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The Honorable Mathy Stanislaus
Assistant Administrator
Office of Solid Waste and Emergency Response
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Docket ID No. EPAHQ-OEM-2014-0328

Re: Comments of the American Fuel & Petrochemical Manufacturers on the Environmental Protection Agency's Request for Information regarding potential revisions to the Risk Management Program Regulations and Related Programs.

Mr. Stanislaus,

The American Fuel & Petrochemical Manufacturers (AFPM) is pleased to submit these comments on the Environmental Protection Agency's (EPA or Agency) Request for Information regarding potential revisions to the Risk Management Program Regulations and Related Programs (Docket ID No. EPA-HQ-OEM-2014-0328). AFPM is a trade association representing virtually all U.S. refiners and petrochemical manufacturers involved in the production and use of the regulated substances subject to the Risk Management Program (RMP) Regulations. AFPM members supply consumers with a wide variety of products and services used daily in their homes and businesses. These products include gasoline, diesel fuel, and home heating oil, jet fuel, lubricants and the chemicals that serve as "building blocks" in making diverse products, such as plastics, clothing, medicine and computers.



We appreciate the opportunity to submit comments to EPA's request for information and we strongly encourage the Agency to set aside the amount of time necessary to analyze these comments. Unfortunately, to date the Agency has not demonstrated that sufficient time will be allowed for any step of the process.

EPA did not provide sufficient time for our members to prepare complete comments to the regulatory changes discussed in the RFI.

On Thursday, July 31, 2014, the Federal Register published the following:

The Environmental Protection Agency (EPA), in response to Executive Order 13650, requests comment on potential revisions to its Risk Management Program regulations and related programs. In this Request for Information (RFI), the Agency asks for information and data on specific regulatory elements and process safety management approaches, the public and environmental health and safety risks they address, and the costs and burdens they may entail.¹

The Agency then enumerated 19 distinct areas (with subparts) to be addressed, including a significant portion from the separate OSHA RFI on potential revisions to the Process Safety Management (PSM) Rule. In total, EPA RFI makes 380 individual requests for information spanning over the 19 areas of concern.

As an initial matter, the RFI involves a host of complex issues, many of which both Agencies (OSHA and EPA) have had to re-examine and continuously refine since the inception of the respective regulations. Moreover, the depth at which the RFI examines these complex issues is considerable.

¹ Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, Section 112(r)(7), 79 Fed. Reg. 44603, 44604 (proposed July 31, 2014) .



Rulemaking is a long process that requires diligence and thoughtful consideration; especially where there is a large volume of complex issues that have the potential to significantly alter day-to-day operations for a large industry. This process should not have been shortchanged by allowing affected industries only 90 days to gather information, study and analyze it, and then prepare meaningful commentary to the questions accompanying the RFI. OSHA recognized this problem when it decided to grant affected industries additional time to respond to its related RFI. OSHA's RFI for revisions to the PSM rule similarly required affected industries to respond within 90 days. When presented with similar requests for a deadline extension, OSHA granted industries an additional three weeks to respond. Here, EPA's RFI is twice as long and contains four times as many requests for information. Therefore EPA's decision not to provide additional time for the preparation of comments is improper.

AFPM and its members understand that EPA is working on a very tight timeline but in order to provide meaningful comments and data addressing EPA's numerous requests, more time was needed and EPA's decision to deny the requests for additional time (as requested by several trade groups representing thousands of companies) is questionable at best.

Particularly concerning is that this is becoming a pattern for EPA, a pattern that has not gone unnoticed. On July 8, 2014, the Congressional Research Service issued a report titled *EPA Regulations: Too Much, Too Little, or On Track?*² wherein the authors noted the persistent

² McCarthy, James E. and Claudia Copeland, Cong. Research Serv., R41561, *EPA Regulations: Too Much, Too Little, or On Track?* (July 8, 2014).



impression that “the Obama Administration’s EPA is ‘overreaching’ in its regulatory efforts”.³ The article concluded by noting that the Agency was attempting to address this concern. For example “[i]n revising proposed rules, EPA often relied on data submitted by industry and other stakeholders, acknowledging that it had inadequate or incomplete data when it proposed the rules.” Yet here EPA has chosen to ignore industry’s and other stakeholders’ request for additional time to submit the data EPA requests. EPA’s insistence on haste will have negative impacts on site security and on the quality of the eventual rule.

PREFACE

There is a long history of cooperation between EPA and Industry

Industry in general and AFPM in particular have a long history of working with EPA and OSHA to develop standards and safe work practices to reduce environmental and occupational risk and to make the work place safer for their employees, the surrounding communities and the environment. This process has been collaborative, focusing on identifying specific issues or hazards in our industry and addressing them. This joint process has demonstrated that the greatest improvement in environmental and occupational safety occurs with a narrowed focus on resolving specific hazards.

A recent example of note was EPA and industry working together to implement changes to Clean Air Act standards for major and area source boilers and commercial/industrial solid waste incinerators. EPA had to withdraw its initial proposal after receiving numerous complaints including one study that said the proposed standard would cost businesses \$20 billion to comply

³ *Id.* at 7.



and cause the loss of more than 300,000 jobs. Working together, a more manageable proposal was enacted. As EPA stated in one of its fact sheets:

On December 20, 2012, the U.S. Environmental Protection Agency (EPA) finalized a specific set of adjustments to Clean Air Act standards, originally finalized in March 2011, for boilers and certain solid waste incinerators. These adjustments maintain extensive public health protections achieved by the March 2011 standards by reducing toxic air pollution, including mercury and particle pollution. At the same time, these adjustments *increase the rules' flexibility and address concerns raised by stakeholders*. The specific set of adjustments address new data provided to the agency and additional information about real-world performance and conditions under which affected boilers and incinerators operate. These adjustments maintain the dramatic cuts in the cost of implementation that were achieved in the final standards issued in March 2011.⁴ (emphasis added)

Instead of revising the RMP Regulations without reference to specific hazards, we recommend that EPA work with the individual trade associations to identify the relevant hazards for specific industries and then allow those industries to develop practices tailored to those hazards. To that end, AFPM's members invite EPA to meet with them and discuss ways to improve the safety performance in the refining and petrochemical industries.

EPA should respect jurisdictional boundaries with OSHA.

EPA begins its request for information by addressing the statutory authority⁵ that purportedly empowers the Agency to implement the changes discussed in the RFI. The Clean Air Act Amendments (CAAA) of 1990 convey broad regulatory authority to EPA to prevent the

⁴ Adjustments from December 2011 Proposed Reconsideration (PDF) available at <http://www.epa.gov/airquality/combustion/actions.html#dec12>.

⁵ 79 Fed. Reg. at 44605 (stating "The statutory authority for this action is provided by section 112(r) of the Clean Air Act (CAA) as amended (42 U.S.C. 7412(r)) and by the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), (42 U.S.C. 11001-11050), which was enacted as Title III of the Superfund Amendments and Reauthorization Act of 1986 (Pub. L. 99- 499), (SARA)").



accidental release of regulated substances that will impact public health and the environment.⁶ EPA does not have the authority to resolve safety and health for workers for which OSHA has exclusive jurisdiction. Yet many of the proposals found within request for information appear to address workplace impacts which EPA acknowledges are well beyond its statutory mandate under the CAAA.^{7,8} As the Congressional Research Services report suggested,⁹ the Administrator is overstepping her statutory authority with these proposed changes.¹⁰

In the preamble to the Final Rule, EPA described its efforts to coordinate the Part 68 rules with OSHA's PSM standard to minimize conflicting requirements and to minimize

⁶ 42 U.S.C. § 7412(r)(7)(A) 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.

⁷ Risk Management Programs for Chemical Accidental Release Prevention, 58 Fed. Reg. 54190, 92 (October 20, 1993) ("The OSHA standard is intended to protect workers from chemical accidents at facilities using highly toxic, reactive, flammable, or explosive substances. EPA's mandate under section 112(r) of the CAA is to protect public health and the environment. . . . The main differences between the EPA's proposed rule and OSHA's standard are those mandated by the CAA OSHA's focus is on workplace impacts while EPA's focus is on offsite consequences, reflecting the differing statutory mandates of the two programs.")

⁸ Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, Section 112(r)(7): Final Rule, 61 Fed. Reg. 31668, 711 ("The words 'including those affecting the safety and health of employees' has been deleted from the requirement for the evaluation of the consequences of deviations (paragraph (c)(1)(v)) because *EPA has no authority to regulate the workplace.*")(emphasis added).

⁹ McCarthy, at 7.

¹⁰ 61 Fed. Reg. at 31672 ("These changes are designed to ensure that OSHA retains its oversight of actions designed to protect workers while EPA retains its oversight of actions to protect public health and the environment and to remove possible interpretations that certain elements of process safety management fail to account for offsite impacts.")(discussing the differences between the text of the Program 3 Prevention Program and OSHA's PSM Standard).



confusion for facilities covered by both rules.¹¹ Based on a number of regulatory changes contemplated in the RFI, it appears that EPA has abandoned these principles and now intends to encroach into areas that are occupational safety issues within OSHA's exclusive jurisdiction. Additional Risk Management Program elements such as stop work authority, job hazard analysis, management of contractor services, management of organizational changes and occupancy criteria for buildings within a facility have been within OSHA's exclusive purview for decades.

For example, EPA's proposed stop work authority is duplicative of OSHA's regulation¹² promulgated in 1973 under which employees have the right to refuse to do dangerous work and refusing to work is an effective form of stop work authority. Concerning EPA's contractor safety proposal, OSHA has extensive regulations and policies designed to eliminate risks and hazards from the workplace. Specifically the OSHA PSM Standard requires a host employer to evaluate the safety experience of a contractor prior to hiring him and to provide training on the hazards of the process, the emergency response plan and changes in the process. Moreover other potential hazards in a refinery are regulated by OSHA standards such as lockout/tagout, confined space, hot work permits, HAZCOM, PPE, hearing conservation and respirator requirements. Lastly, OSHA enforces its multi-employer policy that requires, among other things, the host employer to monitor contractor employees for compliance with safety and health regulations. Rather than develop additional unnecessary and potentially conflicting regulation, EPA should

¹¹ 61 Fed. Reg. at 31711-12 (using the phrase "To maintain consistency with OSHA PSM" two times and the phrase "to ensure consistency with OSHA" eight separate times").

¹² 29 C.F.R. §1977.12(b)(2).



defer to OSHA's expertise in regulating these particular matters and focus its attention on only those items that "pose a potential threat beyond the fence line".¹³

RMP works best as a performance-based regulation.

The accidental release provisions of the RMP regulation are performance-based regulations in which the regulator sets specific goals and the owner/operator is responsible for selecting the means of compliance. Many of the proposed changes in this RFI suggest EPA intends to graft a command-and-control approach onto the underlying performance standards, (e.g. mandating "redundant power supplies, emergency flares, vents, or scrubbers, etc."). AFPM believes its members, the community and EPA itself benefit from the existing performance basis of the PSM and RMP Regulations and a performance standard like PSM is the best way to address process hazards. A performance standard enables the engineers with specific detailed knowledge of each process, its potential hazards, and the specific equipment to safely and effectively either eliminate or control those hazards. The majority of the hazards presented are a function of the specific processes and equipment utilized. In most instances, these broad prescriptive requirements for additional equipment and instrumentation complicate and in some circumstances hinder the regulatory goal of safely eliminating or reducing the hazards. Moreover, a prescriptive regulatory approach will impose unnecessary burdens on equipment, time and resources without addressing the specific underlying hazard.

¹³ List of Regulated Substances and thresholds for Accidental Release Prevention; Requirements for Petitions Under Section 112(r) of the Clean Air Act as Amended, 59 Fed. Reg. 4478, 4486 (January 31, 1994).



Finally, a prescriptive approach may conflict with other regulatory mandates. For example, the suggestion in the RFI that EPA may consider requiring installation of additional emergency flares is inconsistent with EPA's current efforts to discourage flaring through a series of recent consent decrees and the proposed "Petroleum Refinery Sector Risk and Technology Rule and New Source Performance Standards," for which the public comment period ended October 28.¹⁴ Therefore, EPA should not implement prescriptive changes as proposed. The RMP regulation should continue to maintain consistency with the PSM standard as a performance-based regulation.

There is no evidence that the current RMP Regulations are deficient or in need of amending.

AFPM's members believe that when correctly implemented and enforced, the RMP Regulations are very effective in reducing risks of accidental releases and making the workplace safer for employees. EPA has provided no evidence that the current regulations are deficient or in need of amending. The key process safety principles undergirding RMP predated the Clean Air Act. Yet adoption of those safety principles was not uniform throughout all industry sectors. Therefore it is not the absence of a regulation that is the issue. The issue is improving the implementation of the RMP Regulations' key principles in a wide range of industries. In other words, the RMP Regulations (which have been effective in preventing and mitigating catastrophic releases when implemented correctly) do not require a broad-stroke revision across all industries, as EPA is now suggesting.

¹⁴ Petroleum Refinery Sector Risk and Technology Review and New Source Performance Standards, 79 Fed. Reg. 36880 (June 30, 2014).



Implementation of the RMP Regulations requires daily effort from employers and employees. And the vast majority of employers and employees do an excellent job in this regard. Unfortunately, a few tragic incidents have occurred when there was a failure to implement existing RMP requirements. OSHA recently illustrated this fact itself in its own PSM RFI, noting certain facilities allegedly:

- (1) “*failed to properly implement many OSHA-required elements* of its PSM program....”
- (2) “*fail[ed] to properly implement mechanical integrity, training, and standard operating procedures....*” and
- (3) “*failed to properly implement its PSM program . . .*”¹⁵

Each of these alleged failures resulted in catastrophic incidents but as the evidence presented shows and our members confirm, these incidents were not caused by deficiencies in the PSM Standard. Rather, they were caused by the failure of individual employers to properly implement that standard. This indicates that both the PSM Standard and RMP Regulations are adequate as written; *i.e.*, when the RMP Regulations are implemented correctly, they are effective.

The RMP rule was promulgated in June 1996. EPA has not conducted a comprehensive study of all of the major incidents since June 1996 to assess whether any element or component of the RMP rule, when properly implemented, still permitted a catastrophic incident to occur. Without such a study, EPA does not know if there is a root cause for any potential weakness or

¹⁵ Process Safety Management and Prevention of Major Chemical Accidents, 78 Fed. Reg. 73756, 757 (Dec. 9, 2013).



deficiency in the RMP Rule. In turn EPA does not know what changes will actual solve the underlying problem of incidents occurring and improve process safety. Without such a study, EPA has no engineering framework or design philosophy by which to restructure and improve the RMP rule.

In the RFI, EPA has discussed a very small number of unrelated incidents and developed 19 areas of concern that in many cases are entirely unrelated to these incidents. From this statistically insignificant number of incidents, EPA has then extrapolated that all facilities need significant additional regulation. This extrapolation is a complete disconnect from the indisputable fact that the vast majority of facilities are safe and have no need for additional regulation. Finally, the RFI focuses greatly on the West Fertilizer incident. West Fertilizer is an extreme outlier in that it did not comply with a multitude of regulatory requirements and no matter how many regulations EPA, OSHA or DHS should promulgate there may be companies that disregard the law. In lieu of adding regulatory requirements on good companies that make their best efforts to ensure a safe work place, EPA should focus its efforts on enforcing current regulations at companies like West Fertilizer.

EPA has not provided any reason or factual basis for why the RMP Regulations should be revised. Section 6(c) of the Order directs EPA and OSHA to review their regulations and “determine if the RMP or PSM can and should be expanded to address additional regulated substances and types of hazards.” Section 6(e)(ii) directs the Secretary of Labor to “issue a Request for Information designed to identify issues related to modernization of the PSM Standard and related standards necessary to meet the goal of preventing major chemical



accidents.” There’s no directive in the Executive Order for EPA to “modernize” RMP indicative that the President intended for OSHA to lead the process and EPA was to follow suit through harmonization.

Nor is there any data suggesting that the suggested changes will be effective in reducing the risk of specific causative circumstances or events. Rather, it appears that the current proposal is driven by a political desire to be seen as taking action in response to the recent tragic events, such as those that occurred in West, Texas. But making changes for the sake of making changes will not enhance process safety. Before EPA requires industry to undertake the extensive costs, both capital and training, associated with many of the suggested changes, the Agency must demonstrate the need for the changes. Without a clear demonstration by EPA that the current RMP Regulations are deficient and that the suggested changes will address any perceived deficiencies, AFPM cannot support this proposal.

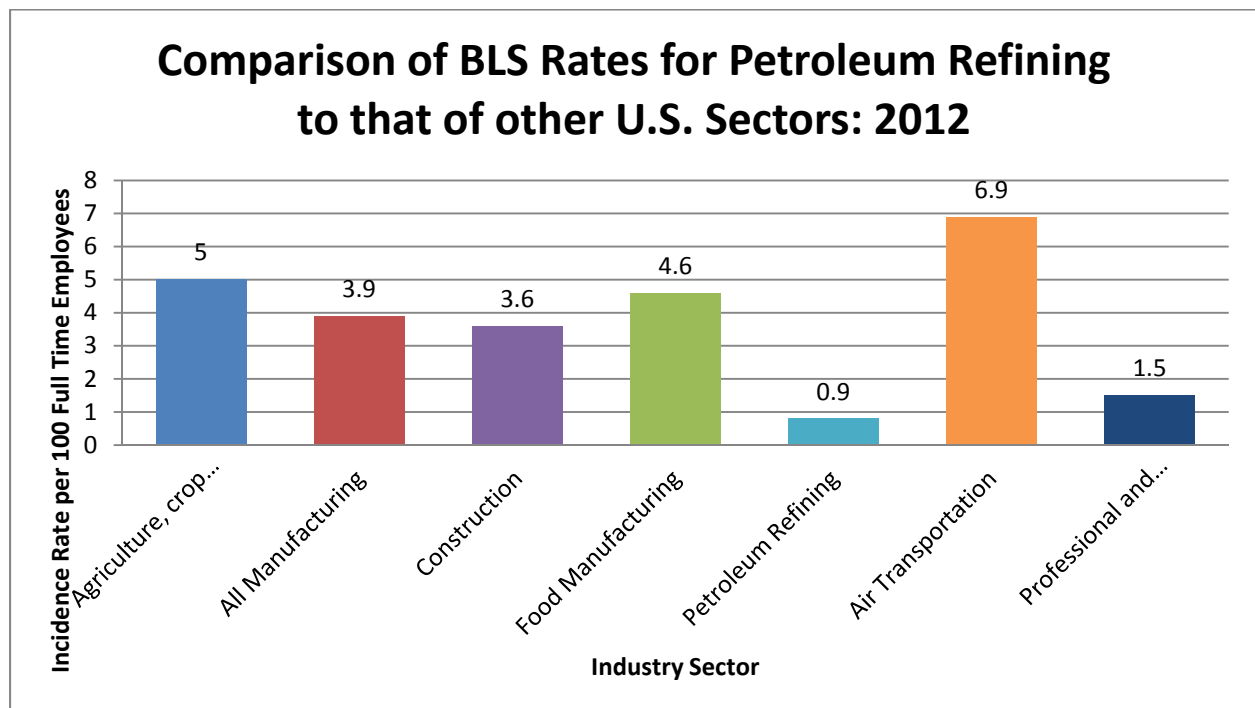
The Petroleum Refining industry has strong safety and health programs.

In two instances of the RFI, EPA asserts that petroleum refineries are “high-risk facilities” and may warrant additional regulation. AFPM disputes this characterization. Our members have had a long and strong commitment to safety and health of its employees and to the environment which has continuously improved and for which we have objective data to demonstrate it.



According to the 2012 Bureau of Labor Statistics (BLS),¹⁶ the total recordable incident rate for the manufacturing sector as a whole is 3.9 job-related injuries and illnesses per 100 fulltime employees. The 2012 AFPM Occupational Injury & Illness Report total recordable incident rate for both company employees and onsite contractors working at petroleum refining facilities was 0.5 incidents per 100 full time employees. Out of these recordable incidents, 79% of injuries were so minor that the worker returned to work immediately.

The chart below compares injury and illness rates for all employers and contractors in petroleum refining with all of the major sectors of the US economy.

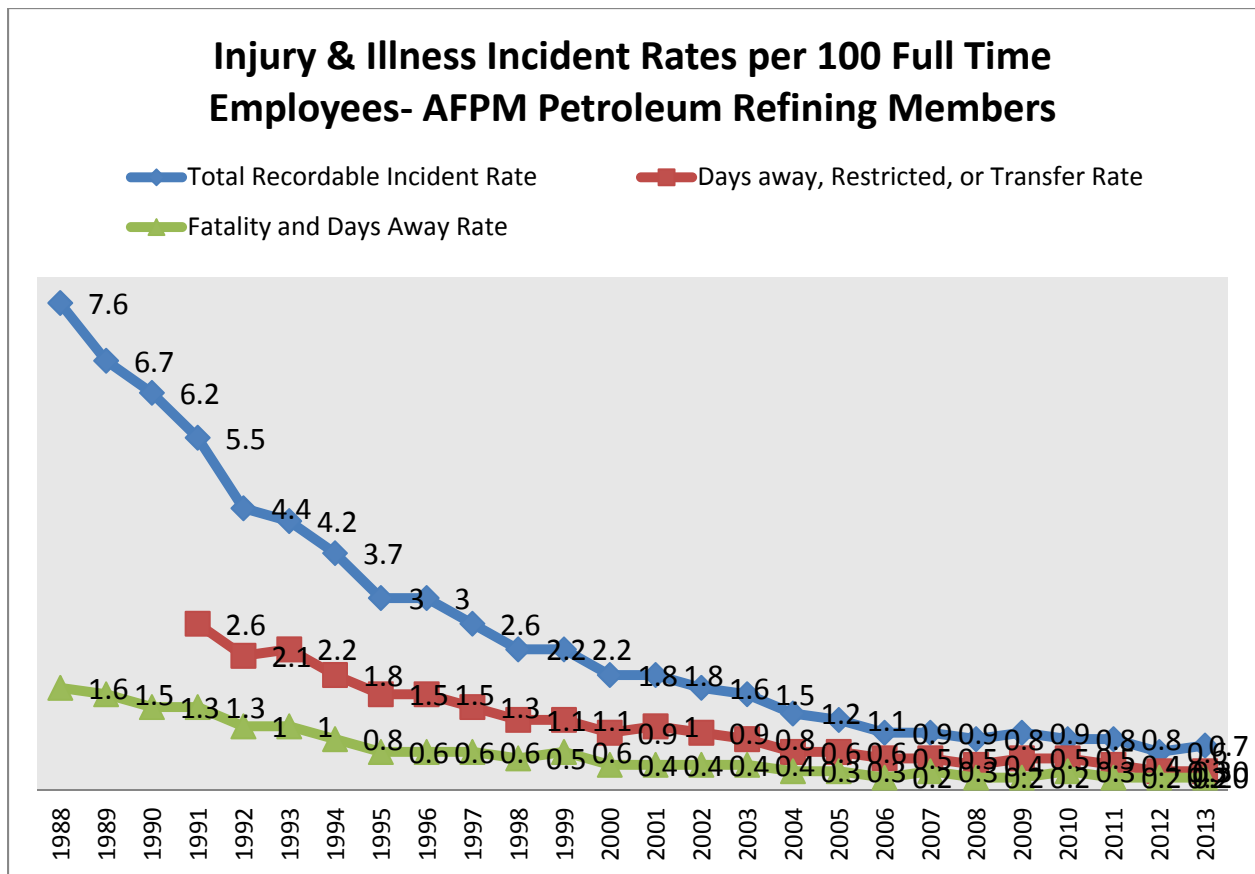


¹⁶ BLS rates are based on a sample rather a census of the entire population and do not include contractor injury & illnesses numbers in their calculations. The AFPM data is a census of AFPM member companies and contains approximately 97% of the US refining capacity and includes a majority of those site's contractor numbers as well.



As the BLS data makes clear, the petroleum refining sector has the lowest incident rate of all of the sectors in the economy and reflects the implementation of strong safety and health programs at these refineries.

Over the last twenty-five years, AFPM members have continually reduced both the frequency and severity of the occupational injury and illness within their refineries. The chart below shows that over the last twenty-five years, fatalities, total recordable injuries and restrictive duty injury rates have continually declined each year. In 1988, the fatality/days away rate was 1.6 per 100 full time employees and by 2013, it was 0.2 per 100 full time employees. This is an 87% reduction.





No serious injuries or fatalities are acceptable, and industry continuously works to minimize the risk of serious injuries at refineries. BLS data indicates refining businesses have been reducing the risk of all injuries – including serious injuries and fatalities – for the last 20 years. Based on 2012 AFPM data, the petroleum refining sector suffered 0.0042 fatalities per every 100 full-time employees. The AFPM data indicates the petroleum refining sector rate is lower than the fatality rates for wood product manufacturing, taxi and limousine services, waste collection services, and postal service to name a few. It is safer to work in a refinery than to drive a cab, or to deliver the mail.

Given the data in these two charts, it is a mischaracterization to call out petroleum refineries as “high-risk facilities” and the assertion that they may require additional regulations is unwarranted.¹⁷

To the extent EPA decides to move forward with a notice of proposed rulemaking in the absence of a factual finding that the current RMP/PSM regulations are deficient, AFPM makes the following comments:

- I. “Combustible Dusts” and “Reactives” should not be added to the regulated substance list because of the inherent vagueness of those terms. EPA should focus its efforts on specific dusts and reactive compounds, as well as their risk factors, not general categories.**

In its request on updating the list of regulated substances, EPA asks whether other categories of substances such as “combustible dusts” should be added to its coverage provisions.

¹⁷ Occupational Injury & Illness data is one metric used in accordance with OSHA’s Recordkeeping Standard 29 CFR 1904 to benchmark safety at workplaces. The downward trend is indicative of an industry that has a strong management commitment to safety and health and strives for a culture of continuous improvement. The injury and illness data measures the rate individuals are injured and while it doesn’t measure all process safety upsets, it does record all injuries resulting from a process safety upset and all occupational injuries.



“Combustible dusts” should not be added in part because of the inherent vagueness of the term. In other words, the issues are complex enough that EPA should identify specific dusts of concern and engage in separate rulemaking to address those individualized concerns. Should EPA choose to include specific dusts, AFPM would argue for excluding petroleum coke dust based on its physical and chemical attributes, the historical absence of an explosive incident involving petroleum coke dust and the Congressional Research Service’s characterization of petroleum coke as “essentially inert.”¹⁸

The determination whether a particular dust is combustible is a very complex scientific assessment and must be done on a dust-by-specific-dust basis. The combustibility assessment must include the chemical composition of the specific dust, its physical form, the particle size, its minimum ignition energy, its explosibility index and its maximum unvented explosion pressure. The factors for a dust such as sugar or flour are very different than those for metals or plastics. As Amy Beasley Spencer, an expert on combustible dust put it: “Part of the problem with regulating dust explosions is the confusion about which dusts can explode and under what conditions. Even how much dust is a hazard is still unknown.”¹⁹

Given the complexity of this assessment, OSHA has struggled to define “combustible dust.” The United Nations working group on the Globally Harmonized System (GHS) has so far resisted OSHA’s effort to adopt classification criteria for combustible dust, since this is not an

¹⁸ Andrews, Anthony. and Richard K. Lattanzio, Cong. Research Serv., R43263, Petroleum Coke: Industry and Environmental Issues (October 29, 2013) at 8.

¹⁹ Dust: When a Nuisance Becomes Deadly, NFPA Journal, Nov/Dec 2008 at 58.



inherent hazard but only a consequence of the particular form of the material, particularly related to particle size. While OSHA has unilaterally applied hazard communication requirements to dust that may be combustible, it decided to bypass adoption of a definition of “combustible dust” altogether.²⁰ OSHA is continuing to evaluate combustible dust and is even considering rulemaking.²¹ While OSHA does that, EPA should postpone further consideration of adding combustible dust to the list of regulated substances.

For a dust to combust, there are five factors that must occur simultaneously and they commonly known as the “Explosion Pentagon.” These factors are the fuel being dust, an ignition source, oxygen, dispersion of the dust in the correct concentration and confinement of the dust particles. If one factor is missing, then no combustion of that dust can occur. OSHA regulations address two of the five factors that make the dust combustible. OSHA regulates housekeeping practices in a workplace.²² The Occupational Safety and Health Review Commission, construing this housekeeping standard, held that it extends to “combustible dust” in the workplace.²³ Several other Courts of Appeal have reached the same interpretation that OSHA’s Housekeeping Standard applies to “combustible dust.”²⁴ Proper housekeeping will

²⁰ Hazard Communication, 77 Fed. Reg. 17574, 17705 (Mar. 26, 2012).

²¹ See Department of Labor, Semiannual Agenda of Regulations (May 23, 2014), RIN 1218-AC41, <http://resources.regulations.gov/public/ContentViewer?objectId=0900006481710771&disposition=attachment&contentType=pdf>.

²² 29 CFR 1910.22(a)(1) which states that “all places of employment, passageways and storerooms and service rooms shall be kept clean and orderly”

²³ Cincinnati Gas & Electric Co., 21 BNA OSHC 1057 (No. 01-0711, 2005).

²⁴ See *Con Agra, Inc. v. Occupational Safety & Health Review Comm'n*, 672 F.2d 699, 702 (8th Cir. 1982) (“[w]e agree that the housekeeping standard is not limited to tripping and falling hazards but may be applied to the



eliminate the fuel from the workplace. OSHA also regulates ignition sources in the workplace. 1910.307(c) requires that “equipment, wiring methods and installations of equipment in hazardous locations . . . shall be intrinsically safe or approved for the hazardous location” Other standards require that hot work permits for welding, cutting and brazing are issued, that equipment and machinery be properly grounded, that power hand tools be UL listed and double insulated, and that forklifts be rated for their use in hazardous locations. Adhering to these OSHA standards, the second factor in the Explosion Pentagon, ignition source, has been eliminated. OSHA standards adequately address the potential hazards of dusts that can be combustible under certain circumstances and there is no need for EPA to issue additional regulations.

In order for a dust to present a combustion hazard, certain conditions must be met, confinement being one of the conditions. The equipment to process petroleum coke is located out in the open subject to wind and rain and do not present a risk of confinement. In addition, petroleum coke dust is saturated with water during the removal process making it highly unlikely that it will disperse and create a potentially explosive cloud. Furthermore, the particle size of petroleum coke dust is one to two orders of magnitude larger than other more well documented combustible dust hazards. Finally, in surveying our members and the available literature, we were unable to identify a combustible dust explosion resulting from petroleum coke. AFPM strongly urges EPA to avoid crafting a regulation around inherently vague terms such as

significant accumulation of combustible dust as was shown in this case”); *Bunge Corp. v. Sec'y of Labor*, 638 F.2d 831, 834 (5th Cir. 1981).



combustible dusts, particularly dusts like petroleum coke dusts that present no known hazards. In other words, the issues are complex enough that EPA should identify specific dusts of concern and engage in separate rulemaking to address those individualized concerns.

AFPM also objects to expanding the RMP Rule to cover to “reactive substances and reactivity hazards” because of the inherent vagueness of these terms. “Reactivity” is chemical and process specific and is far too complex to be effectively regulated within a narrow, prescriptive national rule. In the initial rulemaking for the RMP, EPA recognized the technical complexity of this issue and concluded that it was infeasible to write a single national rule for all processes.²⁵ This technical complexity persists to the present. As a preliminary point, all chemical compounds can be characterized as reactive chemicals because all are formed by the reaction of two or more chemical elements and/or chemical compounds. In addition, the hazard presented by a given chemical’s reactivity is a function of the operating conditions under which the reaction is taking place.

In the RFI, EPA has proposed adopting the two lists of reactive chemicals and reactive functional groups that New Jersey listed in its Toxic Catastrophe Prevention Act (TCPA).²⁶ AFPM members do not support this approach because it fails to address the problem acknowledged by the Agency, such an approach does not “take into account process- and site-

²⁵ See 79 Fed. Reg. at 44611 (“In order to meet the conditions in CAA section 112(r)(3) for the listing of substances, EPA sought to determine the common physical-chemical characteristics or properties that would be used as criteria to identify a set of chemicals to be listed and to provide the technical basis for these criteria. . . .One difficulty (with adding reactive substances and reactivity hazards) is that it is not feasible for national listing decisions to take into account process- and site-specific factors, which can vary widely”.)

²⁶ New Jersey Toxic Catastrophe Prevention Act, N.J. Admin. Code § 7:31 6.3.



specific factors, which can vary widely.”²⁷ Furthermore the Clean Air Act Amendments require EPA to consider:²⁸

- (i) the severity of any acute adverse health effects associated with accidental releases of the substance
- (ii) the likelihood of accidental releases of the substance; and
- (iii) the potential magnitude of human exposure to accidental releases of the substance

New Jersey is not required to consider these factors, making their program inconsistent and inadequate for a national RMP regulation. Since the Agency has not considered these factors either, it cannot simply delegate this task to the New Jersey legislature.

EPA has also proposed the use of NFPA 400 as a means to address reactives. This proposed use of NFPA 400 does not address the technical complexity of the potential reactivity of the various chemicals under process conditions. Moreover NFPA 400 applies to a limited universe of chemicals and has very limited guidance on storage, general use and handling. Lastly, there is inherent vagueness in the phrases “Unstable (Reactive) Solids and Liquids”²⁹ and “Water-Reactive Solids and Liquids”³⁰ in NFPA 400.

In summation, “reactivity” is a broad and, consequently, vague concept upon which to develop meaningful regulation. Therefore EPA should perform its own assessment of individual compounds as the Clean Air Act Amendments require and not defer to state legislators who may

²⁷ 79 Fed. Reg. at 44611.

²⁸ 42 U.S.C. §7412(r)(4).

²⁹ National Fire Protection Association's “NFPA 400: Hazardous Materials Code” 2013 ed. Chapter 19, at 79.

³⁰ *Id.* Chapter 20, at 81.



not possess the level of knowledge maintained by EPA. Upon completion of the assessment, the Agency should then finalize the list of specific chemicals via notice-and-comment rulemaking.

II. EPA does not provide any justification for requiring additional management systems in the workplace.

EPA's proposal to require additional risk management program elements without any demonstrated need or benefit is improper. There is no evidence presented in the RFI that the existing management systems already implemented at many workplaces, including at AFPM's members' facilities, are deficient in any way. In addition, the Agency does not analyze or describe the specific benefits of requiring industry to supplement the already existing management systems with those outlined in the RFI.

More importantly, requiring additional management system elements would undermine the very purpose of the RMP Regulations. The RMP Regulations were conceived as a performance standard to allow a broad range of methods to comply, because it was recognized that certain safety practices or management systems may work at one facility but provide no real benefit at another. Each production facility is unique. EPA's proposal to revise the RMP Regulations in this manner contradicts this purpose and would burden many facilities without any real benefit. To this point, there is no ideal or perfect management system that will eliminate the possibility of incidents; it is all a function of good management and timely execution by the employer.

In the RFI, EPA states that it is considering adopting management system elements from the Bureau of Safety and Environmental Enforcement (BSEE). This system would create a stop work authority, an ultimate work authority and an employee participation plan. EPA's



suggestion inappropriately adopts more unnecessary government regulation without any demonstrated improvement in safety. Put simply, there is already sufficient management system support provided in the OSH Act and the existing RMP Regulations. Employees already have the right to refuse work in light of a hazardous condition that could cause serious bodily injury or death.³¹ Employers already have a statutory duty to maintain a safe workplace, which is ultimate work authority.³² Moreover, the RMP Regulations already include a requirement for a written employee participation plan.³³

Additionally, regulating job hazard analysis is an OSHA function, and Executive Order 13650 calls for avoiding duplication in implementing chemical safety programs. OSHA has extensive rules to address job hazards such as regulations governing personal protective equipment, standard operation procedures, hot work permits, confined space entry permits, respirators and hearing conservation.³⁴

In the RFI, EPA asked whether the RMP regulation should be modified to add safety requirements for contractors. This question overlooks the excellent contractor safety programs that are already in place and the extensive OSHA regulations which apply to both contractors

³¹ See 29 C.F.R. § 1977.12(b)(2).

³² See 29 USC § 654(a)(1).

³³ 40 C.F.R. § 68.175(m)

³⁴ See 29 C.F.R. § 1910.132 (personal protective equipment), 29 C.F.R. § 1910.119(f) (standard operating procedures under PSM), 29 C.F.R. § 1910.252(a)(2)(iv) (hot work permits requirement), 29 C.F.R. § 1910.146 (confined space entry), 29 C.F.R. § 1910.134 (for respirator requirements), 29 C.F.R. § 1910.95 (occupational noise exposure).



and host employers and which assure that the contractors are safe. There is no need for additional regulation.

AFPM members have well developed and effective contractor programs. Each potential contractor has to successfully complete the pre-qualification process. This involves a detailed review of the contractor's expertise, its safe work practices and procedures, and its proven safety and health performance with objective data. Once the contractor has proven that he can work safely and effectively, he receives site specific orientation concerning the hazards in the workplace, the evacuation route and the contract requirement that he must adhere to all of the facility's safety and health requirements. Contractor employees who violate these rules will be subject to discipline which could range from additional training to time off without pay to termination of the entire contract.

OSHA's regulations address all of the hazards to which any contractor may be exposed at a facility. The PSM Standard requires the host employer to review the safety and health performance of the contractor and to train the contractor in the hazards of the process and in the emergency response plan.³⁵ In addition, the PSM Standard requires the host employer to develop safe work practices for the contractor and to periodically evaluate its performance.³⁶ As the work places change through Process Hazard Analyses (PHAs), MOCs and incident reports, there is a continuing obligation to notify and train contractor employees.

³⁵ See 29 C.F.R. § 1910.119(h)(2)(ii), (h)(2)(v).

³⁶ See 29 C.F.R. § 1910.119(h)(2)(ii), (h)(2)(iv).



In addition to the requirements in the PSM Standard for contractor safety, OSHA's standards are designed around specific hazards and if an employee is exposed to that hazard, then his employer must comply with that standard. In this regard, there is no difference between host employers and contractor employers. Employers have an OSHA requirement to provide a safe workplace and work that is free from recognized hazards and the list of OSHA safety and health standards is extensive. OSHA requires employers to inform and train their employees on the hazards of the chemicals with which they work, to isolate hazardous energy prior to starting work, to eliminate hazards prior to entering a confined space, to provide proper personnel protective equipment and to train on its proper use and to remove ignition sources from the work place.³⁷ Lastly, OSHA has issued a multi-employer policy which requires host employers to among other things monitor the safety and health compliance of contractor employees.³⁸ Saying it another way, host employers have two requirements to audit contractors. One is in the RMP/PSM regulation to evaluate the contractor's safety performance under the RMP/PSM regulation and the other is in the multi-employer adherence to general safety and health requirements.

The Agency has also requested comments on whether PHA and hazard review requirements should be clarified or expanded to require that specific scenarios, such as natural

³⁷ See 29 C.F.R. § 1910.1200 (hazard communication standard), 29 C.F.R. § 1910.147 (lock-out/tag-out standard), 29 C.F.R. § 1910.146 (confined space entry), 29 C.F.R. § 1910.132 (personal protective equipment), 29 C.F.R. § 1910.252 (fire prevention and protection).

³⁸ See, e.g., April 29, 2013 Richard Fairfax Memorandum re: Protecting the Safety and Health of Temporary Workers, available at: https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=28613.



disasters or power outages, be considered. AFPM believes that it is not necessary or helpful to require that specific scenarios be analyzed; rather, the PHA should consider a range of potential conditions that could affect the process. AFPM believes existing regulations are clear and that the current industry practices fully comply with the regulation as understood by the plain meaning of the text. In Section 68.67(b) that addresses PHAs, it is written: “The owner or operator shall use one or more of the following methodologies that are appropriate to determine and evaluate the hazards of the process being analyzed.” The hazards in question are hazards in the process, *i.e.* hazards associated with and internal to the process itself. Therefore analysis of natural disasters and vehicle collisions would not normally be required of all PHAs.

It is not the natural disaster or vehicle collision that should be analyzed. Rather it is the accompanying effect that should be analyzed and is in fact done. For example, with a natural disaster one could envision a loss of utilities, a loss of raw material supply, or a loss of control system power. PHAs already address these scenarios and discuss the appropriate safeguards, although they may not specify whether the power loss results from a hurricane or a problem with the electrical provider. There is no need to create a redundant node that asks “What if the facility is struck by lightning that causes a subsequent power outage?” The Agency appears to be ready to regulate the methodology, keywords and nodes of a PHA and moving RMP away from a performance based regulation. Such a prescriptive approach will not have the desired effect.

AFPM stresses that our members are dedicated to continuous improvement through the current RMP Regulations that already require the review of changes, incidents, operating procedures, periodic inspections, audits, and PHAs, all of which require continuous review,



evaluation and improvement. AFPM's members, however, do not believe in a blanket-expansion of the RMP Regulations to require additional management-system elements. To this point, AFPM's members do not believe that expanding the scope of existing RMP Regulation-system elements would improve the protection of human health and the environment.

III. Defining RAGAGEP is unnecessary and mandatory evaluations of updates to RAGAGEP provide no additional safety benefits and would pose an unwarranted burden on our members as well as the rest of industry.

In its request for information, the Agency has asked what definition for Recognized and Generally Accepted Good Engineering Practice (RAGAGEP) do our members utilize? AFPM members agree RAGAGEP should *not* be defined as narrowly as the following:

“Recognized And Generally Accepted Good Engineering Practices” (RAGAGEP)--are the basis for engineering, operation, or maintenance activities and are themselves based on established codes, standards, published technical reports or recommended practices (RP) or similar documents. RAGAGEPs detail generally approved ways to perform specific engineering, inspection or mechanical integrity activities, such as fabricating a vessel, inspecting a storage tank, or servicing a relief valve.

This definition, which originates from Center for Chemical Process Safety (CCPSs) *Guidelines for Mechanical Integrity Systems* and was used in OSHA's Petroleum Refinery NEP directive (CPL 03-00-010), is incorrect. There are two errors with the definition of RAGAGEP. First RAGAGEP is not a finite, static collection of engineering principles which have been completely and definitively explained in written codes and standards. Rather, codes and standards are simply a subset of all of the principles which make up RAGAGEP. Second the CCPS definition of RAGAGEP fails to include internal standards created by on-site engineers with specific experience at the worksite in question. In other words, this narrow definition fails



to recognize that all “established codes, standards, published technical reports or recommended practices” originated from the individual practices of individual employers at their individual sites. RAGAGEP is not based on established codes, standards, etc. as the above definition asserts; codes and standards are based upon RAGAGEP. It is industry-created engineering practices that inform and shape industry-accepted standards. Certainly, codes and standards may function as RAGAGEP but they are not the source of RAGAGEP. In short, RAGAGEP has three fundamental characteristics: (1) proven safe and effective, (2) based on science, judgment and experience and (3) is created and defined by engineers. Therefore, any definition of RAGAGEP must be broad enough to include all the safe engineering practices currently being utilized by industry, specifically including the internal standards formed and implemented by employers.

EPA also asks “[f]rom what sources (e.g., codes, standards, published technical reports, guidelines, etc.) does your facility select applicable RAGAGEP for operations covered under the PSM standard?” Our members make use of several sources of RAGAGEP during the initial design of process units. These may include relevant published codes from organizations such as API, ASTM, ANSI, ASME and NFPA, when applicable. In this request for information, EPA seems to be suggesting that our members should re-evaluate initial designs of process units to ensure the original design and installation conforms to updated published codes. This requirement would impose an extraordinary cost without any demonstrated benefit. As of March 2014, the current catalog of API publications is 206 pages long and includes a listing of



“Publications by Number” that is 23 pages.³⁹ ASTM has published approximately 12,000 technical standards “covering the procedures for testing and classification of materials of every sort.”⁴⁰ Even ANSI⁴¹, ASME⁴² and NFPA⁴³ publish a combined 1,478 standards. Many of these industry standards apply to the refining industry. The costs to review initial designs in order to ensure original designs meet all of these potential updates would be astronomical.

This extraordinary cost must be compared to the marginal benefits expected by implementing the proposed change. EPA seems to be working under the false premise that just because a consensus standard is re-published or updated, the older version is no longer adequate to protect the safety of employees. This line of reasoning is equivalent to arguing that the release of a new, 2015 car model renders the 2014 model unsafe and that all 2014 models should now be recalled. In this sense, EPA needs to clarify the cost/benefit analysis of requiring all employers to evaluate all updates to RAGAGEP; without any additional information, it appears the costs vastly outweigh the benefits.

³⁹ American Petroleum Institute’s *Publications, Programs and Services* (2014), available at <http://www.api.org/~media/Files/Publications/Catalog/Final-catalog.pdf>.

⁴⁰ American National Standards Institute eStandards Store, available at <http://webstore.ansi.org/SdoInfo.aspx?sdoid=41>.

⁴¹ American National Standards Institute eStandards Store, available at <http://webstore.ansi.org/FindStandards.aspx?Action=displaydept&DeptID=30&Acro=ANSI&DpName=ANSI%20Other>. (listing 166 Standards).

⁴² American Society of Mechanical Engineers, available at <https://www.asme.org/shop/standards#page=1> (listing 946 Standards).

⁴³ National Fire Protection Association, available at <http://www.nfpa.org/codes-and-standards/document-information-pages> (listing 366 Standards).



IV. Mandating expansions of mechanical integrity programs to “safety critical equipment” will lead to significant legal challenges without any tangible safety benefit.

In its request, the Agency inquired whether it should “amend the mechanical integrity provisions of the RMP Regulations to explicitly cover all safety critical process equipment? If so, what type(s) of equipment?” AFPM members would argue mechanical integrity provisions should not be expanded to cover all safety critical process equipment for the very reason that the term is unclear as to what types of equipment would be considered safety critical equipment. There is no general consensus among our membership as to what “safety critical equipment” consists of; rather, it is a highly site-specific, process-specific, and equipment-specific matter. For example, a flowmeter that may be absolutely critical to managing a particular process at one facility may be redundant instrumentation in another unit at the same facility. This fact was originally acknowledged by EPA when EPA stated it “believes the responsibility should be on the facility to develop a list, based on specific facility concerns.”⁴⁴

EPA has provided no definition of “safety critical equipment” in the RFI. Moreover, EPA has failed to publish any data that would corroborate or substantiate the purported deficiencies in Sec. 68.73. If EPA is aware of an existing hazard with certain pieces of equipment the Agency has deemed “safety critical”, it should specify the equipment of concern and seek public comment on adding the specific equipment to Sec. 68.73.

⁴⁴ 58 Fed. Reg. at 54204 (discussing EPA’s maintenance requirements in a section by section comparison of the EPA Prevention Program and the OSHA Standard).



Lacking this specificity, AFPM cannot support this proposed change. To the extent safety critical equipment could be construed to include instrumentation, software systems, and so forth, the mechanical integrity standard may be simply inappropriate or ineffective to address the specific design and maintenance needs of particular types of equipment. Further, not only has EPA not provided any data to justify the change, our members are very concerned the phrase “safety critical” will be misused in the enforcement process to justify post incident notices of violation. AFPM is therefore concerned that enforcement officials could take the position that any equipment failure that contributes to an incident will be interpreted as safety critical and cited as such. AFPM is equally concerned that a “but for” test will naturally evolve and EPA will use such a test as the basis for issuing a violation.

The RFI also asks whether the Agency should require that certain types of covered facilities install emergency shutdown systems, such as redundant power supplies, emergency flares, vents, or scrubbers, etc., in order to prevent accidental releases resulting from uncontrolled emergency shutdowns. As stated previously, our members are very concerned that EPA is moving away from performance-based towards prescriptive-based regulations.⁴⁵ EPA is not qualified to be the designer of all the relief systems for all facilities. Relief and flare studies have been done to size the relief system needed. They are complex, process specific and do not lend themselves to a single uniform rule from EPA.

⁴⁵ Requiring certain types of covered facilities to install emergency flares, vents or scrubbers in order to prevent accidental release resulting from emergency shutdowns suggests that industry currently operates independent of any air emission regulations. However Title V of the CAAA already addresses these concerns.



Ultimately elimination of all risk is unattainable and unrealistic. Even a process involving water can pose hazards. Managing and mitigating risk to an acceptable level is the goal and is a function of a risk analysis. As a consequence, our members do not limit their mechanical integrity programs to only those areas required by the RMP Regulations. There is no need to expand the scope of covered equipment beyond what is already presented in Sec. 68.73. The current list is both complete and adequate and EPA has not presented any evidence indicating the need to expand the list.

V. Sufficient administrative guidance on organizational management of change already exists and there is no need to expand upon it as the Agency proposes.

AFPM members are concerned that a revision to require organizational change MOCs to the RMP Regulations would inappropriately permit the insertion of the Agency's decision-making into either the selection of corporate structure or personnel. The independent power to determine corporate structure and staff must remain exclusively with the employer. EPA's proposal will likely open the door for second-guessing employers' personnel decisions after the fact and effectively inhibit the employer's ability to choose the employee that best fits the job. The selection of a unit manager and the development of maintenance budgets are not within the purview of EPA's mandate or expertise. Furthermore, the association between these items and catastrophic incidents is tenuous at best.

In addition, OSHA has already provided adequate administrative guidance on management of organizational change. In a March 31, 2009 OSHA Letter of Interpretation from



former Directorate of Enforcement Programs, Richard Fairfax,⁴⁶ OSHA explicitly addresses what types of changes would constitute “organizational changes:” “[s]ome organizational changes, such as changes resulting from mergers, acquisitions, reorganizations, staffing changes, or budget revisions, may affect PSM at the plant level and would therefore trigger a PSM MOC procedure.”⁴⁷ Additional examples include “personnel changes, including changes in staffing levels, staff experience, or contracting out that directly impact PSM covered processes; and policy changes such as budget cutting that impact PSM covered processes.”⁴⁸ This guidance is more than adequate and does not necessitate additional regulation in the RMP Regulations. Additional regulation is unnecessary and may prove counterproductive.

VI. EPA has failed to demonstrate a need for third-party auditing; in fact, the evidence demonstrates that additional regulation in this area will only generate more problems, not solve them.

EPA’s proposal to require third-party audits seems to be premised on an assumption that third parties are more capable, more credible, or more objective than a facility’s own employees. AFPM’s members disagree with these assumptions. Expanding requirements for compliance audits will not compensate for, nor drive better behavior regarding the existing requirements to perform compliance audits already codified within the RMP Regulations.

In our members’ experience the real experts on a facility’s processes, equipment, and hazards are the company’s own employees. The employers know the skills, experience, and

⁴⁶ See *Management of Organizational Change*, Memorandum for Regional Administrators (March 31, 2009) available at https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=28628.

⁴⁷ *Id.*

⁴⁸ *Id.*



training of their employees and select the appropriate employees to serve on the audit team. The selected employees should be the linchpin of any valid auditing process. Second, many auditors are knowledgeable in the elements of the PSM Standard; however, given the wide range of the covered processes, there are very few third-party auditors who possess sufficient expertise in those processes. Third, the problem is not with the audit but, rather the failure to implement many audit findings, therefore requiring additional audits will not actually accomplish EPA's goal. Last, as OSHA's NEP enforcement data demonstrates, the vast majority of employers have complied with the PSM auditing requirements.

It goes without saying that employees know their facilities best and have the greatest vested interest in identifying safety issues at their worksite. It is the employees who are trained on the proper use of the equipment, develop the procedures that govern the processes, and are most familiar with the areas needing improvement. And, it is the employees' own jobsite that is made safer by a well conducted audit.

Moreover, as OSHA has noted, it is not enough that the auditor be familiar with the 14 elements of a PSM program.⁴⁹ To be truly effective, the auditor must know the process being audited, which is why paragraph (o)(2) requires the compliance audit "be conducted by at least one person knowledgeable in the process."⁵⁰ There is, quite frankly, a dearth of qualified third-party auditors with that level of specialized knowledge. Most third-party audits lack firsthand

⁴⁹ See generally 29 C.F.R. § 1910.119(o)(2).

⁵⁰ *Id.*



knowledge regarding the subtleties of the processes at a facility, whereas our employee auditors have extensive firsthand knowledge of the processes being audited.

OSHA's RFI noted the CSB's investigation of the 2005 Texas City incident and the fact that "the CSB identified a lack of rigorous compliance audits as a contributing factor behind the accident."⁵¹ The Texas City incident, while tragic, remains an outlier and is not illustrative of the industry as a whole. This conclusion is supported by data from the Petroleum Refinery Process Safety Management National Emphasis Program (NEP).⁵² Of the 1088 alleged violations of the PSM Standard issued during the Refinery NEP, less than 5 percent involved compliance audits, and the vast majority of those citations involved the alleged failure to implement audit findings, rather than deficiencies in the audit process itself. After some discussions with employers, OSHA withdrew many of these citations and as a result, the actual level of compliance is superior to what the statistics suggest. We further contend that expanding requirements for compliance audits will not compensate for, nor drive better behavior regarding, the existing requirements to perform compliance audits already codified within the RMP regulations.

AFPM members additionally note that EPA has failed to offer any evidence that employers who perform third-party audits comply better with the PSM Standard or have fewer incidents than those that do not. The proposed changes seem to indicate that EPA fundamentally misunderstands the purpose behind a RMP/PSM audit.

⁵¹ 78 Fed. Reg. at 73762.

⁵² Data received via FOIA request and compiled internally.



In the RFI, EPA has asked whether “EPA clarify Sec. 68.58 and Sec. 68.79 to explicitly indicate that all covered processes must receive a full compliance audit at least every three years?” Conducting a full audit of all covered processes will result in an enormous waste of time, resources, and capital. The regulation contemplates a system audit and statistically valid sampling will provide the relevant information concerning any deficiency in the system and the means to effectively correct them.

EPA should not implement any changes to §§ 68.58 and 68.79. Third-party audits should not be mandated, as employees are the real experts of the processes at their facilities and there is a dearth of qualified third-party auditors who possess sufficient expertise in these processes. Nor will compliance improve solely because an audit is performed by an external third-party auditor. As the example presented by OSHA and the NEP enforcement initiative indicates, the problem lies not with the auditors, but with the post-audit implementation.

VII. EPA should not mandate chemical substitution or process changes as it would likely create unintended consequences such as moving the risk from one point in the process to another.

Inherently Safer Technology (IST) is an engineering concept with a complex framework that seeks to reduce hazards and manage risks of a chemical process. IST is an operation and site-specific evaluation based on engineering judgment considering many variables including hazards, location, surrounding populations, exposures, technical feasibility, and economic feasibility. IST may be better thought of as a philosophical approach to the design and operational life cycle including manufacture, transport, storage, use, and disposal. IST is not a specific chemical compound or a collection of technologies that can be readily substituted into a



given process as each case is unique. From case to case, the results will vary. In short, IST is a design philosophy. For these reasons, regulating IST is infeasible because there is no one-size-fits-all answer when it comes to managing risk.

What makes IST particularly complex is that there is no simple way to measure whether one process is safer than another. As an example, a facility may receive a chlorine shipment by railcar. It may be suggested that having large quantities of chlorine on site presents an unnecessary risk and tank truck delivery would lower that risk. However, even though the tank truck contains less chlorine than the railcar, the frequency of connecting and disconnecting the stored chlorine to the process would increase, thus increasing the risk of a release. Although the worst case release scenario associated with the tank truck would possibly present a lesser consequence, because the primary risk of release occurs when the process is connected and disconnected to the chlorine supply, the railcar delivery would be the inherently safer technology between the two options. To a downwind community though, the delivery by tank truck may be perceived as the inherently safer choice.

One should also recognize that a reduction in hazard does not necessarily result in a reduction in risk. Ammonium nitrate is a perfect example of the limitations of this type of thinking. If properly handled and stored, ammonium nitrate is one of the most stable, nonhazardous compounds in the marketplace. Yet its improper storage can result in a high consequence event even though in and of itself, it is not particularly hazardous.

Advocates of inherently safer technologies often focus on just the chemicals within the process without regard to the processes themselves. This approach incorrectly simplifies the IST



process and disregards the other potential risks present throughout the life cycle of the product. For example a “safer” compound may require additional processing steps potentially increasing the overall risk of a release.

In a report put out Sandia National Labs, IST was defined as follows:

“Inherently Safer Technology (IST), also known as Inherently Safer Design (ISD), permanently eliminates or reduces hazards to avoid or reduce the consequences of incidents. IST is a philosophy, applied to the design and operation life cycle, including manufacture, transport, storage, use, and disposal. IST is an iterative process that considers such options, including eliminating a hazard, reducing a hazard, substituting a less hazardous material, using less hazardous process conditions, and designing a process to reduce the potential for, or consequences of, human error, equipment failure, or intentional harm. Overall safe design and operation options cover a spectrum from inherent through passive, active and procedural risk management strategies. There is no clear boundary between IST and other strategies.

ISTs are relative: A technology can only be described as inherently safer when compared to a different technology, including a description of the hazard or set of hazards being considered, their location, and the potentially affected population. A technology may be inherently safer than another with respect to some hazards but inherently less safe with respect to others, and may not be safe enough to meet societal expectations.

ISTs are based on an informed decision process: Because an option may be inherently safer with regard to some hazards and inherently less safe with regard to others, decisions about the optimum strategy for managing risks from all hazards are required. The decision process must consider the entire life cycle, the full spectrum of hazards and risks, and the potential for transfer of risk from one impacted population to another. Technical and economic feasibility of options must also be considered.”⁵³ (emphasis added)



It should also be noted that there is no data from New Jersey, Contra Costa County or any other jurisdiction requiring an IST analysis that supports the proposition that an IST analysis provides any measurable benefit or has reduced the frequency or severity of incidents.

Furthermore, creating an IST requirement for businesses in the name of national security could actually hinder security by simply shifting risks and creating other supply chain vulnerability points. For example, reducing the volume of a hazardous chemical stored at a facility may reduce on-site risk, but increase truck, rail, or barge traffic into the facility in order to maintain sufficient quantities of materials, thereby potentially increasing overall risk. In focusing solely on potential offsite consequences, IST mandates could divert resources from other critical security concerns such as material theft, product contamination, or infrastructure damage. Also, companies assess risks and protection from such risks on a site-by-site basis. A one-size-fits-all IST approach could hamper the development of necessary site-specific security measures.

EPA should reject calls to mandate IST just as it did in 1996.⁵⁴ The Agency's initial conclusion was correct: "Although some existing processes may be superficially judged to be inherently less safe than other processes, EPA believes these processes can be safely operated through management and control of the hazards without spending resources searching for unavailable or unaffordable new process technologies."⁵⁵

⁵⁴ 61 Fed. Reg. at 31699 ("EPA has decided not to mandate inherently safer technology analyses. EPA does not believe that a requirement that sources conduct searches or analyses of alternative processing technologies for new or existing processes will produce additional benefits beyond those accruing to the rule already.").

⁵⁵ *Id.* at 31700.



VIII. Emergency drills are already being conducted but that does not mean the drills themselves should be regulated.

In its request for information, EPA asks whether requiring RMP-regulated facilities to perform exercises or drills as an element of the emergency response program identified under Subpart E of the RMP regulation would improve coordination with community responders and ensure that facility personnel have practice responding to accidental releases. AFPM members support the use of drills, but believe attempting to regulate the when, who, where and what of a drill would be a prescriptive approach which could thwart the current practices for drilling.

Our members already conduct extensive drills but as any of our members will note, a good drill program looks at different variables at differing times. Some of our drills are “table top” drills while others involve deployment of emergency response personnel. Certain drills test the response to a loss of containment while others test site security in response to potential terrorist activity.

Because an effective drill program contains too many site-specific variables for the development of a useful and effective rule, our members recommend EPA not attempt to regulate the scope of an exercise/drill program, the frequency of the drills, and what response scenarios should be considered for the exercise/drill program. Rather, EPA should allow industry the same flexibility it has under the Oil Pollution Act of 1990. In response to that legislation, industry developed the National Preparedness for Response Exercise Program (PREP) to “provide a mechanism for compliance with the exercise requirements, while being economically feasible for the government and oil industry to adopt and sustain.” The PREP program includes internal and external exercises, emergency procedure exercises, spill



management team tabletop exercises, and equipment deployment exercises. All of these drill elements were developed and are being carried out without prescriptive regulation.

IX. Automated detection and monitoring technology has not sufficiently evolved to the point that it should be mandated as a part of the RMP Regulations.

EPA has asked whether facilities should be required to install monitoring equipment or sensors to detect releases of RMP regulated substances. Our members report that automated detection and monitoring can be part of effective RMP program but only in certain limited situations with certain chemical compounds. Unfortunately, the chemical monitoring technology is not fully developed. In fact it is uncertain whether reliable automated detection and monitoring technology exists for all regulated substances.

In theory, the sooner a release is detected, the quicker the emergency response can occur. But automated detection and monitoring does not necessarily guarantee early detection. There are huge technical issues in deciding on the placement of area monitors, determining the number of monitors required, and compensating for the various and sometimes very harsh weather conditions in geographical areas where our members operate. Moreover, the preventive maintenance to ensure the calibration and reliability of the monitors is enormous.

Even a well-maintained monitoring program has limitations. The sensors within the monitors are cross sensitive to many other substances which will result in alarms for non-regulated substances. A release at one facility could activate a downwind monitor directing the emergency response team to the wrong location. For example, area fenceline monitors are highly dependent on ambient conditions as well as the local surroundings. Our members report



that occasionally, their area hydrocarbon monitors are activated by hydrocarbons resulting from an offsite release from an adjacent facility.

In these cases, if EPA were to require “an automated mechanism to notify, alert and warn the local responders and surrounding public of an incident” false alarms could delay the emergency response to the actual release point and inadvertently increase the risk to the surrounding community. This practice is for an experienced employee to investigate each alarm to confirm and assess it. The investigation determines whether it is a false alarm, a miniscule leak or one requiring an immediate response. The key here is the use of judgment to assess the significance of each alarm. Without that assessment, the community will receive notifications about harmless events and undermine their confidence in the notification process.

Lastly the resources for a reliable preventative maintenance program for the monitors would greatly outweigh any marginal benefits the monitors might provide. Monitors must be routinely verified and recalibrated. Depending on the number of monitors a facility is required to install, new personnel would have to be hired and trained just to perform the calibration checks.

This section in the RFI places too much emphasis on automatic detection and monitoring. There are many tools currently used to detect and monitor for potential releases. They include area monitoring, hand held monitors, small monitors attached to an employee’s shirt, security cameras which operate continuously, infrared cameras and good work practices in which personnel have been trained to look and listen for releases and to be aware of specific odors. All of these types of detection and monitoring techniques have been developed based on the nature of the hazardous materials, the site specific equipment and process.



Automated detection and monitoring may occasionally be a useful tool but as mentioned earlier it is only one tool in the toolbox with many options for identifying and controlling a release.

X. RMP Regulations should not include the regulation of buffer zones and occupancy criteria within a facility.

EPA's proposal to regulate buffer or setback zones will result in EPA being subject to hundreds of lawsuits for regulatory takings. The Fifth Amendment of the US Constitution allows the Government to take property provided "just compensation" is given to the property owner. In *Lucas v. South Carolina Coastal Council*,⁵⁶ David Lucas purchased two beach front lots on the Isle of Palms, South Carolina. Mr. Lucas intended to build single-family homes similar to those on adjacent parcels. When Mr. Lucas originally purchased the lots in 1986, they were not subject to South Carolina's coastal zone building permit requirements. But two years later, in 1988, the Beachfront Management Act was passed that prohibited Mr. Lucas from building any permanent habitable structures on the two lots. Mr. Lucas filed suit alleging a regulatory taking. The Supreme Court agreed holding "when the owner of real property has been called upon to sacrifice all economically beneficial uses in the name of the common good, that is, to leave his property economically idle, he has suffered a taking."⁵⁷ Here there are hundreds of refiners and chemical plants that have acquired land for expansion and a regulation that reduces

⁵⁶ 505 U.S. 1003 (1992).

⁵⁷ *Id.* at 1019.



the utility of that land will constitute a taking. In other instances, the buffer zone could impact lands that are not owned by the regulated facility.

In addition, requiring facilities to set aside a buffer zone would limit the development and expansion of existing facilities which will adversely impact the tax bases of local communities, an unnecessary intrusion into local government zoning ordinances. Requiring facilities to convert existing property into buffer or safety zones will have a negative impact on the local community's tax base as these zones will be unproductive if set up beyond existing fence lines and will limit development and expansion of existing facilities if set up inside the fence line.

Nor has the RFI provided an explanation or example of how EPA would establish a prescriptive measure such as buffer zone that would account for all of the thousands of different processes with different chemicals in differing topographies with different public receptors and with varying amounts of available land upon which to expand. Such a prescriptive measure would have arbitrary and harsh consequences and undermine the performance nature of process safety.

The RFI lists three examples of incidents (Bhopal, BP Texas City and West Fertilizer) as its justification for seeking additional information concerning stationary source siting. The three examples do not support or justify additional regulation. The Bhopal incident occurred in December 1984 which was almost a decade before the advent of PSM and the RMP regulations and the requirements for siting. The Texas City incident involved trailers and in response industry issued API 753 which addresses the placement of trailers to prevent a similar recurrence. Current regulations and RAGAGEP have already addressed these two incidents.



West Fertilizer is an example that on very rare occasions a particular owner or operator will not follow existing regulations and aggressive enforcement against that owner operator is the appropriate regulatory response.

In the RFI, EPA has asked whether it should “establish safety criteria for siting of occupancies inside the facility”. EPA’s jurisdiction is limited to releases that affect the environment and public health. This question improperly intrudes into areas for which OSHA has exclusive jurisdiction. Setting safety criteria for occupancy is at the heart of OSHA’s mandate.

EPA acknowledges the existence of several engineering guidance documents such as American Petroleum Institute (API) Recommended Practice 752, Management of Hazards Associated With Location of Process Plant Buildings, 3rd Edition, December 2009 and API Recommended Practice 753, Management of Hazards Associated with Location of Process Plant Portable Buildings, First Edition, June 2007. Industry guidance documents such as these assist industry in meeting the performance requirements of the RMP Regulations and no further regulation is needed or warranted in these particular areas.

XI. Incident Investigation and Accident History Requirements.

EPA is asking whether incident investigations should be expanded to require a root cause analysis for incidents, near misses and process upsets whether these analyses should be completed within a specific timeframe and what role the community should play in the investigation and in learning about the findings. EPA is also proposing a timeline for the



completion of an incident investigation. The proposal overlooks the fact that facilities and incidents differ in complexity making a one size fits all approach incorrect.

At the outset, it is unclear whether the Agency is using the term “root cause analysis” as a categorical term (like “process hazard analysis” as found in 40 C.F.R. §68.67) or as a more specific term (like the listed methodologies in subpart (b)). If the former, then such a proposal would be redundant to the requirements of 40 C.F.R. § 68.81(d)(4).⁵⁸ If the latter, then our members cannot support adopting such a narrow approach to determining the factors that contribute to an incident, particularly when investigating complex incidents that call for a more robust quantitative risk analysis.

The purpose of the requirements for investigating incidents is to mandate that owners and operators conduct effective investigations and determine the contributing factors for an incident. This proposal in the RFI to require all facilities for all process incidents to use the root cause methodology will undercut this purpose and will result in ineffective incident investigations. For the last two decades owners and operators, using different methodologies, have trained employees to conduct incident investigations and have continually improved the quality of those investigations. By mandating the single method in which an incident investigation must be performed, all of the experience working with other methods would be lost and investigators would be forced to learn a new method called “root cause analysis.” The root cause analysis is one of many effective tools by which owners and operators conduct incident investigations. Requiring the use of a single methodology is a one-size-fits-all approach to incident investigation

⁵⁸ Incident investigation. A report shall be prepared at the conclusion of the investigation which includes at a minimum: (4) The factors that contributed to the incident.



and the range and complexity of incidents are simply too diverse for such a limited methodology. In fact, it was recognition of the limitations of individual methodologies that led to the development of additional methodologies.

The magnitude and complexity of an incident determine the amount of time and the size of the team to conduct a proper investigation. A uniform rule for completing incident investigations will result in hastily performed investigations and prevent high quality effective investigations. For example, incident investigations of major incidents are frequently detailed and quite lengthy. They often involve testing of metals, equipment, pressure relief devices, electrical components and chemical residues. These tests often necessitate outside experts, the development of protocols for gathering the samples correctly and preserving them and appropriate documentation of the chain of custody on those samples. Following many of these incidents, the regulators limit access to the sites where the incident occurred, they demand to be present for the gathering of samples, to have a role in the development of the protocols and to have their own expert present for the tests to be conducted. Finally, it may take days or weeks before it is determined a process, vessel or tank can be safely entered. All of these steps involve a significant amount of time and are necessary to have an effective investigation.

The RFI proposes that near misses and process upsets need to be investigated but frequently, these terms are misapplied by regulators who lack familiarity with the particular process and the engineering controls designed to ensure the safety of the process. Investigations



of near misses are already required under 40 C.F.R. § 68.81(a).⁵⁹ Process upsets on the other hand may result in nothing more than slightly off-spec product with no accompanying risk of a “catastrophic release of a regulated substance”.

The current rule requires that an incident investigation team be comprised of persons with “appropriate knowledge and experience to thoroughly investigate and analyze the incident.” Team members are highly trained in very technical areas of science, engineering, process safety, operations, and other applicable specialized areas of expertise all of which is necessary to have effective investigation. Many investigations require the examination of confidential or proprietary information to which only certain employees have access. Other incident investigations involve an examination of the security features of a facility which by law need to be safe guarded. Given all of this, an effective incident investigation process needs to be a closed internal process for each owner/operator. Section 68.81(f) of the RMP Rule reflects that requiring that incident reports be reviewed with only affected personnel.

AFPM believes the existing regulations are sufficient to meet the performance aspect of the RMP regulations and no further regulatory guidance is needed with respect to incident investigations.

⁵⁹ “The owner or operator shall investigate each incident which resulted in, or could reasonably have resulted in a catastrophic release of a regulated substance.”



XII. Identification of the worst case scenario fails to address the most likely hazards and risks and therefore does little to improve the protection of human health and the environment.

EPA seeks information on whether to revise section 68.25(b) of the RMP regulation to better account for processes involving numerous small vessels stored together, such as on pallets, cylinder racks, and in groups. In addition, the Agency asks whether it should revise Sec. 68.25 to require the owner or operator of a regulated process to consider the potential for worst case release scenarios to involve adjacent facilities or other nearby facilities that are interconnected through pipelines.

Worst case scenarios are a regulatory construct in which an owner/operator is required to make a large range of assumptions such as the release occurs at ground level, in F atmospheric stability class, with the highest daily maximum temperature and that no active mitigation measures are considered. As a result, the worst case scenario presents an inaccurate representation of the potential consequences of a release. The RFI itself lacks a single example of a worst case scenario event occurring. Inaccurate representations of the worst case scenario do not further the goal of transparency or increase the community's awareness of the realistic concerns of an adjacent facility. Moreover, they do not improve the protection of human life or the environment. As EPA acknowledged in the Preamble to the Final Rule, "the worst-case scenario is designed principally to support a dialogue between the source and the community on



release prevention, and not to serve as the sole or primary basis for local emergency planning.”⁶⁰

The unrealistic consequences associated with worst case scenarios interfere with labor relations, harm community relationships, complicate facility permitting modifications, and fuel legal challenges to facility expansions. Given this, the current worst cases are more than adequate to initiate a dialogue with the community.

This proposal also presents a significant set of barriers to effective consideration of the cascading effects of interconnected facilities. Adjacent facilities may be competitors and to have effective discussions over worst case scenarios, a wide range of information needs to be shared. This will often include process chemistry, engineering controls, proprietary information, business confidential information and information about the security systems at the facilities covered by the CFATS regulations. Such information cannot be shared with competitors. Moreover, this proposal expands the definition of worst case scenario to assume multiple failure scenarios occurring simultaneously at two facilities. The likelihood of such concurrent failure scenarios along with all of the other assumptions incidental to a worst case scenario is extremely remote and will not produce any useful information.

XIII. What is the purpose of the Public Disclosure of Information already available to the public?

EPA is seeking public comment on additional steps the Agency could take to improve regulatory compliance through increased information disclosure to the public and local authorities. As most of this information is already available to the public as required by section

⁶⁰ 61 Fed. Reg. 31683.



112(r)(7)(B)(iii),⁶¹ AFPM does not believe regulatory compliance will be improved via these proposed changes. Rather EPA should focus its efforts on the proper development and implementation of Local Emergency Planning Committees' (LEPCs) plans.

The Agency also asks whether disclosing compliance audits, PHA or incident investigation reports would improve emergency planning and response. In the Preamble to the Final Rule, EPA answered this question.

[S]everal commenters made the general argument that right-to-know provisions should be strengthened and that the public should be given full access to all risk management program information including PHAs and actual operating procedures. . . .

EPA agrees that an informed public is a key element of sound chemical emergency prevention, preparedness, and response. However, EPA also believes that it is essential for the public to focus on the information essential at the local level for prevention, preparedness, and response and has decided to maintain its proposed requirement that the RMP provide certain information about the risk management programs at a source. . . .

EPA believes it would be impractical to require sources to share all documentation used for the safe operation of the processes at a source. Not only is much of this information likely to be confidential, but *significant technical expertise and time are necessary to extract, understand, and to make meaningful judgments about the adequacy of the information.*⁶² (emphasis added)

PHAs can go on for hundreds of pages with guide words like “more flow” or “less flow”, “high temperature” or “low temperature” and providing this information as it is presented in a

⁶¹ “Plans prepared pursuant to this subparagraph shall also be submitted to the Chemical Safety and Hazard Investigation Board, to the State in which the stationary source is located, and to any local agency or entity having responsibility for planning for or responding to accidental releases which may occur at such source, and shall be available to the public under section 7414(c) of this title.”

⁶² 61 Fed. Reg. at 31694.



PHA report would be of no use to emergency responders and therefore have no impact on the emergency response itself. Further, public disclosure may create a roadmap for terrorists and trial lawyers. That is why the 1999 Chemical Safety Information, Site Security and Fuels Regulatory Relief Act limited public access to the information contained in RMP to regional reading rooms.

For information that the public can make use of, most LEPCs already have WebPages developed for sharing appropriate information with the community. And chemical specific information is also readily available through websites such as Wikipedia or online Material Safety Data Sheets.

XIV. The use of AEGLs simply broadens the purported at risk surrounding community.

EPA is now considering the use of Acute Exposure Guideline Level (AEGLs) to recalculate RMP threshold quantities and toxic endpoints. EPA alleges the use of AEGLs to recalculate RMP reporting thresholds would better reflect the potential for adverse effects of an accidental release upon individuals in a community because AEGLs take into account the potential exposure of more sensitive individuals, the potential for longer periods of exposure, and the potential for serious but reversible injuries. In doing so, EPA will also change the toxic endpoints for offsite consequence analysis. While the proposed change is consistent with EPA's stated intent during the initial rulemaking, two decades have since passed and no worst case scenario has ever occurred confirming that there is no need to replace the current endpoint analysis with one that would create even larger circles of potential impact.



EPA has not presented sufficient data or evidence to show that adding the new elements and activities to the RMP rule as specified in the RFI are necessary to improve safety performance. The existing RMP Prevention Program elements are effective in driving industry performance, and should be supported by proper site implementation and competent enforcement.

In fact, adopting this change would require a huge amount of work with no measurable benefit particularly in light of a risk-based analysis. Back during the initial RMP roll out, owner/operators prepared worst case scenarios and offsite consequence analysis. These results were also shared with the community. The most common experience that our members had was it took several days or weeks to prepare the presentation, overheads and handouts for the community and then few if any people from the community showed up to hear the presentations. Companies invested in brochures that explained complex information in lay terms and polished their presentations to convey the required information in a manner understandable to the general public. It resulted in a huge amount of work with no tangible improvement with process safety or in community awareness. AFPM cannot support this proposed change without a further showing by the Agency as to the expected benefits.

XV. EPA acknowledges that completely replacing the current RMP regulation (and PSM standard) with a safety case approach would require significant changes to the existing regulatory regime for chemical process safety in the United States. EPA should also acknowledge that there is no evidence to support the premise that this change would improve the protection of human health and the environment.

The “safety case” regulatory model is a framework for regulating industry where owners or operators of industrial facilities must demonstrate to the regulatory agency that the risks have



been reduced to “as low as reasonably practicable” (ALARP). EPA acknowledges that completely replacing the current RMP regulation (and PSM standard) with a safety case approach would require significant changes to the existing regulatory regime for chemical process safety in the United States. Nevertheless, EPA is requesting public comment on whether EPA and OSHA should consider these actions.

A successful safety case regime requires highly competent and well resourced, independent regulators. The safety case is built on the assumption that the regulator has a large staff of highly competent subject matter experts. For the type of detailed engineering review which the safety case requires, EPA would need to hire thousands of chemical, mechanical, electrical and instrumentation engineers and have Congress adjust the Federal pay scale to attract and retain highly competent experts so that they could provide the engineering reviews in a prompt manner. Given the issues over the Federal Budget and the recent controversies over the performances of large agencies with alleged expertise such as the VA Hospital Administration and the CDC, there is no realistic way that such a change could occur.

We do not support changing to a safety case as there are no significant conceptual advantages compared to the existing framework, there is no evidence that the safety case approach actually delivers better process safety performance, and the effort and resource required by both the regulator and the industry in changing to a different model will detract from delivery within the current system potentially leading to more incidents rather than less.

Much of the discussion around the safety case has focused on two perceived advantages: (1) that it is performance based and the current PSM approach is not, and (2) the safety regulator



reviews the case and has the opportunity to accept or reject it, with the implication that the regulator will be able to judge whether risks are appropriately managed.

There is a misconception that the current PSM approach to process safety is largely activity-based and that the safety case approach is therefore superior because it is a performance based standard, requiring risks to be reduced to ‘as low as reasonably practicable’. On closer inspection, it can be seen that companies under a PSM framework actually manage risk against a performance target in a very similar way. Whether in a safety case or PSM regulated environment, the analysis of major risk scenarios is done in the HAZOP or PHA studies. In these studies, the risk from a scenario is compared against a corporate risk criteria. The safeguards are then evaluated to see whether the risk is adequately mitigated. If not, additional controls are added until the risk is considered to be acceptable. The risk criteria, regardless of the regulatory approach, is the definition of what the company considers to be ‘as low as reasonably practicable’. In the evaluation of major risk scenarios, therefore, the safety case and PSM approaches are essentially the same—requiring the addition of risk controls until a performance based risk target is met. It should be noted that the HAZOP/PHA process is really the only aspect of managing process safety that lends itself to such a risk based, performance driven approach. Almost all of the other elements of managing process safety (choice of equipment codes and standards, equipment inspection and repair, control of hot work, pre-start up safety reviews, operating training, safe work practices, etc.) are much more activity driven or based on prescriptive standards. Again, these non-risk assessed aspects are treated very similarly by operating companies whether they are regulated under a safety case or under PSM. The



functional differences between the two regulatory approaches are therefore actually quite small (contrary to what some of the recent debate would suggest.)

The second perceived advantage of a safety case is that the regulator can review the case and accept or reject it. The implication is that by reviewing the case the regulator will be able to spot any gaps or deficiencies and therefore provide additional oversight or protection. The reality is that if a company were PSM compliant, their safety case would be acceptable—a written safety case is nothing more than a summary of the whole process safety program. Incidents occur when there is a difference between what a company thinks it does and how it thinks it manages risk and what actually happens in a facility. A written safety case provides no additional protection in addressing differences between what the company is trying to achieve (as documented in the safety case) and what they actually achieve.

In summary, while there are arguments made that a safety case should be more effective due to the performance based approach and the additional oversight, the reality is that the use of risk criteria in HAZOP/PHA activities is functionally equivalent, and that there is no real additional oversight—the regulator can't see anything more from a safety case than from a PSM compliance audit.

Even if the conceptual advantages of the safety case approach were stronger, there is scant evidence or even broad agreement that the approach is actually more effective. In fact there is some evidence that the U.S. system is safer and more effective at preventing releases into the environment than the British safety case system. In an article titled “Safety Cases: Lessons from the North Sea”, the author discussed an audit of a several facilities operating under the



safety case framework that found remarkable weakness noting that system works poorly with huge quality issues. The author stated “that systems critical to the survival of the workforce during major accidents were in terrible shape” and that “[s]uch systems failed to some degree in sixty-four percent of such tests, revealing a ‘picture of inadequate testing and very poor reliability’ for a critical component of emergency response.” The author went on to report that there was an “overreliance on cookie-cutter prototypes of critical documentation” concluding “[t]his kind of reaction is a strong indicator of a weak and ineffective regulatory regime”. In addition, the UK Buncefield incident in 2005, referred to as the ‘largest fire in peacetime Europe’, is a striking example of a major process safety and environmental event in a facility regulated under a safety case system. This incident involved the overfill of a fuel storage tank with a subsequent fire and vapor cloud explosion which ignited material in other nearby tanks—a relatively straightforward and foreseeable risk scenario.

It is precisely this lack of evidence that caused NIOSH to reverse its position on the safety case and withdraw its original comments submitted to OSHA in response to the PSM RFI. Paul Schulte, director of NIOSH’s Education and Information Division, as reported by the Charleston Gazette,⁶³ said that NIOSH Director Dr. John Howard “was at a number of scientific conferences where he heard from a variety of stakeholders that they had concerns about what we had stated in our March comments.” “The director called for a re-review of what we had said,” Schulte said. “Upon looking at it further, while there are advocates for those positions, we didn’t

⁶³ NIOSH mysteriously backs off support for ‘safety case’ approach, *available at* <http://www.wvgazette.com/article/20140614/GZ01/140619566>.



see that there was actually a scientific basis that attested they were more effective than what was currently being done. We didn't want to be in a position of recommending something to OSHA that didn't have a good evidentiary basis." Similarly, in their report to the President, the EO

Working Group noted:

Overwhelmingly, nearly all comments received regarding the adoption of the safety case regulatory model were negative (-0064, -0069, -0075, -0081, -0085, -0086). One commenter stated:

"[Our organization] wholly opposes changing PSM or RMP to a safety case regulatory regime. The safety case framework would be a drastic overhaul of the current system. Against this, no real data establishes its value in the context of process safety for the chemical industry. [Our organization] believes that shifting responsibility to approve safety decisions from employers to inspectors, who inevitably will be less familiar with the jobsites, would detract from worker safety,"⁶⁴

Requiring the operators to write and the regulators to subsequently evaluate the safety case reports will be a major resource requirement for both industry and the regulator. While these resources are tied up 're-calibrating' to the new approach, it is likely that focus on process safety basics will be reduced and performance will suffer as a result.

Given that 1) the conceptual advantages of the safety case are minimal if there at all; 2) that there is no evidence that the approach is actually more effective at reducing serious incidents; 3) that changing the approach may result in additional incidents during the transition and learning curve time-frame; 4) and that there will be a significant cost to both the industry and the regulator, we do not recommend that a safety case approach be legislated or implemented.

⁶⁴ Executive Order 13650 Actions to Improve Chemical Facility Safety and Security – A Shared Commitment, Report for the President, May 2014 *available at* <https://www.osha.gov/chemicalexecutiveorder/>.



CONCLUSION

AFPM thanks the Agency for reviewing our members' comments on EPA's Request for Information regarding potential revisions to the RMP Rule. Its members would also reiterate their invitation to meet and work together on resolving any perceived safety issues with regard to the RMP Rule. Both groups have a long history of working together to improve employee safety and health; AFPM believes that tradition can and should continue here. As the members' position currently stands, though, after a careful survey of and analysis by our members, AFPM must ask EPA to withdraw its proposal to amend the RMP Rule. The RFI simply fails to offer substantial evidence that any change is warranted, that any of the proposed changes would actually improve process safety and that site security would be maintained.

Thank you again and please contact me if you have any questions.

Sincerely,

Lara A. Swett
AFPM, *Director, Safety Programs*

cc: Docket ID No. EPA-HQ-OEM-2014-0328