt from the proposed rule's STAA requirements.
- And there are many other industries, including the following examples, where there are safer alternatives clearly available, but an STAA will not be required:
    - Secondary aluminum smelters (NAICS 331314) that can replace chlorine gas with nitrogen gas;

[6] Paul Orum, Richard Moore, Michele Roberts, Joaquin Sanchez, *Who's in Danger: Race, Poverty, and Chemical Disasters – A Demographic Analysis of Chemical Disaster Vulnerability Zones* (Environmental Justice and Health Alliance for Chemical Policy Reform, May 2014), p.33.

[7] Ibid.

[8] Ibid.

    - Semiconductor manufacturers (NAICS 334413) that can use less concentrated hydrofluoric acid;
    - Pool service companies (mostly NAICS 56179) that can substitute chlorine gas with chlorine tabs;
    - Refrigerated warehouses (NAICS 49312) that can dramatically reduce amounts of anhydrous ammonia gas with low charge ammonia refrigeration systems;
    - Various food processors (various NAICS) that can substitute anhydrous sulfur dioxide gas with sodium bisulfite or sodium metabisulfite.
- Regardless of industry sector, EPA proposes to exempt all RMP level 2 facilities. For example, seven water or wastewater facilities around Dallas and Fort Worth, Texas have a million or more people living in their RMP vulnerability zones. As level 2 facilities, these facilities would all be exempt from STAA requirements regardless of industry sector.

EPA should not set itself up as gatekeeper to prejudge the outcomes of STAAs. EPA should instead require STAAs for all § 7412(r)-covered sources, to ensure facilities compile this information and provide it to EPA so facilities can remove unnecessary catastrophic chemical hazards and EPA (along with other facilities, agencies, and safety experts) can learn from STAAs, including both successes and barriers, and how to best strengthen safety protections at hazardous-release facilities. If EPA proposes to exempt some facilities, it must provide a substantial and credible justification for why STAA requirements are not appropriately imposed upon them in light of the risks they present, the potential benefits of requiring STAA, the statute's insistence that EPA maximize prevention of releases, and the fact that safer alternatives are clearly available to many of the exempted facilities. Among other issues, EPA must:

- Justify its position that "while most sectors regulated under 40 CFR part 68 could identify safer technology," it will not require most sectors to conduct an STAA.
- Justify its exclusion of entire industry sectors from conducting STAAs because their options "may be limited," when in fact entire excluded industry sectors, such as drinking water and wastewater, already have well known and widely used safer alternatives to RMP-regulated processes.
- Explain why sources that "may have opportunities to implement chemical substitution strategies" should not be required to examine these options just because they "may be limited in their ability to apply moderation and simplification strategies" (or vice versa).
- Explain how its focus on industries with a "disproportionate share of reportable releases" can credibly be used to forecast and prevent rare catastrophic events (which by their very nature tend to fall outside existing patterns).

Absent such explanations, a rule limiting the STAA requirement to a small subset of facilities would be inconsistent with the statute and arbitrary and capricious for three reasons.

First, the Act does not authorize EPA to exclude entire categories of "stationary sources" to which § 7412(r) applies from prevention measures.[9] For sources excluded from the STAA requirement, the proposed rule addresses only incidents after the fact; there are no requirements for prevention at all facilities. Thus the rule does not satisfy the prevention objectives of § 7412(r)(1), (2), and (7), on which EPA relies for this rulemaking.[10] There is no support in the statute for exempting entire industries from the Act's prevention objectives or from its preference for measures that eliminate the presence of potential hazards.

Section 7412(r)(7)(A) allows EPA only to "make distinctions" between facilities based on certain factors. Similarly, section 7412(r)(7)(B) allows EPA only to, "as appropriate, recognize differences in size, operations, processes, class and categories of sources and the voluntary actions of such sources to prevent such releases and respond to such releases." Even if EPA had cited and were relying on these provisions to justify the limits it has placed on STAA (which it has not done), their language does not permit EPA to disregard the core requirement of prevention with respect to such facilities. A "distinction" or "recogni[tion]" of "differences" is not the same as a blanket exemption from the prevention mandate. If Congress intended such terms to allow for a broad exemption from the Act's requirements, presumably it would have stated that. Thus, neither provision authorizes a complete exemption for thousands of facilities otherwise covered by § 7412(r) from the only prevention measure EPA has proposed in this rule.

Second, even assuming that the statutory language might allow for some limited exemptions for certain facilities or sources if EPA could satisfy the statutory factors provided in the provisions allowing "distinctions" and "differences," EPA has not attempted to rely on those provisions to justify its exemptions, nor has it adequately explained how the factors identified in those provisions support the distinctions it has drawn. The agency neither cites these factors nor demonstrates based on any evidence why or how exempting entire categories of stationary sources from the STAA requirements could satisfy § 7412(r)(7).

Third, limiting STAA to only the three industries would be arbitrary and capricious under the Administrative Procedure Act, 5 U.S.C. § 706(2), based on the significant value the STAA would provide to facilities, to EPA, and to at-risk workers and communities. In addition to removing potential hazards, inherently safer technology and design is the only approach that can sometimes improve industrial efficiency and save facilities money while removing enormous potential liabilities. EPA has provided no reasoned explanation for limiting the STAA

[9] A "stationary source" is defined in the Act as: "any buildings, structures, equipment, installations, or substance emitting stationary activities (i) which belong to the same industrial group, (ii) which are located on one or more contiguous properties, (iii) which are under the control of the same person (or persons under common control), and (i) from which an accidental release may occur." 42 U.S.C. § 7412(r)(2).

[10] *See* 81 Fed. Reg. at 13,646 ("Each of the portions of the Risk Management Program rule we propose to modify in this document are based on EPA's rulemaking authority under section 112(r)(7) of the CAA"; and EPA also specifically cites and relies on each of the three major requirements of § 7412(r)(7)(B)(i) re: "prevention and detection of accidental releases" and "response to such release by the owners or operators").

requirements only to certain facilities within three industry sectors, while denying other facilities and communities access to these benefits.

The evidence is clear that the best way to prevent harm from accidental releases is to make any such releases less able to cause harm, *i.e.*, by using inherently safer and less hazardous technologies, processes, and chemicals. EPA's important new proposal to require STAA at certain facilities recognizes this evidence. EPA likewise recognized the value of IST in its June 2015 Alert https://www.epa.gov/sites/production/files/2015-06/documents/alert_safer_tech_alts.pdf recommending: "The first choice for managing chemical hazards and risk is the use of Inherently Safer Technology (IST) or Inherently Safer Design (ISD)."

Commenters previously submitted significant information to EPA on IST and its broad value to prevent harm from accidental releases—including in the 2012 petition, in comments on EPA's Request for Information, and in comments on EPA's refineries air toxics rule (submitted in 2014), all of which are provided as additional support and incorporated into these comments by reference here and through resubmission as part of an accompanying Appendix.

Moreover, key federal experts have emphasized to EPA the importance of requiring IST as cited in the materials we have previously submitted, and in their own comments provided to EPA, such as by the Chemical Safety Board. As another major example, the National Research Council of the National Academy of Sciences, in its influential 2006 report, *Terrorism and the Chemical Infrastructure: Protecting People and Reducing Vulnerabilities*, recommended that "[t]he most desirable solution to preventing chemical releases is to reduce or eliminate the hazard where possible, not to control it. This can be achieved by modifying processes where possible to minimize the amount of hazardous material used, lower the temperatures and pressures required, replace a hazardous substance with a less hazardous substitute, or minimize the complexity of a chemical process."[11] In its report on the near-disaster at Bayer's West Virginia facility, the NAS again emphasized that the philosophy of inherently safer technology recognizes that "[i]t may not always be feasible to eliminate or reduce hazards, but … this [must] be attempted before moving on to specification of risk management equipment and procedures."[12] Inherently safer technologies not only "have the potential to reduce the probability or likelihood that a worst-case accident occurs," but also "to provide assurance that, should a worst-case release occur (i.e., the largest single storage vessel under worst meteorological conditions), an absolute upper bound to the magnitude of an offsite release exists, and that this upper bound is less severe than the worst-case accident resulting from conventional passive, active, and procedural controls."[13]

Not only does the statute require prevention measures, the record of the existing RMP rule's inadequacy at preventing accidental releases further supports the need for primary

[11] National Research Council, *Terrorism and the Chemical Infrastructure: Protecting People and Reducing Vulnerabilities* 7 (2006)

[12] National Research Council, The Use and Storage of Methyl Isocyanate (MIC) at Bayer CropScience, at 4-53 (2012).

[13] *Id.* at 4-57.

prevention measures—*i.e.*, the STAA requirements—to apply to additional facilities. The RMP rule's requirements that facilities prepare risk management plans have now been shown to be insufficient to prevent accidents. Nor has the RMP rule adequately and substantially addressed the potential for rare catastrophic releases that could, according to RMP submissions, dwarf the scale of even the West, Texas explosion that gave rise to Executive Order 13650 and EPA's proposed rule.[14,15] The RMPs submitted to EPA have not met the statutory goal of preventing significant releases. For example, during the years 2004 to 2013 alone, there were over 2,200 accidents reported by RMP-covered facilities nationwide. EPA-HQ-OEM-2015-0725-0002 (EPA spreadsheet documenting 2,291 reported incidents). These data show that broader action is needed at § 7412(r)-covered facilities. Moreover, many of these accidents occurred at facilities that EPA proposes to exempt from STAA requirements. A lower incidence of accidents at particular types of facilities in the past is not necessarily predictive of the likelihood of an accident at those facilities in the future, or of the severity of such accidents.

Fourth and finally, § 7412(r)(7)(B)(i), specifically relied on by EPA here, 81 Fed. Reg. at 13,646, directs that regulations and guidance under this provision must "provide, **to the greatest extent practicable**, for the prevention and detection of accidental releases of regulated substances and for response to such releases." *Id.* § 7412(r)(7)(B)(i) (emphasis added). EPA has not shown how limiting STAA to only three industries provides for prevention "to the greatest extent practicable," especially because safer alternatives are clearly available for facilities in many other sectors. EPA must substantially address adding other industries to ensure that it satisfies the statutory factors provided in the authority it is applying for this rulemaking.

Therefore, to fulfill the prevention requirements of the Act cited above, EPA must finalize the proposed STAA requirements and also extend them to apply to all RMP-covered facilities, or demonstrate why it is lawful to exempt any such facilities. It would not be lawful or reasonable to limit the STAA requirements only to a small subset of RMP-covered facilities, as the proposal would do, especially when EPA acknowledges that so many exempted sectors have known or promising alternatives. Instead, all § 7412(r) facilities should be required to perform an STAA, use that STAA to determine what prevention measures are available and should be implemented for each facility, and report to EPA on its implementation decision. Each facility has an independent "general duty" requiring it to "tak[e] such steps as are necessary to prevent releases." 42 U.S.C. § 7412(r)(1). Requiring STAA is essential both to enable facilities to make informed decisions about how to perform that duty, and to permit the agency to determine whether additional preventive measures are required to assure compliance with this duty and to satisfy EPA's prevention obligations under the Act.

---

[14] EPA's *Regulatory Impact Analysis* of the proposed rule notes (on page 97) that the ten-year period for which the Agency compiled baseline data does not include any "major catastrophes" such as the 1989 explosion at Phillips in Pasadena, TX, which killed 23 workers (a loss valued at $197 million in current dollars), injured at least 150 more ($7.5 million), and did $1.4 billion in property damage.

[15] EPA's proposed rule states that "not reflected in the 10-year baseline costs are the impacts of non-RMP accidents at RMP facilities and ***any potential impacts of rare high consequence catastrophes***." (81 Fed. Reg., at 13,643, emphasis added)

D. It would be arbitrary and capricious for EPA not to require STAAs to be certified and submitted to the EPA and make relevant safety information available to the public as a prevention measure for all facilities

The proposed rule should also be amended to require submission of STAAs (or at least summaries that contain specific essential information) to EPA and their disclosure to the public, ensure opportunities for at-risk communities to engage with facilities about alternatives and prevention plans, and issue annual reports with specific RMP program information (including relevant information from STAAs and conversions to safer alternatives), and establish a public clearinghouse of safer alternatives information.

Given the existence of the RMP reporting program and the mandate to prevent chemical releases, it would be arbitrary and capricious not to require facilities that conduct STAAs to submit them to the EPA. The agency has proposed new rules that will increase efficacy and rigor in the auditing process. These requirements should also be applied to STAA. Ideally the audit program would ensure that STAAs are certified for accuracy and completeness. Requirements should include certifying that STAA's include a comprehensive analysis of the cost savings and other economic and social benefits of safer alternatives and that feasibility is not determined solely by the cost of a safer alternative.

By requiring the submission of certified STAA's the Agency will also enhance the quality of STAA assessments and feasibility analysis. It will also better inform enforcement under the Clean Air Act's General Duty Clause providing the Agency with world class knowledge of feasible safer alternatives.

In particular it will inform the 2017-2019 National Enforcement Initiative (NEI) approved by the Agency on February 18, 2016. *"Thousands of facilities nationwide, many of which are in low income or minority communities, make, use and store extremely hazardous substances. Catastrophic accidents at these facilities—historically about 150 each year—result in fatalities and serious injuries, evacuations, and risk of harm to health and the environment. EPA will focus on reducing the risks of accidents through innovative accident prevention measures, and improving response capabilities."* https://yosemite.epa.gov/opa/admpress.nsf/bd4379a92ceceeac8525735900400c27/25662047ebab45a085257f5d0071b4a0!OpenDocument

In addition, information on safer alternatives and hazard information from the STAAs should be made available to first responders, communities and the public at large, including all of the many civil society actors who play a role in chemical safety.

Communities, workers, businesses, and first responders that may suffer significant damage, injuries, and deaths from a catastrophic chemical release cannot participate meaningfully in their own protection without knowledge of the basic scope and results of alternative assessments.

The at-risk public can only participate effectively, and can only hold facilities accountable, if they know what prevention and control options have been analyzed, and what conclusions were reached and actions planned (or not planned). These analyses and decisions

directly impact the safety of residents, workers, businesses, and first responders, especially in disproportionately impacted and overburdened communities.

Unfortunately, the proposed rule would only release selected STAA information to LEPCs, only at their specific request, only for facilities within their jurisdiction, and would only provide incomplete information as to the thoroughness of the assessment. EPA's proposal will ensure that **residents, schools, businesses, hospitals, and others near these facilities will never know whether facilities have appropriately assessed alternatives, or if the community could be protected through safer chemicals or technologies,** and will therefore be unable to engage with the facility or other entities regarding protection and prevention.

In addition, EPA's proposal will needlessly isolate LEPCs from information regarding successful hazard reduction practices achieved in other jurisdictions. It will also isolate LEPCs from the benefit of information provided via other constituencies, including technology vendors, facility employees, academic researchers, insurers, the general public, and government agencies.

At-risk communities need to know that all assessments were thorough and meet certain key criteria, including the major alternatives evaluated, whether any safer alternatives were identified, whether the facility plans to implement any and on what general timeline; or, if no safer alternatives will be implemented, why not. Communities need to know whether any similar facilities elsewhere have implemented or are planning to implement safer alternatives.

Specifically, the rule should:

1. Require submission of STAA's to EPA and the inclusion of summary information from them in the RMP*National Database, with the ability for facilities to withhold truly confidential business information (CBI) based on the current, successful CBI standards and protections already used in the RMP program, including facility-specific, element-specific, up-front substantiation of security claims. See recommendations on CBI requirements for STAAs below.
2. Require and provide for easy, practical at-risk community access (to all vulnerability zone residents, businesses, schools, etc., and through both online comprehensive "one-stop" access and local physical access, as specified elsewhere in these comments) to facility STAAs, withholding only CBI properly documented through facility-specific, element-specific, up-front substantiation of security claims.
3. In keeping with current RMP program CBI standards, which already identify specific RMP elements that may or may not be claimed as CBI, specify information derived from STAAs that cannot be claimed as CBI. See CBI substantiation recommendations below.
4. As an alternative to requiring public access to full STAAs (withholding CBI based on current RMP CBI protections and facility-specific, element-specific, up-front substantiation of security claims, as recommended elsewhere), require owners or operators to submit basic, specified STAA information to EPA as part of regular RMP submissions, and make these STAA summaries directly available to at-risk communities (not just to LEPCs). As with other parts of the RMP, STAA information included in the RMP*National Database can be general descriptions and checkboxes. Specific summary

STAA information submitted in RMPs, or made directly available to the public, should include:

a. A description of each major technology alternative evaluated and its category (substitution, minimization, simplification, moderation);
b. A description of each option selected for implementation, if any, and a general timeline, or,
c. For each major option not chosen, the reasons it was not selected for implementation, including:
    i. Cost;
    ii. Technical feasibility;
    iii. Conflict with other regulatory requirements or good practices, and if so which requirements or practices;
    iv. Associated hazards;
    v. Other (indicate reason).
d. An attestation and checklist demonstrating a comprehensive accounting of potential benefits, savings, and avoided costs associated with each major option;
e. For facilities that deregister from RMP, add "implemented IST/ISD" to existing reason codes that facilities use upon deregistering, paired with a field to indicate the nature of the change.

5. Require that STAA summaries (including the information specified in #4 immediately above) be available to at-risk communities and the public both online and offline, including at public meetings required at 68.210 (when STAAs have been completed).
6. The proposed rule should ensure that at-risk communities and other stakeholders have access to information on alternatives that they need to participate effectively in their own protection by establishing an online clearinghouse of alternatives information.

Establishing a successful safer technology clearinghouse

"EPA seeks comment on whether either EPA or a third-party should create a 'clearinghouse' of safer technology and alternatives that allow source owners or operators to share useful information and/or consult to identify technologies to evaluate for their process." (81 Fed. Reg. 13,669)

We generally support the concept of a clearinghouse of safer technology and alternatives, but only under certain very important conditions necessary for its success.

- First, EPA must collect STAAs in order to garner the information knowledge basis that will be necessary to inform the clearinghouse. Knowledge of alternatives will not simply arrive out of thin air: the STAAs should be by design a rich source of information about solutions used in diverse chemical processing operations. Rather than "allow" owners or operators to share information, EPA should utilize information that the proposed rule should require to be included in STAAs and submitted to the agency (sanitized based on element-specific, facility-specific, up-front substantiation to remove CBI as recommended elsewhere in these comments).
- Second, information from STAAs must be available not only to the clearinghouse but *also available to the public*. Residents, workers, businesses, schools, hospitals, first

responders, and others that may suffer significant damage, injuries, and deaths from a catastrophic chemical release cannot participate meaningfully in their own protection without knowledge of the basic scope and results of alternative assessments. Enabling diverse parties to derive lessons learned from open source STAAs (while protecting CBI appropriately substantiated through up-front documentation) will be much more successful than making the clearinghouse into an information bottleneck. The clearinghouse should complement and be informed by STAA research conducted by many parties and sources.

- Third, the clearinghouse should be dedicated to the topic of safer technology and alternatives, including regular reports on the full scope of alternatives identified in STAAs and from deregistered facilities. Also, the clearinghouse should not be operated by industry funded academics or institutions, but by EPA, another appropriate federal agency, or an independent third party.

Substantiating CBI claims when facilities withhold information from STAAs

EPA should require up front substantiation of secrecy claims when allowing facilities to withhold any information from STAAs (or any other reports or documents). EPA's proposed approach to sharing Safer Technology Alternatives Assessment (STAA) information is fundamentally flawed and needs improvement by making basic STAA information public except where owners or operators specifically substantiate secrecy claims.

EPA's approach to this issue is arbitrarily broad, unjustified, arbitrary and capricious, and fails to inform or protect at-risk communities. The proposed rule would impede all information from STAAs from reaching the public, including at-risk residents, businesses, schools, and medical facilities, with the narrow unworkable exception of partial information provided haphazardly, if at all, to LEPCs and emergency responders. EPA does not even propose to collect sufficient information from STAAs to carry out its own responsibilities, let alone those of other agencies and departments such as the Occupational Safety and Health Administration (OSHA), Department of Homeland Security (DHS), and Chemical Safety and Hazard Investigation Board (CSB). EPA's failure to collect sufficient information frustrates the intent of Executive Order 13650, which mandates improved cooperation and coordination with OSHA and DHS to prevent chemical disasters.

Instead of unsubstantiated blanket impediments to public information and functional government (such as near-complete secrecy of even general information from STAAs), **EPA should require facility-specific, element-specific, up-front substantiation of security claims** in the same manner as the current successful Confidential Business Information (CBI) protections.

We agree with EPA's decision to maintain current CBI standards of the RMP program, except that the agency should specify information derived from STAAs that cannot be claimed as CBI. EPA's current CBI policy requires facility-specific, element-specific, up-front substantiation of CBI claims, among other requirements. In outline, under EPA's current CBI requirements:

- EPA has identified specific RMP elements that may be claimed as CBI and elements that may not.[16]
- EPA requires facilities to substantiate CBI claims up front at the time the information is submitted.
- The facility must show that disclosing the information would reveal CBI either directly or through reverse engineering.
- The information must not be available to the public through other means (such as prior disclosure, simple observation, or reverse engineering), the facility must take steps to prevent disclosure, and disclosure must be likely to cause substantial competitive harm to the facility.
- An owner, operator, or senior official must certify that the information is CBI.
- The facility must submit both a sanitized and un-sanitized RMP, and sanitized substantiation if necessary. For a CBI chemical name, the facility must submit a generic chemical category or class of chemical instead of the actual name of the chemical.

The Chemical Safety Information, Site Security and Fuels Regulatory Relief Act limits dissemination of information only from off-site consequences analysis (OCA) portions of RMPs (65 Fed. Reg. at 48,108) and these limits do not cover new information to be reported in STAAs. We strenuously disagree with any attempt to limit information in STAAs based on implied security concerns without facility-specific, element-specific, up-front substantiation and review. Any attempt to restrict STAA information based on alleged security concerns must be subject to facility specific substantiation using established criteria as above. Following this approach, general information from STAAs can be safely incorporated into EPA's RMP*National Database, including alternatives considered and barriers to adoption.

As noted, basic criteria by which to substantiate secrecy claims are well known and established. In essence, facilities may not conceal chemical hazards that are already disclosed, readily observed, or readily discovered through standard engineering analysis. At the same time there is no doubt that unnecessary secrecy harms unsuspecting communities, such as the emergency responders and public in West, Texas, who prompted the Presidential Executive Order that led to EPA's proposed rule. Any proposal to keep vital hazard or alternatives information secret must be carefully scrutinized and subject to substantiation.

Because secrecy does not guarantee security, the appropriate balance is not between secrecy and security (as EPA suggests) but rather between secrecy and other means to address the problem. Neither EPA nor the Department of Homeland Security (DHS) are taking any effective steps to remove unnecessary targets of opportunity by requiring changes in specific industries, nor have they notified emergency responders and others at risk that they plan to do so. EPA and the proposed rule should foster rather than impede civil society solutions – the interactions between facilities and nearby residents, emergency responders, technology vendors, facility employees, academic researchers, insurers, nearby communities, the general public,

[16] Under current policies, RMP facilities may not claim as CBI certain registration data, NAICS code and program level of covered processes, offsite consequence analysis data (restricted), accident history data, prevention program data, and emergency response program data.

government agencies, and everybody else that are essential to develop and implement solutions – by ensuring that critical information from STAAs (and other sources) is broadly available.

E. EPA SHOULD REQUIRE MORE EXTENSIVE DOCUMENTATION OF IST FEASIBILITY IN PROCESS HAZARDS ANALYSES (PHA)

EPA states that:

> "*EPA is also proposing to add paragraph (c)(8)(ii) to require that the owner or operator determine the feasibility of the IST or ISD considered. The results of the feasibility analysis must be documented as part of the current PHA requirements in § 68.67(e), which requires the owner or operator to document actions to be taken and resolution of recommendations. EPA seeks comment on whether the proposed requirements to document feasibility are adequate or if these requirements should be modified to require a more extensive documentation of feasibility."* (81 Fed. Reg. at 13,668)

EPA's proposed requirements to document feasibility are inadequate. The proposed rule requires the owner or operator to "determine the feasibility of the inherently safer technologies and designs considered." However, EPA does not specify that the options considered be listed anywhere in the PHA. As proposed by EPA, the owner or operator could simply attest to having considered relevant alternatives without providing any evidence or documentation of having done so. Furthermore, EPA's proposal would not thoroughly incorporate safer design alternatives and principles into the PHA process. To fix these problems, EPA should add ***major IST alternatives evaluated*** to 68.67(e)(1), and should add both ***additional IST identified*** and ***IST determined to be infeasible*** to 68.67(e)(2). (These elements are included in New Jersey's TCPA program.) Requiring owners and operators to document the major alternatives evaluated will help incorporate safer design principles into the PHA while adding integrity to the process.

EPA does propose to require the owner or operator to attest in 68.67(e)(2) "[w]hether the current PHA addresses safer technology and alternative risk management measures, as required in 68.67(c)(8)." But such an attestation is not the same as identifying and documenting the technology options analyzed, incorporating the options into the PHA, or justifying why each option was or was not chosen. Owners or operators should document feasibility determinations in meaningful detail (similar to the program in Contra Costa County, CA).

EPA also states that:

> "*EPA requests comment on whether to require STAA documentation be submitted to EPA and/or the implementing agency."* (81 Fed. Reg. at 13,668)

Yes, as noted elsewhere, commenters believe that EPA should require STAA documentation be submitted to EPA for use by any implementing agency, including OSHA, and other data users. EPA and other agencies need the data to do their jobs. EPA's responsibility under the statute is to prevent disasters. Lack of meaningfully documented STAA information leaves the agency incapable of carrying out its statutory obligations.

F. EPA SHOULD SPECIFY BASIC STAA ELEMENTS AND INCLUDE THEM IN ANY GUIDANCE ON EVALUATING SAFER TECHNOLOGIES AND ALTERNATIVES

EPA states that owners and operators may use "any available methodology or guidance to conduct their STAA" (81 Fed. Reg. at 13,669). This approach makes it imperative that EPA define basic elements that owners or operators must include in their STAA. Each STAA should generally include an analysis of the technical, economic, legal/regulatory, social, and hazards implications of each major technology option. However, the sample methodologies and guidance listed in the proposed rule may not include all of these elements. For this reason, EPA must specify minimum STAA elements. We specifically urge EPA to require the economic analysis to include potential liabilities, costs, avoided costs, and savings associated with each major STAA option evaluated.[17]

III. EPA SHOULD REQUIRE IMPLEMENTATION OF IST TO PROVIDE FOR PREVENTION

EPA's proposal is incomplete not only in failing to require STAA for all covered facilities that pose threats to the public, but also in not requiring that facilities implement the results of their own analysis by adopting inherently safer technologies (IST) when the STAA supports such action. An important and logical step accompanying the STAA rule would be to require implementation of at least some IST measures found in that assessment. As summarized above, EPA has full authority to require such implementation. In particular, section 112(r) provides: (1) authority under section 112(r)(7)(A) "to promulgate release prevention, detection, and correction requirements which may include monitoring, record-keeping, reporting, training, vapor recovery, secondary containment, and other design, equipment, work practice, and operational requirements." 42 U.S.C. § 7412(r)(7)(A); (2) authorization to promulgate regulations to "provide, ***to the greatest extent practicable***, for the prevention . . . of accidental releases of regulated substances," *id.* § 7412(r)(7)(B)(i) (emphasis added); and (3) the "general duty clause," section 112(r)(1), which imposes an obligation on all owners and operators of facilities that use extremely hazardous substances to "design and maintain a safe facility taking such steps as are necessary to prevent releases, and to minimize the consequences of accidental releases which do occur," 42 U.S.C. § 7412(r)(1). Together, these provisions support requiring action – i.e., the implementation of prevention measures—after STAAs are performed showing what measures are appropriate and available for facilities to implement.

A. Section 112(r)(7) Authorizes EPA to Impose Design and Operational Requirements to Prevent Releases

EPA's regulatory authority under § 112(r)(7)(A) directly provides EPA with regulatory authority to require chemical facilities to avoid or mitigate releases through the use of safer technologies. Section 112(r)(7)(A) provides the agency broad authority to regulate chemical facilities in order to prevent accidental discharges:

[17] A sample list of costs avoided with safer alternatives is found in *Preventing Toxic Terrorism*, Center for American Progress, 2006, page 9.

> In order to prevent accidental releases of regulated substances, the Administrator is authorized to promulgate release prevention, detection, and correction requirements which may include monitoring, record-keeping, reporting, training, vapor recovery, secondary containment, and other design, equipment, work practice, and operational requirements. Regulations promulgated under this paragraph may make distinctions between various types, classes, and kinds of facilities, devices and systems taking into consideration factors including, but not limited to, the size, location, process, process controls, quantity of substances handled, potency of substances, and response capabilities present at any stationary source. Regulations promulgated pursuant to this subparagraph shall have an effective date, as determined by the Administrator, assuring compliance as expeditiously as practicable.

42 U.S.C. § 7412(r)(7)(A).

The authority conferred by § 112(r)(7)(A) clearly encompasses the power to require the use of safer technology to reduce or eliminate quantities of extremely hazardous substances. The provision specifically authorizes the imposition of "design" and "operational" requirements, and further authorizes EPA to make distinctions among facilities based on "process controls, quantity of substances handled, [and] potency of substances." This authority seems ideally suited to serve as the basis for regulations that require that facilities be designed and operated in such a manner as to minimize quantities of highly potent hazardous substances. And it permits regulation of any stationary source, thus permitting the agency to regulate without regard to whether "threshold" quantities of substances are present (as under regulations pursuant to § 112(r)(7)(B)) and without restrictions on the types of facilities subject to regulation (such as the limits imposed on DHS in establishing the CFATS regulations).

That EPA's authority under § 112(r) encompasses the power to require measures to prevent release through eliminating or minimizing the use of dangerous chemicals is fully consistent with the intent of the enacting Congress. As mentioned above the Senate Report on the 1990 legislation that added § 112(r) to the Clean Air Act explains, such measures were viewed by Congress as the best way to achieve the statutory goal of preventing accidental releases:

> The objectives of the proposed section … include both the prevention of accidental releases and the minimization of the consequences which may result. Systems and measures which are effective in preventing accidents are preferable to those which are intended to minimize the consequences of a release. ***Measures which entirely eliminate the presence of potential hazards (through substitution of less harmful substances or by minimizing the quantity of an extremely hazardous substance present at any one time), as opposed to those which merely provide additional containment, are the most preferred.***

S. Rep. No. 101-228, at 209, 1990 U.S.C.C.A.N. 3385, 3594 (emphasis added).

Furthermore, the additional criteria established in subsection (r)(7)(B) for regulation of certain facilities with more than threshold quantities of hazardous substances explicitly require prevention, stating that: "the Administrator shall promulgate reasonable regulations and appropriate guidance to provide, ***to the greatest extent practicable***, for the prevention and

detection of accidental releases of regulated substances and for response to such releases by the owners or operators of the sources of such releases." *Id.* § 7412(r)(7)(B)(i) (emphasis added). EPA's broad regulatory authority under § 7412(r)(7)(B)(i) would also authorize implementation of IST, just as fully as it authorizes the STAA requirements that EPA has proposed.

EPA's invocation of its 112(r)(7) rulemaking authority calls the full range of its authority into play, and EPA explicitly relies on each of the three major requirements of § 7412(r)(7)(B)(i): "prevention and detection of accidental releases" and "response to such release by the owners or operators." *See also* 81 Fed. Reg. at 13,646 ("Each of the portions of the Risk Management Program rule we propose to modify in this document are based on EPA's rulemaking authority under section 112(r)(7) of the CAA.") EPA is fully authorized to require implementation of IST measures as an essential type of prevention, to serve the stated statutory objectives.

Further, it would be particularly appropriate for EPA to use its regulatory authority under section 112(r)(7)(A) to require those facilities that identify feasible safer alternatives to adopt one or more based on the results of the STAA. EPA should also require that facilities document in meaningful detail the basis for determinations not to use safer alternatives, and disallow such determinations based solely on cost or other criteria selected by the agency (similar to the successful program in Contra Costa County, Calif.). This approach would be a precisely calibrated use of the agency's authority to make distinctions between various types, classes, and kinds of facilities, devices and systems" (§ 112(r)(7)(A)) and to "recognize differences in size, operations, processes, class and categories of sources and the voluntary actions of such sources to prevent such releases and respond to such releases " (§ 112(r)(7)(B)). Such a requirement would eliminate and reduce hazards by creating a tested class of facilities, and would provide the agency with the needed flexibility to take into account the many considerations that are necessary to determine when the use of safer technology is appropriate and when to require additional measures to reduce hazards.

Section 112(r)(7) also provides the agency with the ability not only to announce a generally applicable standard, but also to issue specific rules applicable to specific types of facilities and chemicals that pose particular hazards and for which there are readily available safer technologies (e.g., water treatment facilities that use chlorine gas). Section § 112(r)(7) would authorize EPA to require use of such alternatives if the agency found (based on review of a STAA or through other means) that such a change would have significant benefits for public health and safety and would be feasible and not unreasonably costly.[18] Use of the agency's regulatory authority to promulgate such requirements would provide site owners and operators with clear standards facilitating compliance and enforcement.

B. To meet the Act's prevention objectives and address the dire need for additional action to prevent accidental releases, EPA's rule should provide for implementation of IST, based on the results of the STAA

[18] One possible model for requirements that could be imposed through EPA's regulatory authority would be the provisions of § 2111 of H.R. 2868, the Chemical and Water Security Act of 2009, which passed the House of Representatives in 2009.

EPA's rule should include "prevention," to satisfy § 7412(r)(7), and applying IST measures is a critical part of meaningful prevention. Not requiring IST implementation would thus be unlawful, arbitrary and capricious. EPA has given no reasoned justification based on the statute's objectives and the record for requiring only an assessment, and not requiring conversions to safer alternatives when feasible based on the result of STAAs (based on adopted standards or criteria for actual implementation of measures that are available to prevent harm from accidental releases).

EPA's sister agency to which Congress delegated authority under § 7412(r), the U.S. Chemical Safety and Hazard Investigation Board (CSB), is statutorily charged with making recommendations to EPA (and other federal agencies) to prevent future chemical disasters. The CSB has made clear that implementation of IST should be the top priority for regulators. For example, in response to the EPA's July 31, 2014 RFI, the CSB said, "*The CSB also noted that even though industry good practice guidance provides that inherently safer technology (IST) is the preferable and often the most effective safety precaution in the hierarchy of controls to prevent major accidents, it is not enforced by the EPA through its RMP program or through its General Duty Clause or other provisions of the Clean Air Act (CAA). In addition, the CSB stated in its investigation report that while the Clean Air Act (CAA) directed the EPA to promulgate the RMP regulations 'to provide, to the greatest extent practicable, for the prevention and detection of accidental releases of regulated substances,' there is no RMP requirement to reduce risks to 'as low as reasonably practicable,' or ALARP."* EPA should follow this valuable guidance and recommendation and require IST as described by the CSB. Notably, the CSB's stated test tracks the test Congress put into the provision EPA cites here, § 7412(r)(7)(B)(i): "to the greatest extent practicable."

Further, as a major reason for requiring STAAs is presumably that EPA believes facilities will then implement IST, it can have no rational justification for not requiring them to do so on a reasonable timeframe. Failing to set a requirement to do so removes the incentive for facilities to complete IST implementation in a prompt manner. The likely result will be preventable accidents happening in the meantime. Not requiring implementation of IST also creates a competitive disadvantage for those facilities that do so voluntarily, when other rogue facilities and those close to the end of their operational lives may prefer to take the substantial risk of not implementing IST to maximize short-term profits. And where implementation of IST may be a close question for a facility, not requiring it puts the thumb on the scale in favor of not taking available preventative safety measures, rather than providing an additional incentive to do so to satisfy the statute and regulations.

IV. EPA SHOULD REQUIRE COMPLIANCE WITH THE STAA REQUIREMENTS EXPEDITIOUSLY, NOT DELAY COMPLIANCE FOR FIVE YEARS

EPA states that it has discretion to choose the compliance dates – as long as four and five years for certain requirements – because this action will amend the prior rules. 81 Fed. Reg. at 13,686. As a result, sources would not even have to complete the STAA – an *assessment* of safer technologies – until June 5, 2021, ***more than 5 years from now***. History shows there is a high likelihood of many serious accidents during that time at the facilities covered by § 7412(r).

EPA's proposed compliance dates are both unlawfully and arbitrarily long. Contrary to EPA's statement, the Act states that "regulations" promulgated under the authorities EPA cites here shall meet the following tests. The Act directs that regulations promulgated under § 7412(r)(7)(B)(i) "shall be applicable to a stationary source 3 years after the date of promulgation." 42 U.S.C. § 7412(r)(7)(B)(i). And, regulations promulgated under § 7412(r)(7)(A) "shall have an effective date, as determined by the Administrator, assuring compliance as expeditiously as practicable."

EPA has expressly invoked subsection (r)(7)(B)(i) as authority for its proposed regulations. Thus, the agency has no lawful basis to extend the compliance date beyond 3 years.

Even if the three year deadline were inapplicable, under the general requirements of subsection (r)(7)(A), EPA must ensure compliance occurs "as expeditiously as practicable." It has not shown that 5 years for the STAA requirements is "as expeditiously as practicable." Instead, EPA states that it seeks as a courtesy to allow a facility to wait to implement the STAA "in their normal PHA update cycle if they so choose." 81 Fed. Reg. at 13,687. The Act does not permit EPA to allow a facility to choose when to comply. Nor does the fact that facilities have a "normal . .. update cycle" mean that it would not be possible for them to complete the STAA more expeditiously than the 5 years EPA has provided.

EPA's separate justification that it intends to publish guidance on STAA is also not a reasonable excuse for delay. IST is a well-known concept and sources can begin their STAA without additional detailed guidance from EPA. EPA can and should complete such guidance in parallel with or soon after this rulemaking such that covered sources will have such information as soon as possible. Having facilities begin the STAA assessment may well inform and strengthen EPA's guidance.

Communities near § 7412(r) sources need the STAA requirements in place "as expeditiously as practicable." Every month, every year that passes without compliance with these requirements and implementation of IST based on the information they provide translates into hundreds of additional accidents, and potential deaths.

Drawing from the implementation of Toxic Use Reduction Plans in Massachusetts, EPA could instead realistically propose as many as two rounds of STAA assessments by 2021. The TURA requirement that a facility obtain a statement of certification, made by an approved Toxics Use Reduction Planner (TURP), is one that is also consistent with EPA proposed 3rd party auditor requirements.

In his own words, EPA Assistant Administrator, Mathy Stanislaus reports that *"in the past 10 years nearly 60 people died, some 17,000 people were injured or sought medical treatment, and almost 500,000 people were evacuated or sheltered-in-place as a result of accidental releases at chemical plants. During that time, more than 1,500 incidents were reported causing over $2 billion in property damages."* The cost burden brought on by reducing compliance deadlines pales in comparison to costs of the aforementioned damages to life, health and property. If EPA imposes a more expeditious facility assessment process, industry can act sooner and be well-equipped to do so by following standardized models that are already in place.

V. EPA SHOULD ADOPT A DEFINITION TO GUIDE SAFETY MEASURE IMPLEMENTATION THAT BUILDS ON OSHA'S DEFINITION OF "FEASIBLE"

EPA has requested comment on its proposed definition of "feasible" and whether a term like "practicable" would be better to use, to determine what safety measures are considered available and capable of being accomplished by a facility. 81 Fed. Reg. at 13,667-68, 13,703. EPA proposes to define feasible as "capable of being successfully accomplished within a reasonable time, accounting for economic, environmental, legal, social, and technological factors. Environmental factors would include consideration of potential transferred risks for new risk reduction measures." *Id.*

EPA should strengthen this definition, rather than finalize it as proposed. The definition EPA proposes has a number of pitfalls likely to undermine safety measure implementation, such as the following.

- This definition, whether called "feasible" or "practicable," is extremely weak, and open to exploitation by facilities or others who wish to use any amount of cost as a sole justification for not implementing safety measures. To do so, all they would need to cite is the allowance of consideration of "economic . . . factors" in the definition. EPA must not finalize a definition that would make any level of cost, no matter how minimal, an excuse not to implement safety measures. Rather, EPA should recognize that measures should be implemented unless doing so would cause an extremely serious adverse economic effect, such as facility shutdown.
- Moreover, a similar problem exists with each of the other listed factors – a facility could point to a vague set of "social . . . factors," or "environmental . . . factors" as a justification not to implement measures that an objective evaluator would find appropriate.
- Further, the term "within a reasonable time" is equally vague and could lead to a decision not to implement an important measure for an arbitrary reason. It would be better not to put a time-based factor into the test, than allow a facility to decide that, just because a measure could not be fully implemented within one year or some other arbitrary timeframe, it is not feasible.
- An additional problem is that the definition seems to *require* consideration of a long list of factors, through use of the phrase "accounting for," and this could lead to finding a safety measure not feasible for an inappropriate reason. Although the factors listed might be reasonable considerations in at least some circumstances, not all should be required as considerations, and thus treated as potentially equal justifications not to implement safety measures, in view of the statute's objectives.
- Even if EPA keeps part of its proposed definition, the agency should delete the second sentence, which reads: "Environmental factors would include consideration of potential transferred risks for new risk reduction measures." Each of the five factors listed – economic, environmental, legal, social, and technological – may or may not present reasons for proceeding or not proceeding with a particular technological option. To call out only environmental factors is unbalanced. The appropriate place for information on

barriers to adoption of IST measures, whether identified within any of the five factors, is section 68.17. As described elsewhere in these comments, reporting information to EPA on barriers to adoption of IST measures is foundational for the integrity and accountability of the STAA process – but does not belong in this definition at section 68.3 as proposed.

Whatever term EPA chooses to use, commenters urge EPA to adopt a definition that is stronger than or at least as protective of health and safety as the OSHA definition of "feasible." OSHA's definition would provide an appropriate minimum level of protection under § 7412(r)(7) that EPA should not go below. Under the OSHA standard, a protective measure is technologically feasible if, using existing technology or technology that is reasonably expected to be developed, a typical facility could achieve the standard in most operations most of the time. And the protective measure is economically feasible if its costs do not threaten the existence or competitive structure of an industry. OSHA's definition has been interpreted by courts to mean that the mere expense of a measure, alone, cannot trump the implementation of safety measures that are "capable of being done."[19] EPA should not set a weaker definition that would make it *less* likely that IST or other prevention measures would be implemented under § 7412(r) than under OSHA's definition. Doing so would be both inconsistent with the objectives of § 7412(r) and with the existing framework facilities follow under OSHA requirements. Setting a definition of "feasible" that is weaker than OSHA's definition could lead to confusion for facilities and in the courts, and an overall reduction in safety measures, rather than fulfilling the Act's objectives.

EPA has authority to favor safety measures as capable of being accomplished even if they would not be so found under the OSHA standard. OSHA acts under a framework that focuses particularly on worker safety. EPA's mandate is to protect the public as well as workers. Within the at-risk public are extremely vulnerable populations, including children, the elderly, and communities facing socioeconomic disparities, as some examples. For the facilities covered by § 7412(r), EPA's scope of responsibility covers many more people – *i.e.*, everyone within a vulnerability zone. And EPA's authority to protect people from accidental releases is broad under § 7412(r)(7), as described above. Thus it has full authority to set a stronger definition favoring implementation of safety measures than OSHA does.

If EPA decides to set a test that favors safety measures even more than the OSHA standard of "feasible," it may be appropriate in that event to use a different term, such as "practicable," to acknowledge the difference. Using a term like "practicable" would also follow

[19] *See, e.g.*, 81 Fed. Reg. at 13,667 n. 152-53 (citing *Am. Textile Mfrs. Inst. v. Donovan*, 452 U.S. 490, 509 (1981); *Avcon, Inc.*, 23 O.S.H. Cas. (BNA) 1440, 1452 n.24 (O.S.H.R.C. Apr. 5, 2011)); *see also Nat'l Realty & Const. Co., Inc. v. Occupational Safety & Health Rev. Comm'n*, 489 F.2d 1257 (D.C. Cir. 1973) ("a precaution does not become infeasible merely because it is expensive"; only if it is "so expensive that safety experts would substantially concur in thinking the methods infeasible"; "if adoption of the precaution would clearly threaten the economic viability of the employer, the Secretary should propose the precaution by way of promulgated regulations, subject to advance industry comment, rather than through adventurous enforcement of the general duty clause.")

the text of § 7412(r)(7)(B)(i), which directs EPA to provide for prevention and other objectives "to the greatest extent practicable."

At minimum, EPA must set a test that follows, rather than is weaker than, the OSHA definition of "feasible." To determine how best to define the test it will use, Commenters urge EPA to consult OSHA, the CSB, and other safety experts.

In comments submitted to EPA's 2014 Request for Information on this same topic, we submitted extensive recommendations regarding and examples of existing public policies that establish requirements to assess chemical hazards and safer alternatives, and define critical terms (such as "feasible," "affordable," "available," and etc.). These comments incorporate by reference and resubmit those comments.

Commenters strongly support EPA setting a strong, health- and safety-protective definition to guide implementation of safety measures. In doing so, however, Commenters also urge the agency to fulfill its legal obligations under the Act and the APA to provide a reasoned explanation for the definition, within the statutory context and framework of its authority. EPA also must explain how its definition best serves the objectives of the statute, including the core objective to prevent the serious hazards that the statutorily-covered accidental releases can cause. In the proposed rule, EPA has not done this for the definition described.

VI. REQUIRE FACILITIES CONDUCTING STAA TO IMPLEMENT ADDITIONAL PREVENTION AND DETECTION REQUIREMENTS

EPA has appropriately recognized that prevention measures are needed in this rule, and Commenters support EPA's proposed STAA requirements, which should be extended to satisfy the Act, as discussed above. In addition, Commenters urge EPA to require for all covered facilities the following additional prevention and detection measures. All of the following measures are well-supported by evidence and are requirements within EPA's authority under § 7412(r)(7) rulemaking authority which includes standards and "monitoring." 42 U.S.C. § 7412(r)(7)(A); *id.* § 7412(r)(7)(B)(i) (regulations shall cover "equipment to monitor, detect, inspect . . . such releases").

In October 2014 comments on EPA's then-proposed petroleum refineries air toxics standards, over 90 national and local environmental and community organizations called on EPA to require inherently safer technologies, practices, and processes at refineries.[20] As explained in accompanying technical comments, signed by 20 national and local organizations, IST for these sources includes at least the following.[21] All or most of these requirements are also highly relevant to chemical plant facilities, and other facilities, and EPA should consider requiring these

[20] *See* http://earthjustice.org/news/press/2014/communities-call-for-stronger-protection-from-oil-refineries-air-pollution-epa-s-public-comment-period-ending, also included as an attachment to EPA-HQ-OAR-2010-0682-0568.

[21] Comments of Earthjustice, Envtl. Integrity Project *et al*. (Oct. 28, 2014), EPA-HQ-OAR-2010-0682-0568.

measures for industries where these would make a significant difference to prevent and detect accidental releases, including all facilities required to conduct STAAs.

Prevention measures

- The phase-out of highly dangerous hydrofluoric acid, including a ban on its use by new sources and a requirement to consider and if possible use a safer alternative.
- A requirement for anonymous near-miss reporting and other types of anonymous safety and maintenance reporting to allow workers to provide critical information on how to prevent an accident to EPA, the states, and the public, without threatening their jobs. Such systems have served the federal aviation system well – preventing plane crashes – they are also used effectively by firefighters, and a similar system is being developed for the off-shore drilling sector by the Bureau of Safety and Environmental Enforcement (BSEE), in the Interior Department. Further, EPA should require sources themselves to report all near misses, as some states have done. 81 Fed. Reg. at 13,651-52 (describing New Jersey program). The CSB recommended this be implemented at the Belle, West Virginia, DuPont facility, and in 2013, found that it had been implemented.[22] Anonymous reporting about non-compliance can also help inform decisions by EPA to require third-party audits.
- Requirements for back-up power, to prevent accidental releases in the event of a power outage.

Detection measures

- Leak detection and repair.[23]
- Real-time fenceline air monitoring, with real-time information sharing over the internet of air concentrations to anyone who has the application software. Such software could provide automatic notices of elevated air concentrations of hazardous air toxics to those who elect to receive them. EPA recently finalized fenceline monitoring at all U.S. refineries, but it includes only passive sampling and will not assist in a real-time emergency. Petroleum Refinery Sector Risk and Technology Review and New Source Performance Standards, Final Rule, 80 Fed. Reg. 75,178, 75,182-83 (Dec. 1, 2015). EPA recognized that the purpose of this monitoring was to assure compliance with the standards rather than assist in a real-time emergency. The purpose of the present rule is to do just that, and EPA should require this monitoring under its accidental release authority.

These comments incorporate by reference and resubmit those comments, citing Part VI, pp. 135-150 (focused on IST).[24] In finalizing the refineries air toxics standards, EPA pointed to

[22] See http://www.csb.gov/assets/recommendation/Status_Change_Summary__DuPont_Belle_R5.pdf.

[23] *See, e.g.*, U.S. Chem. Safety & Hazard Investigation Board, Investigation Report, Pesticide Chemical Runaway Reaction Pressure Vessel Explosion, Bayer CropScience, Institute, WV, Aug. 28, 2008 (No. 2008-08-I-WV) (Jan. 2011), http://www.csb.gov/assets/1/19/Bayer_Report_Final.pdf.

this rulemaking as the place to consider IST comments, stating that the comments were outside of the scope of that rulemaking. *See, e.g.*, Response to Comments, EPA-HQ-OAR-2010-0682-0802, at 322-23, 356. Therefore, Commenters urge EPA to follow through here and fully address and consider requiring these measures for refineries, and also for other relevant industries, like chemical plants, in the current rulemaking. In addition to refineries, EPA should require the specific types of safer practices described in the attached comments "to the greatest extent practicable," as § 7412(r)(7)(B)(i), directs.

VII. EPA'S PROPOSAL TO REQUIRE AN EMERGENCY RESPONSE FIELD EXERCISE ONCE EVERY FIVE YEARS IS INADEQUATE

In Section 68.96(b)(1) EPA proposes to: *"require the owner or operator to conduct an emergency response field exercise involving the simulated accidental release of a regulated substance at least once every five years and within one year of any accidental release meeting the criteria in § 68.42(a)*. Conducting an emergency response field exercise once every five years is inadequate. Much like the proposed STAA reporting timeline, EPA can and should impose a more frequent review of emergency response practices. Section 68.96(b)(1) should be amended to require annual emergency response field exercises for all facilities. http://www.nj.gov/dep/rules/rules/njac7_31.pdf

Personnel turnover is a major factor in emergency response preparedness. A five-year interval for field exercises does not foster a compliant, collaborative atmosphere between facility operators and emergency responders. Much of the limited time entities have to collaborate in an exercise would be spent bringing new employees up to speed on how to properly respond to an incident that is entirely site specific. It is equally important for emergency responders to be well versed in responding to a site-specific chemical release by completing annual exercises. A first responder could be with an organization for five years without having been through a site-specific exercise at a local facility that has the capacity to harm large populations in the event of a release. Accidents with varying degrees of severity at chemical facilities can and will happen during this proposed, lengthy timeframe.

A five-year timeframe for emergency response field exercises does not conform to the standard set forth by CAA under § 7412(r)(7)(B)(i), which states "the Administrator shall promulgate reasonable regulations and appropriate guidance **to provide, to the greatest extent practicable, for the prevention** and detection of accidental releases of regulated substances and for response to such releases by the owners or operators of the sources of such releases." *Id.* § 7412(r)(7)(B)(i) (emphasis added). In failing to require sufficiently frequent field exercises to provide for prevention of and response to releases "**to the greatest extent practicable,**" EPA has proposed legally insufficient regulations. By choosing to place (minimal) operating costs above worker and public safety, EPA has missed the mark on prevention and set a poor standard for emergency response.

---

[24] *See* Comments of Earthjustice, EIP *et al.* (Oct. 28, 2014), EPA-HQ-OAR-2010-0682-0568, *supra* note 15.

VIII. THE PROPOSED RULE MUST BE AMENDED TO ADDRESS DISPROPORTIONATE HAZARDS TO ALREADY OVERBURDENED COMMUNITIES TO ENSURE ENVIRONMENTAL JUSTICE, AND IMPROVE INFORMATION DISCLOSURE

EPA, and the proposed rule, must ensure that all at-risk communities around RMP facilities, especially disproportionately affected communities of color and/or low-income communities, have access to the information and engagement opportunities necessary to participate effectively in their own protection. Currently the proposed rule fails to do so.

EPA has repeatedly expressed its commitment to ensuring that at-risk communities, especially disproportionately at-risk communities, are able to participate fully and effectively in their own protection. Unfortunately, the proposed rule fails to ensure that at-risk communities near RMP facilities, and especially Environmental Justice communities (i.e. those that are predominantly or disproportionately communities of color and/or low-income communities) have the information on hazards, incidents, and solutions that they need to participate in meaningful ways, and appropriate and timely opportunities and support to engage directly with facilities.

The proposed rule creates needless and harmful restrictions on information disclosure that will not protect facilities or communities, and establishes unnecessary and impractical information bottlenecks that will disenfranchise at-risk communities and many other stakeholders (including technology vendors, facility employees, academic researchers, insurers, nearby businesses, government agencies, and the general public). The RMP program and proposed rule amendments cannot succeed without functional facility-community-government partnerships based on the informed interaction of many parties. RMP rule amendments should facilitate rather than artificially impede these partnerships and interactions.

Communities (including residents, businesses, workers, schools, medical facilities, emergency responders, and governments) cannot possibly participate effectively in disaster prevention and response without:

1. Access to information on hazards, alternatives, incidents, and inspections;
2. Training, support, and opportunities that allow direct engagement with facility/company planners, managers, and decision makers on hazards, alternatives, prevention plans and opportunities, and response plans;
3. Access to reports on inspections, incidents, near misses, safety audits, lessons learned, and major alternatives that can be readily organized by company, industry sector, city, LEPC district, county, state, and nationally.

As required by Executive Order 12898, and by the Agency's own policies and plans, EPA must address Environmental Justice concerns and needs in any final RMP rule.

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires EPA to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high

and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States."

More specifically, EO 12898 requires EPA to conduct its programs and activities in a manner that ensures that the Agency is not "denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under, such, programs, policies, and activities, because of their race, color, or national origin."

EPA's own *Plan EJ 2014* establishes goals to:

- Protect health in communities over-burdened by pollution; and
- Empower communities to take action to improve their health and environment.

And EPA's *EJ 2020 Action Agenda Framework* highlights the Administrator's and the Agency's commitment to "making a visible difference in overburdened communities" by reaching three specific goals:

I. Deepen environmental justice practice within EPA programs to improve the health and environment of overburdened communities;
II. Collaborate with partners to expand our impact within overburdened communities; and;
III. Demonstrate progress on outcomes that matter to overburdened communities.

EPA's *Guidance on Considering Environmental Justice During the Development of Regulatory Actions* (May 2015) defines "environmental justice" as the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the **development, implementation and enforcement** of environmental laws, regulations and policies." The *Guidance* explains that:

> ***Fair treatment*** refers to efforts to prevent environmental risks and harms from disproportionately affecting a particular group of people.
>
> ***Meaningful involvement*** refers to inclusion of potentially affected populations in decisions about activities or programs to address those risks. Meaningful involvement may include facilitating the involvement of populations potentially affected by those activities or programs. It also entails ensuring that potentially affected populations have an opportunity to participate in decisions and influence decisions about those activities or programs.

It is well established, both in EPA's Regulatory Impact Analysis (RIA) for the proposed rule and through the published literature, that communities of color, low-income communities, and Indigenous communities throughout the U.S. face disproportionate adverse health and environmental hazards and consequences due to unplanned chemical releases from RMP facilities. EPA has already recognized that both the RMP program and the proposed rule include particular health and safety concerns that disproportionately affect these communities and must be addressed.

The RIA includes an explanation of how the agency has attempted to address Environmental Justice issues associated with this rulemaking. Unfortunately, the only actions taken by EPA to facilitate "meaningful involvement" as listed in the RIA are actions to collect input during 2013-2014 that helped shape the current proposed rule. There is **no analysis of whether or how the actual proposed rule will facilitate meaningful involvement by Environmental Justice communities in their own protection** (including in implementation and enforcement of the rule, especially through access to and participation in facility chemical disaster prevention and response plans and activities), which is the real issue. In fact, the proposed rule lacks elements and requirements recommended by EJ communities and organizations that are essential to ensuring that overburdened and disproportionately impacted communities will have meaningful involvement in the **implementation and enforcement of** any RMP rule.

Because the 112(r) facilities create particular and disproportionate health and safety threats in communities of color and low-income communities, and EPA has recognized that these are important factors to consider in rulemaking action, it would be arbitrary and capricious under the APA for EPA not to consider additional steps in this rule to address those threats, particularly when the affected communities themselves have recommended specific elements. In particular, EPA should consider how this rule can do more to strengthen public transparency, and community involvement in implementation and enforcement of the rule, as discussed in these comments. EPA also should recognize that these disproportionate impacts provide an additional reason to strengthen and expand the scope of the STAA requirements, and implement the additional prevention, detection, and response measures described in these comments, to advance the agency's own commitments to address environmental justice in rulemaking.

Overburdened and disproportionately impacted communities themselves have specified, in comments submitted to EPA's 2014 Request for Information (EPA-HQ-OEM-2014-0328) on this topic by twenty-three community-based Environmental Justice organizations, and in comments to the EO 13650 Listening Sessions (DHS-2013-0075-0001) by many Environmental Justice organizations, **the outcomes that matter to them**, which include:

- **Prevention** of off-site releases through reduction and removal of hazards;
- Much greater **disclosure of information** on hazards, alternatives, conversions, incidents, consequences, inspections, and audits to at-risk communities (not just to EPA or LEPCs);
- Full partnership between at-risk communities (not just LEPCs and local governments) and facilities, including **opportunities for direct community engagement** with facility planners, managers, and decision makers **on both prevention and response plans**;
- **Immediate public reporting** by telephone, radio, television, and internet of releases that could potentially threaten public health, including action instructions.

Recommendations made to EPA by overburdened and disproportionately impacted communities for RMP program elements to move toward these outcomes that **are not** included in the proposed rule include:

- Assessment of potential safer chemicals and processes must be mandatory (this is included in the proposed rule, but only for a small subset of RMP facilities, and not

disclosed in any way to communities or EPA), and the results of alternatives assessments must be made public;

- Conversion to safer alternatives must be mandatory whenever one or more alternatives are available, effective, and affordable;
- Information on dangers and alternatives must be easily available to workers, communities, and first responders;
- Education and training for workers and fenceline communities must be dramatically improved;
- Communities and workers must become full partners in decisions about hazards and solutions.

We specifically recommend that the proposed rule:

1. Establish practical, easy access (meaning online through a centralized, comprehensive "one stop" web site and at local libraries, community centers, and/or municipal buildings in the affected community, rather than through the patchwork of facility web sites, facility offices, libraries, etc. that EPA proposes) for at-risk communities to information on facility hazards, alternatives (both summaries of facility STAA alternatives analyses and information on safer alternatives implemented by similar facilities), summaries of compliance audit reports, summaries of incident investigation reports (including near misses), prevention plans, disaster response plans, and other relevant information.

2. Establish an easy, practical appeal process for communities directly to appropriate EPA national staff if required information and engagement opportunities are not provided by facilities in a timely and effective manner.

3. Require that within six months of final adoption of the rule EPA conduct, and publicly release the results of, a national study of emergency response and medical facility capacity to respond to worst-case and alternative worst-case scenarios at RMP facilities.

4. Require a community meeting sooner than 30 days following an incident.

5. Require establishment and publication of response and evacuation plans for affordable housing, schools, daycare centers, nursing homes, and health care facilities within the worst-case scenario vulnerability zone of each facility, developed with community participation, and which establish dedicated funding reserved by the facility to pay for basic needs and transportation for workers and community members in emergencies.

6. Require immediate public reporting by real-time monitoring and internet, telephone, radio, television, and other appropriate media of releases that could potentially threaten public health, including information on how to evacuate to reliably safe distances and directions, with appropriate compliance and enforcement mechanisms.

7. Require RMP facilities to actively engage fenceline communities in development of both prevention plans and disaster response plans, and provide opportunities for fenceline community representatives and residents (not only emergency responders, government

officials, and LEPC members) to directly discuss prevention plans, hazards, and possible alternatives with facility and company planners, managers, and decision makers.

8. Require that EPA provide education, training, and support opportunities and funding to the most vulnerable and disproportionately impacted or at-risk communities to enable the engagement outlined in recommendation #8 immediately above and elsewhere in these comments and in the proposed rule.

9. Require EPA to annually issue public reports of incidents, organized by city, county, state and nationally, along with facilities that have implemented safer alternatives (including which alternatives were used and/or how or why the facility deregistered from the RMP program), so that the public, industry, and decision makers understand the scope of chemical incidents and prevention opportunities and benefits.

IX. THE PROPOSED RULE SHOULD PROMOTE WORKER PARTICIPATION IN ALL ASPECTS OF FACILITY MANAGEMENT SYSTEM AND RMP/PSM ACTIVITIES

The proposed rule should require expansion of the employee participation provisions of the RMP standard to ensure that employees and their representatives are involved in all aspects of a facility's management system. This expansion should include participation in existing RMP/PSM activities such as process hazard analysis, management of change, incident investigations, regulatory agency compliance inspections and others, and particularly any new requirements adopted under this rule, especially those related to Safer Technology and Alternative Analysis (STAA), implementing Inherently Safer Technologies, and third party audits. The Agency must also take steps to ensure that these changes are closely aligned and harmonized with equivalent changes in OSHA's PSM standard, as it is clear from the original Clean Air Act legislation and Executive Order 13650 that the agencies are expected to closely coordinate their actions.

EPA's authority under Section 112(r)(7) of the Clean Air Act explicitly addresses the "**prevention and detection** of accidental releases," (emphasis added) and workers are uniquely positioned to contribute to both goals of the legislation. Front line workers are the group most frequently and seriously affected by fatalities and injuries resulting from accidental releases, and hence they have a keen interest in preventing them. They have detailed knowledge of the jobs they do and the processes they operate, and thus can make valuable contributions the control of potential hazards and the consideration of alternative technologies and their feasibility. Lastly, they understand how things are "really" done on the shop floor, which is far too frequently different from what the written "official" operating procedures purport. This means that workers can bring an essential dose of both knowledge and reality to the planning and implementation of safer chemical processes.

Moreover, the EPA is undoubtedly aware that worker participation is an essential component of all widely-recognized existing management system standards, including the American National Standard ANSI Z10, as well as the ILO OSH/20001 standard, OSHA SAS 18001, and the British Standards Institute 8800.

The RMP program should require and ensure that employers develop, implement and maintain a written plan to ensure employee participation in all aspects of RMP planning, analysis, and implementation, including any new components of the RMP program adopted under this rulemaking. The proposed rule should require the development and implementation of such plans, including provisions that provide for the following:

- Consultation by the employer with employees and their representatives on the development, implementation and maintenance of all elements of Process Safety Management required by the revised RMP rule;
- Access by employees and their representatives to all information developed by the employer pursuant to the revised RMP rule, including information that might otherwise be subject to protection as a trade secret;
- That all employees who serve on any committee or in an advisory capacity related to RMP and facility safety are selected by employees or employee representatives.
- Employees designated to participate in RMP/PSM activities shall receive adequate time and resources to fulfill their roles, including adequate training in relevant aspects of management systems and other necessary topics, as well as paid time for their activities;
- Employers facilitate and encourage worker participation in activities and deliberations of any active Local Emergency Planning Committee (LEPC);
- Employers develop, implement and maintain an effective Stop Work Authority and Hazard Reporting Program that ensures at a minimum:
    - The right of all employees, including employees of contractors, to refuse work based on safety or health concerns and anonymously report hazards;
    - The right of all employees, including employees of contractors, to recommend to the operator in charge of a unit that an operation or process be stopped or shut down based on safety or health concerns;
    - The authority of the operator in charge of a unit to stop or shut down an operation or process based on safety or health concerns; and,
    - Coordination with the Occupational Safety and Health Administration (OSHA) to ensure that these rights are protected by strong provisions to prevent retaliation against employees exercising any aspect of the Stop Work Authority and Hazard Reporting Program.

EPA should strengthen policies, communications and enforcement to ensure that all facility employees (hired and contract) have whistleblower protection (i.e. ability to anonymously report safety concerns) and participate in inspections, participate in alternatives analyses assessments and have adequate education and training to participate, and that communities are fully trained and empowered to participate in planning and in reviewing assessments and decisions. Section 68.83 of the federal EPA rules for accidental release prevention still applies, and requires "…consultation with employees and their representatives…" and ensures union access to information.

The employees that participate in Process Hazard Analyses and on IST teams must have the specific knowledge and experience stated in the team requirements. This is one of the bases for our primary recommendation on new training requirements.

As documented and argued in comments submitted in response to EPA's RFI on the RMP, EPA should strengthen regulations that set specific training requirements for workers engaged in high hazard chemical process industries.

Further, we recommend that EPA employ a new training model beyond the systems used in meeting the requirements of the Hazardous Waste Operations and Emergency Response Standard administered by OSHA.

Respectfully submitted to **Docket EPA-HQ-OEM-2015-0725** on May 13, 2016 by:

Monique Harden
Co-Director & Attorney
Advocates for Environmental Human Rights

Adrian Shelley
Executive Director
Air Alliance Houston

Pamela Miller
Executive Director
Alaska Community Action on Toxics

Chaplin Anthony Quezada
American Veterans (AMVETS)

Pastor Alfred Carrillo
Apostolic Faith Center

Aaron Mair
Executive Director
Arbor Hill Environmental Justice Inc

Sharon Bryant
Coordinator
Art Slam @ SsAM

Jim Puckett
Executive Director
Basel Action Network

Jeanne Rizzo. R.N.
President and CEO
Breast Cancer Fund

Teresa Mills

Program Director
Buckeye Forest Council

Andria Ventura
Program Manager
California Clean Water Action

Jane Williams
Executive Director
California Communities Against Toxics

Drew Wood
Executive Director
California Kids IAQ

Kathryn Alcantar
Director
Californians for a Healthy and Green Economy (CHANGE Coalition)

Dr. Cecilia Martinez
Director of Research Programs
Center for Earth, Energy and Democracy

Alvaro Palacios Casanova
Pollution Prevention Advocate
Center for Environmental Health

Stephen Lester
Science Director
Center for Health, Environment & Justice

Rena Steinzor (as an individual)
Founder and Member Scholar
Center for Progressive Reform

Brent Bolin
Director
Chesapeake Region Clean Water Action

Kathleen A. Curtis, LPN
Executive Director
Clean and Healthy New York

Mark S. Rossi, PhD
Executive Director
Clean Production Action

Lynn Thorp
National Campaigns Director
Clean Water Action

Elizabeth Saunders
Director
Clean Water Action Alliance of Massachusetts

Deanna White
Director
Clean Water Action Alliance of Minnesota

Jesse N. Marquez
Executive Director
Coalition For A Safe Environment

Magdalena Avila, Dr.P.H., MPH, MSW (as an individual)
Associate Professor of Health, Exercise, and Sports Science
College of Education, University of New Mexico

Judy Robinson and Elizabeth Crowe
Co-Directors
Coming Clean

David LeGrande
Occupational Safety and Health Director
Communications Workers of America

Ricardo Pulido
Executive Director
Community Dreams

Octavia Dryden
President
Community Housing Empowerment Connection

Hilton Kelley
Executive Director and Founder
Community In-power and Development Association Inc.

Denny Larson
Executive Director
Community Science Institute

Dr. Sofia Martinez

President
Concerned Citizens of Wagon Mound and Mora County

Anne Hulick
Director
Connecticut Clean Water Action

Sharon Lewis
Executive Director
Connecticut Coalition for Environmental and Economic Justice

Christopher Ramírez
Juntos Director
Conservation Voters New Mexico Education Fund (CVNM-EF) Juntos: Our Air, Our Water

Rev. David Bouie Sr.
President
Crossett Concern Citizens for Environmental Justice (CCCEJ)

Crystal Baynard norman
Founder/Artist
Crystal Baynard norman and the Arts Community

Cynthia Babich
Executive Director
Del Amo Action Committee

Dee Durham
Chapter Chair
Delaware Chapter of Sierra Club

Paulyne Webster
Co-Founder
Delaware Concerned Residents for EJ

Stephen Brittle
President
Don't Waste Arizona

Yolanda Whyte, MD
President
Dr. Whyte Pediatrics

Emma Cheuse
Staff Attorney
Earthjustice

Angela Adrar
President
Ecohermanas

Tracey Easthope, MPH
Director, Green Chemistry & Safer Materials Project
Ecology Center

Bianca Encinias
Owner
El Chante Casa de Cultura

Magali Sanchez-Hall, MPH
Executive Director
EMERGE

Judy Braiman
President
Empire State Consumer Project

Kari Fulton
Environmental Justice Organizer
Empower DC

Anna Aurilio
Director, DC Office
Environment America

Richard Moore and Michele Roberts
Co-Coordinators
Environmental Justice Health Alliance for Chemical Policy Reform

Sonya Lunder
Senior Analyst
Environmental Working Group

Kathy Aterno
Director
Florida Clean Water Action

Lisa Archer
Director, Food and Technology Program
Friends of the Earth U.S.

Edmund J. Schlegel

Secretary
Friends of the Foothills

Ahmina Maxey
US & Canada Campaigns & Membership Coordinator
GAIA: Global Alliance for Incinerator Alternatives

The Rev. Fletcher Harper
Executive Director
GreenFaith

Rick Hind
Legislative Director
Greenpeace

Colette Pichon Battle
Director/Attorney
Gulf Coast Center for Law & Policy

Eric Uram
Principal
Headwater LLC

Gary Cohen
President
Health Care Without Harm

Bill Walsh
Executive Director
Healthy Building Network

Marisol Ruiz, Ph.D. (as an individual)
Assistant Professor, School of Education
Humboldt State University

César Abarca, Ph.D. (as an individual)
Assistant Professor, School of Social Work
Humboldt State University

Janet Redman
Climate Policy Program Director
Institute for Policy Studies, Climate Policy Program

Ted Smith
Coordinator
International Campaign for Responsible Technology

Jaydee Hanson
Policy Director
International Center for Technology Assessment

John S. Morawetz
Health and Safety Department Investigator
International Chemical Workers Union Council

Richard Liroff
Executive Director
Investor Environmental Health Network

Fartun Weli MPH
Executive Director
Isuroon (Strong women, Strong Communities)

Charlotte Keys
Executive Director
Jesus People Against Pollution

José T. Bravo
Executive Director
Just Transition Alliance

Craig Williams
Program Director
Kentucky Environmental Foundation

Dr. Tessa Cordova
Owner
Las Pistoleras Instituto Cultural de Arte

Sanford Lewis (as an individual)
Attorney
Law Office of Sanford Lewis

Tracy Gregoire
Healthy Children's Project Coordinator
Learning Disabilities Association of Maine

Dennis J. Coker
Principal Chief
Lenape Indian Tribe of Delaware

Juan Gonzalez

Los Jardines Institute

Anne Rolfes
Founding Director
Louisiana Bucket Brigade

Amy Ziff
Executive Director
MADE SAFE

Emily Scarr
Director
Maryland PIRG

Nic Clark
Director
Michigan Clean Water Action

Ken Dryden and Octavia Dryden
Founders
Minority Workforce Development Coalition

Joe Womack
Vice President
Mobile Environmental Justice Action Coalition

Molly Rauch
Public Health Policy Director
Moms Clean Air Force

Dorothy Felix
President
Mossville Environmental Action Now

Lauro Silva
President
Mountain View Neighborhood Association

Michelle Mascarenhas-Swan
Collective Member
Movement Generation: Justice & Ecology Project

Ilya Sheyman
Executive Director
MoveOn.org

Bahati Ansari
Founder
National Racism Free Zone

Angel De Fazio, BSAT
President/Executive Director
National Toxic Encephalopathy Foundation

Jared E. Knicley
Beagle Fellow
Natural Resources Defense Council

Rev. Dele
Founder
Nature's Friends

Amy Goldsmith
Director
New Jersey Clean Water Action

Dan Fatton
Executive Director
NJ Work Environment Council

Beryl A. Thurman
Executive Director/President
North Shore Waterfront Conservancy of Staten Island, Inc.

Niaz Dorry
Coordinating Director
Northwest Atlantic Marine Alliance

Dorothy Wigmore
Director, Outreach and Education
Occupational Health Clinical Centers

Janet Keating
Executive Director
Ohio Valley Environmental Coalition

Myron Arnowitt
Director
Pennsylvania Clean Water Action

Pam Nixon
President

People Concerned About Chemical Safety

Judy Hatcher
Executive Director
Pesticide Action Network North America

Martha Dina Argüello
Executive Director
Physicians for Social Responsibility - Los Angeles (PSR-LA)

Lisa Gilbert
Director, Congress Watch
Public Citizen

Tom "Smitty" Smith
Director, Texas Office
Public Citizen - Texas

John Berard
Director
Rhode Island Clean Water Action

Joe R. Gatlin
Vice President
San Pedro-Wilmington NAACP Branch # 1069

Devon Santoro (as an individual)
Graduate Student, Health Advocacy MA
Sarah Lawrence College

Kaeleigh Forsyth (as an individual)
Sarah Lawrence College

Jon Barton
Service Employees International Union

Leslie Fields
Director, Environmental Justice & Community Partnerships Program
Sierra Club

Fatemeh Shafiei, Ph.D. (as an individual)
Associate Professor and Chair, Department of Political Science
Spelman College

Melissa Tuckey (as an individual)
Eco-justice Poetry Project Coordinator

Split This Rock

Mr. Tracy M. Stephens
President
Sunnyside Civic Club

Robin Schneider
Executive Director
Texas Campaign for the Environment

Juan Parras
Director
Texas Environmental Justice Advocacy Services

Lilace Guignard
Director
The Institute of Science and the Environment at Mansfield University

Karen Savage / Cherri Foytlin
Co-Founders
The Life Support Project

Derrick Evans
Executive Director
Turkey Creek Community Initiatives

Gerald Poje (as an individual)
Founding Member
U.S. Chemical Safety Board

Andre Delattre
Executive Director
U.S. PIRG

Rev. Pat Watkins
United Methodist Missionary for the Care of God's Creation
United Methodist Caretakers of God's Creation

Audrey Hope-Milton
President
United Methodist Women of Ezion-Mount Carmel United Methodist Church

Peter Orris, MD, MPH (as an individual)
Chief Occupational and Environmental Medicine
University of Illinois Hospital and Health Sciences System

Robin Saha (as an individual)
Associate Professor of Environmental Studies
University of Montana

Elizabeth Yeampierre
Executive Director
UPROSE

Dr. Brian Moench
President
Utah Physicians for a Healthy Environment

Cecil D. Corbin-Mark
Deputy Director
WE ACT for Environmental Justice

Dr. Henry Clark
Director
West County Toxics Coalition

Omega and Brenda Wilson
Founders
West End Revitalization Association

Charles Brittingham
President
Wilmington Branch of NAACP

The Honorable Maria D. Cabrera (as an individual)
City Council Member At Large
Wilmington City Council

Anabell Romero Chavez
Board Member
Wilmington Improvement Network

Erin Switalski
Executive Director
Women's Voices for the Earth

Monica E. Unseld, Ph.D (as an individual)
Biologist and Member of Board of Directors of Kentucky Environmental Foundation

David Halperin (as an individual)
Attorney and Counselor

Dr. Robert D. Bullard (as an individual)
Author and Environmental Justice Leader

APPENDIX

Amnesty International

"Clouds of Injustice: Bhopal Disaster 20 Years On" November 29, 2004
https://www.amnesty.org/en/documents/ASA20/015/2004/en/

Association of American Railroads

"Homeland Security Committee Urged to Consider Safer Chemicals; Chemical Companies Should Stop Manufacturing Extremely Hazardous Chemicals" February 27, 2008
http://www.greenpeace.org/usa/wp-content/uploads/legacy/Global/usa/planet3/PDFs/railroads-safer-chemicals.pdf

Center for American Progress

"Leading Water Utilities Secure their Chemicals" March 2, 2010
https://www.americanprogress.org/issues/security/news/2010/03/02/7538/leading-water-utilities-secure-their-chemicals/

"Chemical Security 101" November 19, 2008
https://www.americanprogress.org/issues/security/report/2008/11/19/5203/chemical-security-101/

"Toxic Trains and the Terrorist Threat" April 2, 2007
https://cdn.americanprogress.org/wp-content/uploads/issues/2007/04/pdf/chemical_security_report.pdf

"Preventing Toxic Terrorism" April 24, 2006
https://www.americanprogress.org/issues/security/news/2006/04/24/1924/preventing-toxic-terrorism/

Center for Effective Government

"Living in the Shadow of Danger: Poverty, Race and Unequal Chemical Facility Hazards" January 16, 2016 http://www.foreffectivegov.org/shadow-of-danger/

"Blowing Smoke: Chemical Companies Say "Trust Us", But Environmental and Workplace Safety Violations Belie Their Rhetoric" October 22, 2015
http://www.foreffectivegov.org/blowing-smoke/

"Chemical Hazards in Your Backyard: Do Your First Responders Have the Information they need in an Emergency?" April 2015
http://www.foreffectivegov.org/chemical-hazards-your-backyard/
https://www.americanprogress.org/issues/security/news/2010/03/02/7538/leading-water-utilities-secure-their-chemicals/

"Kids in Danger Zones: One in Three U.S. Schoolchildren at Risk from Chemical Catastrophes" September 30, 2014 http://www.foreffectivegov.org/kids-in-danger-zones/

Clorox

"Clorox is Converting All of Its US Plants" 2009
http://investors.thecloroxcompany.com/releasedetail.cfm?ReleaseID=420583

Coalition to Prevent Chemical Disasters

Comments submitted from 156 organizations to Docket ID No. EPA - EPA-HQ-OEM-2014-0328, "Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, Section 112(r)(7); Rule Modernization Under Executive Order 13650; Request for Information" October 29, 2014 https://www.documentcloud.org/documents/1350484-coalition-to-prevent-chemical-disasters-rfi.html

"Petition to the Environmental Protection Agency to Exercise Its Authority Under Section 112(r) of the Clean Air Act to Prevent Chemical Facility Disasters Through the Use of Safer Chemical Processes" July 25, 2012
https://www.documentcloud.org/documents/404584-petition-to-epa-to-prevent-chem-disasters-filed.html

Congressional Research Service Memos

"RMP Facilities in the United States as of December 2014" December 3, 2014
https://preventchemicaldisasters.files.wordpress.com/2015/03/rmp-facilities-in-the-united-states-as-of-december-2014.pdf

CRS Report: "Chemical Facility Security: Issues and Options for the 112th Congress" December 21, 2012 https://www.fas.org/sgp/crs/homesec/R41642.pdf

Earthjustice et al
Comments submitted from Earthjustice and 20 other organizations to Docket EPA–HQ–OAR–2010-0682, "Petroleum Refinery Sector Risk and Technology Review and New Source Performance Standards; Proposed Rule, 79 Fed. Reg. 36,880," June 30, 2014
https://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2010-0682-0568

Environmental Justice Health Alliance

"Who's In Danger? Race, Poverty, and Chemical Disasters" May 2014
http://comingcleaninc.org/assets/media/images/Reports/Who's%20in%20Danger%20Report%20FINAL.pdf

Greenpeace
"Chlorine Bleach Plants Needlessly Endanger Millions" February 4, 2016
http://www.greenpeace.org/usa/wp-content/uploads/2016/02/chlorine-bleach-report-2016.pdf?8ea2de

Management Information Services Inc.

"Economic and Employment Benefits of the Chemical and Water Security Act of 2009 (H.R. 2868)" July, 2010
http://www.misi-net.com/publications.htmlhttp://www.misi-net.com/publications.html

New Jersey Work Environment Council (WEC)

"Failure to Act: New Jersey Jobs and Communities are Still at Risk From Toxic Chemical Disaster" October 2013
http://www.njwec.org/PDF/Reports/FailuretoAct_CompleteReport.pdf

Paper, Allied-Industrial, Chemical, and Energy Workers International Union

"PACE International Union Survey: Workplace Incident Prevention and Response Since 9/11" October 2004 http://research.greenpeaceusa.org/index.php?a=view&d=5888

United Steelworkers, New Perspectives Consulting Group, and Tony Mazzocchi Center

"A Risk Too Great: Hydrofluoric Acid in U.S. Refineries" April 2013
http://assets.usw.org/resources/hse/pdf/A-Risk-Too-Great.pdf

U.S. Homeland Security Council

Planning Scenarios: Executive Summaries Scenario 8: Chemical Attack—Chlorine Tank Explosion Copyright valid through 2009
http://www.globalsecurity.org/security/ops/hsc-scen-8.htm

U.S. Navy

"Fast and Accurate Chemical, Biological & Radiological (CBR) Emergency Assessment" archived July 12, 2007
http://www.citizenarchive.org/documents/EmergAssess_Boris_Oct6_03.pdf

U.S. PIRG

"Toxic Pollution And Health: An Analysis of Toxic Chemicals Released in Communities across the United States" March 2007
http://www.uspirg.org/sites/pirg/files/reports/Toxic_Pollution_and_Health_USPIRG.pdf

"Pulp Fiction: Chemical Hazard Reduction at Pulp and Paper Mills" August 2007
http://www.uspirg.org/sites/pirg/files/reports/Pulp_Fiction_USPIRG.pdf

"Needless Risk: Oil Refineries and Hazard Reduction" August 2005
http://www.uspirg.org/sites/pirg/files/reports/Needless_Risk_USPIRG.pdf

Working Group on Community Right to Know
"Unnecessary Dangers: Emergency Chemical Release Hazards at Power Plants" 2004