Comments of American Fuel & Petrochemical Manufacturers
on the Occupational Safety and Health Administration’s
Small Entity Representative Background Documents for the
Process Safety Management of Highly Hazardous Chemicals Standard

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I. Introduction

The American Fuel & Petrochemical Manufacturers ("AFPM") respectfully submits these comments to the U.S. Department of Labor, Occupational Safety and Health Administration ("OSHA" or "the Agency") regarding revisions OSHA is considering to the Process Safety Management of Highly Hazardous Chemicals Standard ("PSM" or "the Standard"), 29 C.F.R. Section 1910.119. AFPM appreciates the opportunity to provide comments at this stage of the rulemaking process, and is hopeful that the information and insight we are providing will assist OSHA, the Small Business Administration ("SBA"), and the Office of Information and Regulatory Analysis ("OIRA") as they consider whether and how the PSM Standard should be revised.

AFPM is a trade association with members including virtually all U.S. refiners and petrochemical manufacturers. Our members have processes subject to OSHA’s PSM Standard.

Process safety management is integral to our members’ operations. Since the promulgation of the PSM Standard in 1992, AFPM members have developed and refined process safety management programs to not only comply with the PSM Standard, but to use their expertise and understanding of their complex operations to implement best practices and facility procedures and programs that ensure the safety of their employees. Our members’ programs have had a demonstrably significant impact on safety, and we hope OSHA will give serious consideration to learning from our membership the best and safest manner in which to regulate process safety.

II. Overarching Issues and Fundamental Flaws of the PSM Revisions Under Consideration

As an initial matter, AFPM wishes to make clear its view that the current PSM Standard is an effective regulatory program that has helped the industry drive significant improvement in safety since its promulgation in 1992. The current PSM Standard establishes a thoughtful and comprehensive set of performance goals that enables regulated facilitates to capitalize on their
internal and industry recognized expertise and best practices to identify, address, and manage a complex set of interrelated risks and hazards.

There are several overarching concerns that run through virtually all of the revisions to the PSM Standard that OSHA presents in its PSM SBREFA Issues Document and the accompanying Process Safety Management SER Background Document (hereinafter collectively referenced as “OSHA Background Documents”). We address each of the specific revisions that OSHA is considering separately herein; however, most fundamentally, the underlying theme of OSHA’s revisions seems to undermine the original intent, and likely the historical effectiveness, of the PSM Standard. It is AFPM’s view that adoption of these revisions will fundamentally change the Standard in a manner that will not only fail to significantly reduce operational risks at covered facilities in our industry, but may actually undercut the safety benefits of the current PSM Standard and our members’ existing programs; and will add significant, unnecessary and unjustified compliance costs to an already costly program.

Accordingly, we urge OSHA to either halt the PSM rulemaking entirely because it has failed to show that the proposed changes would significantly improve process safety management, or, if the Agency persists in moving forward, it ought to first, and at a minimum, (1) further study its contemplated changes to determine whether any additional data or evidence exists to support the notion that the changes to be proposed will significantly improve process safety management (as it has provided insufficient support thus far); and (2) carefully review stakeholders’ input provided through the SBREFA process to ensure that any formal proposed rule is fashioned in a manner that takes into account the serious concerns AFPM and others raise in this important initial phase of the rulemaking process. In addition, and as further explained below, we urge increased coordination with EPA to ensure consistency in both rulemakings.
A. Undermining the Performance Nature of PSM

The proposed revisions to the PSM Standard OSHA is considering fundamentally undermine the performance nature of PSM, which has been crucial to industry’s implementation of the Standard and the success of the regulatory program. OSHA purposely established PSM as a performance-oriented standard to allow the regulated community flexibility in determining how to meet the performance objectives set by the Agency based on what works most effectively for each unique facility and process.\(^1\) Across the board, the changes OSHA is considering work to remove that essential discretion, and replace it with a series of “one-size-fits-all” specification criteria.

OSHA’s “command and control” approach, such as requiring a specific type of incident investigation, directing the timing and nature of emergency drills, or mandating blanket evaluation of updates to voluntary standards without consideration given to site specific requirements and circumstances, creates fundamental implementation problems as well as the undesirable situation where safety and engineering resources must be diverted toward items of little to no safety value. PSM program elements are highly complex, are applied to a myriad of unique facility configurations, and necessarily involve considerations beyond just the technology or process itself. OSHA does not have the field experience, expertise, or judgment to effectively substitute its judgment for the employers on PSM implementation issues. Yet that is exactly what the approach underscored by the proposals in the Background Documents would accomplish.

Taking the PSM Standard in that direction is especially concerning given that OSHA has provided no evidence in its Background Documents or from feedback from the PSM-focused National Emphasis Programs (“NEPs”) that facilities in our industry are implementing the regulatory objectives of the PSM Standard in a deficient fashion. Even where the Agency has

\(^1\) See Process Safety Management of Highly Hazardous Chemicals; Explosives and Blasting Agents, Final Rule, 57 FR 6356 (Feb. 24, 1992).
identified sporadic non-compliance, it is unclear that the non-compliance would have been avoided by a more prescriptive regulatory standard. Accordingly, OSHA has identified no valid or legitimate basis for fundamentally restructuring the PSM Standard to a specification standard, severely constricting flexibility in achieving compliance.

Even more concerning from a safety standpoint, changes that limit the performance nature of the Standard inevitably will hamper facilities’ ability to develop best practices that go well beyond the baseline PSM Standard requirements. The flexibility of the current Standard provides the regulated community the ability to expand and build on the Standard’s requirements. For instance, as more fully addressed below, mandating third-party audits will almost inevitably constrict optimal implementation of the current Standard’s auditing requirement. Requiring a root-cause analysis form of incident investigation may steer employers from other causal based investigation protocols that more effectively identify contributing factors. Similarly, OSHA’s putative mandate of a safer alternatives analysis may well replace the better practice of design phase safer alternatives analysis currently conducted by industry.

In sum, OSHA originally issued a fundamentally performance-oriented PSM Standard for a reason – to provide the highly expert regulated community the flexibility to establish compliant regulatory programs that can be built to fit extremely unique, intricate and complex technical operations. The description provided of OSHA’s contemplated revisions to the PSM Standard in the Background Documents seems fundamentally inconsistent with and contrary to the Agency’s initial and correct determination of the proper nature of a PSM regulatory framework.

B. No Compelling Safety Need to Amend the PSM Standard

Regardless of whether OSHA has the expertise or resources to set specification requirements in the PSM context, this movement away from a performance-based standard appears
to be a specification-based solution to a non-existent problem. OSHA has offered no evidence of any systemic problems with the current PSM standard. The Standard is effective when properly implemented. Safety data from BLS, EPA and AFPM support and confirm this based on the type of recordkeeping required in the OSHA recordkeeping rule.

The occupational and process safety performance of petroleum refining has significantly improved over the past twenty years, and is among the very best of any type of manufacturing. AFPM compiles annual Occupational Injury & Illness (“I&I”) and Process Safety Performance statistics. The I&I reports include statistics on injuries, illnesses and fatalities, and cover on-site contractors as well as site employees. AFPM has been collecting this data since 1976, and consequently, has a robust database showing clear trends in safety performance that can be tied to implementation of the PSM Standard in the early 1990s. See Figure 1.

AFPM I&I statistics also include annual rates for worker days away or lost days due to job transfers or restrictions caused by an incident, as well as fatalities. Like the overall incident rates, each of these metrics have fallen consistently and significantly over the last two decades, and continue to do so overall for both refineries and petrochemical plants. See Figures 1 and 2.
Bureau of Labor Statistics (“BLS”) data corroborate AFPM’s data. BLS data show a consistent reduction of recordable incidents in the refining industry since the PSM Standard was implemented, with the most recent BLS data (2014) showing recordable incident rates for the petrochemical manufacturing and petroleum refining industries of .5 and .6 (incidents per 100 employees) respectively, seven times lower than the overall manufacturing sector rate of 3.9.²

Importantly, and specific to OSHA’s proposed revisions to the PSM Standard, the petroleum refining industries have experienced lower overall and generally declining rates of all PSM incidents. We analyzed the accident history data for the last ten years maintained by the U.S. Environmental Protection Agency (“EPA”) under the Risk Management Plan (“RMP”) regulation. Figure 3 displays the annual number of PSM/RMP incidents, as well as the three-year rolling average of such incidents, for the petrochemical and refining industries. The downward trend is clear, with the number of PSM/RMP incidents dropping by more than fifty percent since 2004.

² See Bureau of Labor Statistics, Injuries, Illnesses, and Fatalities (2014), http://www.bls.gov/iif/. A process safety incident is the result of a fire, explosion or release of a chemical within a facility. Although the BLS data does not include a list of non-injurious process incidents, it does capture the number of people on- and off-site who were injured as a result of a process safety incident. Over the last 30 years, the number of injuries in our industry has declined steeply – an indicator of the effectiveness of the PSM Standard and our Industry’s commitment to safety.
Accordingly, industry and government data show that the current PSM regulatory scheme is effective, and that operators in petroleum refining and petrochemical manufacturing are using the current PSM Standard, and the programs implemented consistent with the Standard, to continually and successfully improve process safety at our facilities.

C. Process Safety Fallacy of the West Texas Incident and EO 13650

OSHA’s PSM rulemaking is a direct response to Executive Order (“EO”) 13650, which was prompted by the explosion at the West Texas fertilizer warehouse. At the time of the EO, the U.S. Chemical Safety and Hazard Investigation Board (“CSB”), OSHA, EPA and other agencies presumed that the West Texas incident resulted from process safety failures related to reactive chemicals stored at the facility, and in response, the EO called on OSHA, EPA and others to determine how PSM and RMP could be expanded or enhanced to address these risks. Based on further understanding of this incident since issuance of the EO, however, it seems clear that the

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premise for the President’s directive to revise PSM (and RMP) was erroneous and the substantive focus of OSHA’s and EPA’s rulemakings are faulty.

First, the government’s investigation by the Bureau of Alcohol, Tobacco, Firearms and Explosives now suggests that a deliberate act of arson was the leading cause of the West Texas explosion, not process safety deficiencies. Additionally, the investigation has made clear that the best practices and exemplary level of PSM programs implemented in the petroleum refining and petrochemical industries had not been adopted by West Texas Fertilizer. Regardless of the above, and somewhat ironically, OSHA’s contemplated changes to the PSM Standard, like EPA’s proposed revision to RMP, barely address factors relevant to even the CSB’s initial understanding of the incident, or the goals set forth in the EO 13560. Accordingly, reliance on this incident to undertake wholesale revisions to the PSM Standard is completely inappropriate and unwarranted.

Moreover, recognizing the disconnect between the impetus for this rulemaking and the contemplated revisions OSHA is considering, at minimum, sheds an entirely new light on the immense costs that industry would incur to come into compliance with rule changes of the magnitude being contemplated. Requiring the petroleum refining and petrochemical industries to bear such costs with no valid basis for the revisions is not warranted.

Put simply, the West Fertilizer incident does not provide a sound basis to fundamentally restructure the PSM regulatory framework. If the Administration moves forward on this basis, it should reconsider application of any revisions to the petroleum refining industry where the PSM Standard is working extremely effectively as currently drafted and structured.

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5 One of the questions raised after the incident was whether ammonium nitrate or reactives stored in the West warehouse should have been regulated under PSM and RMP. Although OSHA’s Background Documents do address that one issue, the proposal goes well beyond those defined by the EO without justification.
D. OSHA’s and EPA’s Diverging Requirements

Another fundamental concern common to many of the changes OSHA is considering to the PSM Standard, as they relate to EPA’s proposed RMP revisions, is the threat to harmonization and alignment of the two programs that Congress originally intended. Harmonization is essential to the practical functionality of implementing both PSM and RMP at one facility, as well as to the cost of doing so. For refineries and major chemical manufacturers, the RMP standard was intended to drive conduct nearly identical to that required by PSM. Thus, PSM-covered facilities have been able to satisfy their RMP program requirements by implementing a compliant PSM program, and vice versa, which is critical to cost savings and proper functionality. However, the changes now being proposed by the agencies are not in alignment.

Several changes OSHA is considering are not included in or differ from EPA’s RMP proposal, and there are also several changes EPA proposed to the RMP rule for which there is no corollary change in OSHA’s PSM Background Documents. For instance, EPA proposes to expand the scope of the RMP compliance audit to require review of each RMP element, in every covered process, every three years, whereas OSHA has long approved representative unit/process sampling when selecting units to review during the three-year PSM compliance audit. Permitting this divergence in the EPA and OSHA regulations will require employers to, among other obligations, determine how to feasibly conduct compliance audits that comply with differing

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6 Accidental Release Prevention Requirements, Final Rule, 61 FR 31671, 31711 (June 20, 1996) (discussing EPA’s “… desire that sources implement one prevention program that protects the safety and health of workers, the public and the environment and should have no effect on sources already complying with the OSHA PSM rule.”)

7 Accident Prevention Release Requirements: Risk Management Programs Under the Clean Air Act; 81 Fed. Reg. 13,637, 13,706 (proposed language for 40 CFR § 68.79(a)).

8 OSHA has embraced the 119(o) compliance audit methodology of using a “sample size sufficient to give a degree of confidence that the audit reflects” the employer’s level of compliance. See Appendix C, 29 CFR 1910.119(o); see also Petroleum Refinery Process Safety Management National Emphasis Program, CPL 03-00-004 (June 7, 2007). Moreover, OSHA has endorsed the Center for Chemical Process Safety as a source for information on PSM compliance, which guidance also calls for sampling representative units in compliance audits. See Appendix D, 29 CFR 1910.119(o); see also Guidelines for Auditing Process Safety Management Systems, CCPS (March 2011).
requirements of the two regulations. We are concerned the direction of EPA’s and OSHA’s rulemakings will necessarily cause numerous compliance inconsistencies like this, which will force employers to follow two different paths. In addition to the practical implementation problems, this could amount to severe economic hurdles many businesses would struggle to overcome, or would divert limited resources away from safety initiatives and projects that would drive real process safety improvement.

This is not to say that OSHA should align its changes with EPA’s proposal. While the outcome of both rulemaking efforts should be that compliance with PSM continues to equate to compliance with RMP, and vice versa, the fact that EPA is ahead of OSHA in the rulemaking schedule is no reason for OSHA to defer to or align any proposal it develops with EPA’s proposal. In fact, to the contrary, the PSM and RMP regulations are, fundamentally, safety regulations, over which OSHA has primacy in understanding and expertise between the two agencies.\(^9\) We, therefore, encourage OSHA to reassert its primary authority over process safety regulation, and coordinate with EPA to ensure that any revisions to RMP are consistent with the historically successful PSM Standard. We also reiterate that neither OSHA nor EPA should proceed with revising the PSM and RMP standards because both have failed to provide sufficient evidence that the proposals would generate significant improvement in process safety.

### III. Comments on the Specific Revisions to PSM Under Consideration

#### A. Safer Technology and Alternatives

1. Vague and Unenforceable Proposal

OSHA is considering a change to the PSM standard to require employers to perform some type of a “hierarchy of controls” analysis that identifies potentially safer alternative technologies,

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equipment, chemicals and/or work practices to achieve some employer-specified level of risk. It appears OSHA is not clear about what it is considering, however, as the Background Documents repeatedly interchange terminology that is not interchangeable. Specifically, at times, OSHA speaks of hierarchy of controls, but at other times OSHA refers to safer technologies and alternatives analysis. These are two distinct and significantly different engineering principles. The Background Documents also are silent on a multitude of critical questions, such as: whether an analysis must be done in conjunction with a Process Hazard Analysis (“PHA”); what specifically the PHA team should measure; whether the team must evaluate reduction in particular hazards or in overall risk; whether that reduction must be measured quantitatively or qualitatively, etc.

Even at this relatively early stage in the rulemaking, this proposal is too vague to provide informed comment. We encourage OSHA to provide additional clarity, and then resubmit a more concrete proposal for small business review before formally proposing any change to the PSM Standard along these lines. Reconsideration at the SBREFA level is critical because, in addition to not having sufficient understanding of precisely what is being contemplated by OSHA, the compliance costs associated with a safer technologies analysis will vary wildly based on the specific details of a proposal in this area, to the point where, for small businesses, the cost of compliance could be the difference between retaining a profit margin and going out of business.

Having said this, AFPM members have vast experience in analyzing technologies and processes from a safety perspective and conducting effective PHAs. Based on that experience and expertise, AFPM offers the following comments as OSHA considers how to move forward.

2. **Blanket, Continuous Safer Alternatives Analyses are Infeasible**

A blanket requirement to perform continuous safer alternatives analyses over the life of a process oversimplifies the complexity of the decision-making process and safety and operational
review that is performed, and additionally, would almost certainly be infeasible for OSHA to enforce. For an operator to identify a potentially safer technology, it must assess the myriad impacts of implementing that alternative technology and determine how this would fit in the overall functioning and safe operation of the facility. A feasibility analysis also must be conducted on any such safer technology.

OSHA’s Background Documents do not sufficiently address the feasibility analysis or attempt to define feasibility. However, such an analysis must be performed in assessing safer technologies and alternatives because, depending on the actual change being analyzed, it may be technologically, economically or practically infeasible to implement. Moreover, a feasibility analysis would need to be made in the context of an overarching operational safety analysis. Understanding the costs of any particular technology alternative would be critical to conducting a feasibility analysis (which is different from and in addition to a safer technology and alternatives analysis). Therefore, OSHA’s proposal must also consider the expense of such an analysis.

For small businesses particularly, OSHA needs to ensure that resources are used in a manner that has the most significant impact on overall safety. Thus, a requirement to continuously reevaluate technology, and follow every rabbit hole to evaluate and possibly implement every “safer alternative” for all PSM covered processes in the refining industry would allocate resources in a manner that does not promote overall safety.

Regardless, enforcement of a requirement to implement “safer alternatives” is not feasible for OSHA. Safer alternative analyses are highly complex, resource intensive, heavily dependent on the operating phase of the process, and very process and technology specific. OSHA simply does not have sufficient information, expertise, or resources to conduct the level and type of analysis necessary to evaluate a facility’s safer alternatives determinations. If OSHA adopts a
safer alternatives requirement, it will require Agency compliance officers to evaluate employers’
decisions without knowledge of unique facility operating constraints, customer demand, supply
chain logistics, global competition and numerous other factors that go into these types of decisions.

The relevant risk reduction of a particular technology or alternative is very dependent on
the particular circumstances of the process. A technology that lowers risk to a permissible level
at one facility, may not have the same impact at another. An alternative chemical that lowers one
type of risk, may increase another hazard (e.g., substituting a less combustible material for one
that is more toxic in a release). Thus, the proposal would necessitate OSHA becoming involved
in measuring, evaluating, and determining the starting point for risk level, as well as the unique
impact on overall risk an alternative technology would have, at each facility. Moreover, a sound
analysis must consider not only the level of risk of an individual process at issue, but holistically,
the impact on risk created for the entire facility, and in some cases beyond the facility’s boundaries.
For OSHA’s judgment to be sound, it would have to consider all the relevant circumstances and
risk considerations that employers must consider, and would have to make those judgments with
only a fraction of the knowledge employers have regarding the relevant processes.

Furthermore, the Background Documents do not disclose the scope of any potential
enforcement remedy. It is unclear whether OSHA is considering requiring operators to simply
evaluate safer alternatives while leaving them with discretion to implement other still effective
alternatives, or whether the Agency contemplates requiring implementation of any safer alternative
identified. If the latter, the power and responsibility of the regulatory agency is immense, and the
enforcement remedy uncertain for those processes long past their design phase when an
enforcement inspection occurs. This quandary demonstrates how ill-suited the enforcement
framework is to this type of analysis.
3. Safer Alternatives Analysis is Only Appropriate in Design Phase

As stated above, the Background Documents provided by OSHA do not provide clarity on when OSHA would expect evaluation and implementation of safer alternatives. According to a recognized and accepted publication by the Center for Chemical Process Safety (“CCPS”), *Inherently Safer Chemical Processes: A Life Cycle Approach*, implementation of safer alternatives will have the greatest impact on risk reduction when implemented during the design phase of a new process.\(^{10}\) This is because, to be effective, safer alternatives analyses do not take a particular process as a given, but rather, ask *which process design* best minimizes hazards *over its life-cycle*.\(^ {11}\) Properly done, safety alternatives analyses extend beyond material processing to the transportation, use, storage, and ultimate disposal of hazardous materials.\(^ {12}\)

As a process progresses further into the lifecycle, identifying and implementing impactful safer alternatives becomes increasingly more difficult, if not infeasible, because a safer alternatives analysis for an existing process simply cannot address many of the most important aspects of such an analysis. The facility can no longer choose among different process designs – it is locked into the life-cycle of the current process.

Safer alternatives analyses are already routinely conducted by AFPM members during the design phase of new processes, or other projects, process changes, or technology or equipment changes. However, this analysis is inherently complex and the employer must not only identify and evaluate composite risk, but also balance that risk against the risks identified from the myriad of alternatives considered. The sophisticated analysis conducted in this industry is not one that


\(^{12}\) *See* id.
fits within a regulatory framework; is difficult to record. The sophisticated analysis conducted in this industry is not one that fits within a regulatory framework; is difficult to record; and, if improperly done (in response to a specification regulation), could significantly compromise the PHA process, undermining its intended purpose.

Furthermore, technology does not advance on a prescribed regulatory schedule. To mandate a safer alternatives analysis under a 5-year PHA schedule is not practical, and is an inefficient use of time and resources.

Accordingly, if OSHA incorporates a safer alternatives analysis requirement for the PSM Standard, which AFPM believes it should not, the analysis should be required only at the design phase of a new process or facility. Regardless, we encourage OSHA to consider these comments and abandon or resubmit more detailed plans in this area for consideration by small business interests before proceeding to the proposed rule stage.

4. OSHA’s Cost Estimate Significantly Overstates the Potential Safety Benefits

OSHA significantly misses the mark in evaluating the costs of implementing a safer alternatives analysis requirement. Some obvious cost factors are excluded. For instance, OSHA does not account for the additional staffing needed to conduct a full analysis of safer technology and alternatives. According to a sampling of facilities in the refining and petrochemical industries that AFPM originally analyzed for its comments in response to EPA’s Notice of Proposed Rulemaking for revisions to its RMP Standard, the cost to assess safer technologies would be approximately $14,000 for a simple process, and $75,000 for a complex process. Thus, based on AFPM’s evaluation, a small facility with 2.5 simple processes would be required to spend approximately $35,000 per year (if this is an annual requirement) or per PHA cycle (if the requirement is tied to the five-year PHA revalidation cycle). See Cost Table below. Such costs
are highly burdensome, and unwarranted in light of the fact that OSHA has provided no evidence that these reviews would enhance safety. The highest cost OSHA predicts that a small petroleum manufacturing facility would incur to meet this obligation is $4,023, well below even the annual breakdown for a five-year revalidation cycle at a small refinery with only 2.5 simple processes.

<table>
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<th>Range of Costs per Process</th>
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<th>Multiplier for Annual Costs (PHA Every 5 Years)</th>
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The safety benefits of a regulatory requirement mandating safer alternatives analyses is unclear. According to CCPS’s analyses of the Contra Costa County and New Jersey Inherently Safety Technologies programs, “it is difficult, if not impossible, to evaluate the contribution these requirements have made to safety and security.”13 This is why the SBA panel requested additional evidence on this element of EPA’s RMP proposal.14 We request the same of OSHA here.

OSHA in fact provides no evidence supporting the need to mandate a safer alternatives analysis beyond a statement in the Background Documents that a “number of stakeholders have

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13 See Inherently Safer Chemical Processes, supra, at 245.
advocated for OSHA to require the implementation of safer technology and alternatives.” To mandate such a costly and complex analysis into the regulatory framework of the PSM Standard without evidence of a significant gap in the program causing safety failures is unwarranted.

In sum, AFPM believes a safer alternatives analysis requirement is ill-suited for the PSM regulatory framework and should not be included in any proposed revision to the Standard. If OSHA insists on proposing such a revision, it must first develop a specific proposal as to precisely what will be required and when (e.g., requiring the analysis to be conducted only at the design phase of a project or when major changes are made to a process), and determine a realistic approach to enforcement. The Agency also must develop realistic cost estimates for its proposal in order to allow for a meaningful comment on its cost/benefit analysis.

B. Third Party Compliance Audits

OSHA is considering a revision to the Section 1910.119(o) three-year PSM compliance audit requirement, to mandate that these audits be facilitated by or conducted exclusively by third-party auditors. Although AFPM supports the existing requirement to perform regular compliance audits to evaluate management systems, mandating that this review be conducted by a third party is not only unnecessary, but could negatively impact process safety.

Our industry currently uses a combination of internal, second-party and third-party auditors to conduct the most effective and impactful audits. Having the flexibility to use either third parties, former employees, employees from sister facilities, or internal auditors – or some combination thereof – is vital to the optimal performance of compliance audits. It is not that industry rejects the use of third-party auditors. To the contrary, a survey of industry members indicates that third parties are used at times, for a variety of reasons. For instance, a third-party auditor may be used
because a specific type of expertise is necessary for a particular portion of an audit, and/or because smaller companies do not have the resources to devote in-house personnel to compliance audits.

It is clear to industry, however, that regardless of their status (internal, second-party, former employees, or third-party) auditors who have familiarity with a facility’s covered processes, equipment, operating history, procedures and programs are critical to conducting high quality audits. Indeed, the most important characteristic of a qualified audit team is its knowledge and experience. Limiting an audit to only third-party auditors necessarily limits the pool of auditors with appropriate knowledge and experience, and therefore adversely impacts the quality of compliance audits, and in turn, adversely impacts process safety.

Refinery operators and managers know their facilities best and have the greatest vested interest in identifying safety issues in their PSM-covered processes. Refinery operators and managers also know the areas of vulnerability and where improvement is most needed, and what steps likely will drive the most improvement. They have received training in proper use of the equipment and, in many instances, assisted in developing the relevant operating and mechanical integrity procedures. This is particularly true in smaller businesses, where there are fewer employees who work with the same processes every day. The ability to use internal auditors allows a company to design an audit program that best meets the needs of its facility and PSM program.

The current requirement allows facilities to build their own audit teams with whatever resources they deem appropriate, providing flexibility to employers to voluntarily choose a third party option when appropriate. That flexibility is what makes PSM successful, and should remain.

1. **Compliance Audit Reform is Not Necessary**

OSHA’s consideration of mandatory third party compliance audits seems to be a solution in search of a problem, as there is no information or evidence challenging the sufficiency of the
current compliance audit processes or results, or indicating that an audit performed by an internal auditor would be insufficient to meet the goals of the PSM Standard.

OSHA analyzed the results of its petroleum refinery and chemical facility PSM National Emphasis Programs, and that analysis demonstrated that compliance audit reform is unnecessary. OSHA’s evaluation found that only 4% of the violations issued in the petroleum refinery NEP involved deficiencies with PSM compliance audits, and none appear to have been the types of violations that would be avoided by use of a third-party auditor (i.e., most related to speed of addressing audit recommendations).\(^\text{15}\) Likewise, in the chemical facility PSM NEP, compliance audit deficiencies made up only 4.5% of the violations issued.\(^\text{16}\)

The only information OSHA includes in its Background Documents to support compliance audit reform is a vague statement that CSB found deficient compliance audits to be contributing factors to some incidents it investigated. However, there was no indication whether those audits involved third-party auditors, or that any of the alleged deficiencies with those audits would or could be remedied by introducing a less familiar, outside auditor into the process.

### 2. OSHA’s Cost Estimates Are Unrealistic

OSHA predicts that small refiners will be required to spend in the range of $2,932 to $24,388 for a third party audit, with the low end range for an audit of a small oil processor (conducting the audit and preparing an audit report, at an estimated thirteen hours of work), and the high end for an audit and audit report for a small petroleum manufacturing facility (an estimated 112 hours of work). This appraisal significantly underestimates the real costs of this aspect of the proposal for several obvious reasons.

\(^\text{16}\) See id at 9.
First, OSHA’s estimate does not account for the change its proposal would create in the auditor market. As discussed in more detailed below, higher demand for a scarce resource will lead to inevitably higher prices for outside auditing services. OSHA’s Background Documents do not discuss, or attempt to quantify, the likely shifts in the auditing market in response to a third-party audit requirement. Adopting independence and other limiting competency requirements like EPA has proposed, would further increase price by restricting the supply of eligible auditors and creating new certification costs that would pass-through to facilities hiring the auditors.

Second, OSHA’s cost estimates do not account for the new administrative costs that would be associated with a third-party audit, such as finding an auditor, time spent by facility personnel interfacing with an outside auditor (e.g., contracting with the auditor, facilitating the auditors’ access to information, and educating the auditors about the processes to be audited), the additional expense of setting up systems to ensure confidentiality of proprietary business information now to be handled by an outside entity, and the likely substantial follow-up with outside auditors necessary to interpret and fully understand the auditors’ findings and recommendations, a new problem caused by outsourcing the audit to an entity less familiar with the employers’ processes.

Further inaccuracies to OSHA’s cost estimates stem from the Agency’s underestimating the time it takes to conduct an audit. Based on feedback received from several refinery and petrochemical manufacturing facilities, an audit of a small entity with four covered processes usually requires approximately forty-two hours of work, among six auditors, with significant additional hours of employee time to assist with and address the audit findings and recommendations. AFPM members provided their own cost estimates based on their experience contracting with third-party audit firms from five companies representing 35 facilities.17 On

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17 AFPM generally excluded facility data based on conducting partial third-party or second party audits.
average, an audit of four covered processes required one week of time. Larger facilities reported they would either hire additional personnel to conduct the audit or perform the audit over two weeks if auditing a representative sample. The data was normalized to assess the average cost of conducting a third-party audit of four covered processes in one week.

In addition to audit service costs, these companies estimated costs for the managerial and legal review the new provisions would require. Applying current labor rates, the process of merely contracting with third-party auditors (not counting the audits themselves) is estimated to cost $9,700. As for the actual audits, the companies in the survey reported four cost categories: (1) labor costs to conduct the audit; (2) non-labor audit costs such as travel, meals and other expenses; (3) company labor costs to respond to the audit with regulatory agencies; and (4) company personnel time to brief the audit team, escort them around the facility, clear them through safety and security procedures, and answer questions about equipment, operating procedures, and other topics. The Table below shows an estimated cost of $119,099.30 per third party PSM/RMP Compliance Audit, or $29,774.81 per covered process (divided among four covered processes).

![Table showing estimated costs for third-party PSM/RMP Compliance Audit]

<table>
<thead>
<tr>
<th>Auditor Cost</th>
<th>Hours Per Week</th>
<th>Non-Labor Costs</th>
<th>Auditors Hired</th>
<th>Hourly Wage Rate</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Labor Costs</td>
<td>42</td>
<td>$2,650</td>
<td>6</td>
<td>$300</td>
<td>$75,600</td>
</tr>
<tr>
<td>Facility Personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manager</td>
<td>67</td>
<td>$149.89</td>
<td>6</td>
<td>$10,042.63</td>
<td></td>
</tr>
<tr>
<td>Corporate Manager</td>
<td>25</td>
<td>$139.50</td>
<td>6</td>
<td>$3,487.50</td>
<td></td>
</tr>
<tr>
<td>Outside Attorneys</td>
<td>12</td>
<td>$632.59</td>
<td>6</td>
<td>$7,591.08</td>
<td></td>
</tr>
<tr>
<td>In-House Engineers</td>
<td>265</td>
<td>$105.59</td>
<td>6</td>
<td>$27,981.35</td>
<td></td>
</tr>
<tr>
<td>Front Line Supervisors</td>
<td>44</td>
<td>$108.75</td>
<td>6</td>
<td>$4,785</td>
<td></td>
</tr>
<tr>
<td>Hourly Operations Security</td>
<td>5</td>
<td>$56.25</td>
<td>6</td>
<td>$281.25</td>
<td></td>
</tr>
<tr>
<td>Total: 4 Processes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$145,793.10</td>
</tr>
<tr>
<td>Cost Per Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$36,448.28</td>
</tr>
</tbody>
</table>
In all, the full audit process (for a four process audit) would cost approximately $145,793.10, or $36,448.28 per covered process, as compared to OSHA’s estimate of approximately $2,932 per process. Adding this much cost for a potentially lower quality audit and more burdensome auditing process is unwise, unwarranted and unsupportable.

3. Availability of Qualified Auditors

OSHA has provided no market impact analysis or assessment of third party auditor supply and demand in its discussion of the contemplated third-party auditor requirement. In our industries, there is already a dearth of competent third-party PSM auditors, and if OSHA mandates all PSM-covered facilities in the U.S. use third-party auditors, it will be extremely challenging to find enough qualified third-party auditors to meet new demand (even without arbitrary, unreasonable “independence” or competency restrictions like EPA proposed in its RMP rulemaking).\(^{18}\) In fact, anecdotal information collected in this SBREFA process suggests AFPM members who utilize third-party auditors already typically need to schedule audits a full year in advance because of demands on third-party auditor time. Capitalism informs us that after a surge in demand and a lag time with long delays for scheduled audits with competent third-party auditors, the auditor pool will eventually populate with warm bodies to meet demand. However, auditors with experience, skills, detailed knowledge of PSM, and a meaningful understanding of complex refining operations are not likely to materialize. As a result, the quality of PSM compliance audits will decline.

Although OSHA has not specified limiting criteria for an acceptable third-party auditor (e.g., independence or P.E. licensure), we are aware of and vehemently oppose EPA’s proposal in

\(^{18}\) See e.g., Letter from OSHA to Mr. E. C. Palmer (July 12, 2006) “Note that the phrase, ‘knowledgeable in the process,’ contained in 1910.119(o)(2) means the same as discussed in the above paragraphs related to requirements for persons knowledgeable in the process for incident investigation teams. For Compliance Audits, the person must have knowledge of the process being audited.” This qualification would significantly limit the pool of available third-party auditors.
that regard, and provide the following comment to OSHA about EPA’s proposed criteria, in the event OSHA ultimately considers similar criteria. Under EPA’s approach, auditors must not only be third party to the employer, they also would be required to meet very strict and limiting criteria for independence and competence, including: (1) performing no other work for an audited entity three years before and three years after an audit; and (2) staffing at least one professional engineer (“PE”) on the audit team. These requirements will drive the best auditors from the field (favoring more lucrative consulting services over audit services since they would be mutually exclusive), severely reduce the number of qualified auditors available, and/or severely limit employers’ ability to hire the best and most competent consultants. Therefore, OSHA should not implement the requirements as proposed by EPA, or any similar limiting criteria. Indeed, OSHA should not only decline to adopt EPA’s third-party auditor proposal, OSHA should actively educate EPA about the negative impacts on process safety that would follow if EPA’s proposal is promulgated.

AFPM also wishes to note that while its position is that the current Section 1910.119(o) requirement should not be revised, the industry believes the Alternative 10 option may avoid the concerns identified by AFPM herein and be an acceptable revision to the compliance audit requirement. Alternative 10 leaves third-party audits as a voluntary option for a facility, but extends the compliance audit frequency from three to five years if conducted by a third-party auditor. This option retains the flexibility industry needs to build an optimal compliance team, relieves the pressure of finding a good third-party auditor every three years, reduces the competition for existing third-party audit resources, and incents the use of third parties by relieving employers of the obligation to conduct compliance audits with the frequency currently required,

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19 See 81 Fed. Reg. at 13,659-60. EPA implies that ethical standards to which PEs are held under their license do not exist for other professionals involved in auditing PSM processes. However, it is AFPM’s view that this is a distinction without a difference, and that the members of its auditing teams hold themselves to the utmost ethical standard in conducting audits, whether they are licensed PEs or not.
thereby also reducing the overall cost to use third parties. If OSHA proposes to modify Section 1910.119(o) at all, it should go no further than Alternative 10 in the Background Documents.

C. Incident Investigation – Mandatory Root-Cause Analysis

Currently, Section 1910.119(m) of the PSM Standard provides employers with the flexibility to appropriately style and tailor incident investigations to the specific incident or “near miss” being investigated. This allows performance-based determinations to be made about the level and type of incident investigation to conduct. OSHA is contemplating a revision to this provision, and EPA has already proposed a corollary RMP revision, that will require a prescribed root-cause analysis for all PSM/RMP incident investigations, based on the theory that mandated root-cause analysis investigations would result in better quality investigations and fewer incidents.

As a preliminary matter, it should be noted that OSHA’s Background Documents and the information it has shared with the SERs on this possible revision is unclear and vague. OSHA seemed to indicate in a teleconference with the SERs that it would not require a specific root-cause analysis for every incident investigation, yet the materials it has supplied to the SERs and the public seem to indicate that the Agency is considering mandating a specific root-cause analysis methodology for all incident investigations under Section 1910.119(m), with attendant costs and resource burdens, even for those incidents that pose little potential risk. That is certainly what EPA has proposed. It may be that OSHA is simply indicating that “why and how” questions be examined in all incident investigations, rather than intending to prescribe a specific and narrow root-cause analysis methodology on industry. The regulated community, therefore, needs more information on what precisely OSHA is contemplating.20

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20 Adding to the confusion the term “root-cause analysis” connotes a certain type of methodology, but is not a specific term of art with a corresponding definition, and can mean something different to various stakeholders.
1. Constriction of Investigation Process

Incident investigations are highly effective tools used by industry to avoid future incidents, and in our view, among the most important tools available to industry to evaluate and reduce risk. To be effective, however, the nature of the investigation must be tied to the nature of the incident, its complexity and magnitude, and the process in which the incident occurred. Using this information, the expertise and experience of the incident investigation team should dictate how an incident is investigated, and the precise type of incident investigation tool that should be used. Employers, particularly small businesses, need to be highly efficient in their incident investigations to ensure scarce resources are applied appropriately and most efficiently to protect employees.

If OSHA is considering mandating that all incident investigations adopt a root-cause analysis methodology, as AFPM understands the term, this would be unwise and would too severely constrict employers from using their judgment to determine the appropriate investigation method to follow for any particular incident. Prescribing a single methodology for all incident investigations undercuts not only the performance nature of PSM generally, but it will almost inevitably make certain incident investigations less efficient and could make them less effective.21

Root-Cause Analysis methodologies are result driven and negatively reasoned. 5 Whys, TapRoot, and Fault Tree Analysis, for instance, are types of root-cause analyses that are, by design, blame-based investigation tools designed to lead to results tied to systemic deficiencies. These are useful tools, and are widely used in our industry; however, they are not always the best tool, as they may, in some instances, miss critical accident causal factors. The reason certain failures occur may be obvious and linear, and not need or be suited to a full root-cause analysis. Other incidents are best investigated with a more positively reasoned causality-based methodology. Failure Mode

and Effects Analysis ("FEMA"), for example, is a positively-reasoned tool that is more effective in understanding causes of certain types of incidents and accidents. Employers’ flexibility in selecting the best investigation tool for each incident should not be constrained.

2. Costs Associated with Root-Cause Analyses Requirement

Depending on precisely what OSHA requires with respect to PSM incident investigations, OSHA may significantly expand the scope and breadth of required incident investigations, and therefore, the cost and burden of compliance. OSHA’s intentions are unclear from the Background Documents, so we analyze the potential costs based on the more detailed elements of EPA’s parallel rulemaking. AFPM analyzed member data to calculate a realistic estimate of expanded costs to conduct full root-cause investigations and to do so under a broader definition of “near miss” as proposed by EPA, which would increase substantially the number of covered incidents.

EPA estimated that it will cost between $1,800 and $4,000 to conduct a compliant incident investigation under its proposed revision to the RMP regulation, and OSHA predicts, at most, a root-cause analysis would cost $11,487, even for a root-cause investigation of a complex incident. In reality, a thorough root-cause analysis investigation of a PSM/RMP incident will require significantly more resources and cost vastly more than either OSHA or EPA estimate.

Based on a detailed analysis of costs by AFPM, the average cost per root-cause investigation would be more than $17,000. With an estimated average annual rate of 3.2 triggering accidents or near misses, the total cost for mandating root-cause analyses is approximately $70,000 per year. For a complex facility, the cost per incident rises to $30,000 per investigation, and depending on the seriousness and complexity of the incident, the upper bound easily could exceed $100,000.
These cost estimates are based on AFPM member feedback indicating that it frequently takes investigative teams of four to six employees (and sometimes outside expert resources) working over a period of months to conduct such investigations. These cost estimates also account for PSM and RMP required employee participation, as well as including contractor representatives in investigations if one was involved in the incident. Because hourly employees usually earn time and a half for participating in an investigation, costs of hourly employee involvement was calculated on that pay scale. Note, AFPM’s estimates do not include costs associated with significant incidents that would require testing in a lab or a third-party analysis.

3. Expansion of “Near Miss” Definition

OSHA does not indicate in its Background Documents whether it is considering expanding the scope of events for which an incident investigation under Section 1910.119(m) would be triggered. Because EPA proposed to expand covered “near miss” incidents in the RMP proposed rule, we address this issue herein. Specifically, EPA proposes to define a “near miss” triggering an incident investigation to include any circumstance in which relief valves, rupture discs, interlocks, or other such mechanisms are activated, and would require a full root-cause investigation for each such occurrence.\(^\text{22}\)

While we do not consider most events of this type insignificant, and all generally get evaluated to the extent deemed necessary (either individually or in relevant groupings), we disagree with the assertion that every such instance constitutes a PSM- or RMP-covered “near-

\(^{22}\) See 81 Fed. Reg. at 13,652.
miss.” All of EPA’s examples are in reality carefully considered engineered solutions to prevent, control, and/or mitigate releases, and serve to minimize risks. To assert that these mechanisms, when functioning as designed, now constitute a catastrophic “near-miss” is to ignore the forethought and engineering of these systems that are specifically designed to prevent catastrophic releases of highly hazardous chemicals. These events should not automatically trigger a PSM incident investigation at all, let alone a mandatory, full root-cause analysis.

It is important to also note that in light of the significant costs involved in incident investigations, neither OSHA nor EPA offer any evidence to suggest that employers – certainly not employers in the petroleum refining and petrochemical manufacturing industries – are making improper judgments about the types of events that ought to trigger regulatory-mandated incident investigations.\(^{23}\) If anything, AFPM members err on the side of more investigation by reviewing virtually every mishap or near miss at least at a screening level. From the screening, additional information is gathered to determine whether the event needs further investigation, and if so, what type of investigation is warranted. This is precisely the sort of performance-based judgment OSHA (and EPA) encouraged in the original process safety regulatory framework.\(^{24}\) OSHA should convince EPA that second-guessing industry’s judgment as to what constitutes a near miss and what level of investigation is required for one is inappropriate and unnecessary.

4. **Mandatory Findings of Management System Failures**

OSHA’s Background Documents do not specify that the “root cause” result in a management system failure, like EPA’s parallel rulemaking. AFPM discourages OSHA from following suit. We have serious concerns with the manner in which EPA defines “root cause” so

\(^{23}\) See generally 81 Fed. Reg. 13,637.

\(^{24}\) See 29 C.F.R. 1910.119(m); see also 40 C.F.R. § 68.81(d)(4).
as to prescribe findings of management system deficiencies. Specifically, EPA’s proposal defines “root cause” as a “fundamental, underlying system-related reason why an incident occurred that identifies a correctable failure(s) in management systems.”

We understand that OSHA and EPA intend for incident investigations to enable employers to determine the root cause(s) of an incident, yet a proposed definition of “root cause” that arbitrarily assumes that the root cause of an incident is some type of management deficiency, or any particular outcome, is misplaced and will lead to less effective incident investigations. This direction toward management system deficiencies will skew an objective investigation, and as described above, could potentially result in overlooking or ignoring other causes, contributing factors or other valuable information that, if identified, could prevent a future similar incident.

If investigation teams are required by regulation to find a management system deficiency, then that is what will be found, whether it exists or not, and perhaps at the expense of finding the real cause of an incident. This type of definition of root cause essentially dictates an outcome, which would inhibit a robust and unbiased investigation.

In sum, employers have adopted specific investigation methods unique to their facilities, and trained their investigators on proper implementation of those methods. They also have revised those tools over years, based on experience. Requiring employers to change their programs to use one specific investigation method, or even a specific investigation type, would mean setting aside proven techniques based on a long history of experience, with no evidence to support that the root-cause analysis format or technique for investigating incidents is an appropriate one-size-fits-all method. Accordingly, as stated above, AFPM encourages OSHA to allow employers ample

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26 Frequently, there are multiple factors occurring simultaneously that cause an incident and management system failure may or may not be a significant factor. The current language in the PSM regulation recognizes this and requires incident investigations to identify “factors that contributed to the incident.” 29 C.F.R. 1910.119(m)(4)(iv).
discretion in the performance of incident investigations under 1910.119(m) in order to maximize their effectiveness and value. We also discourage OSHA from adopting the other reforms proposed by EPA, and to actively educate EPA about the harm to process safety that will follow should EPA implement its proposed incident investigation reforms.

D. Defining RAGAGEP and Requiring Continuous Evaluation of RAGAGEP Updates

1. Policy, Legal and Technical Considerations on Defining RAGAGEP

OSHA is proposing to define the phrase “Recognized and Generally Accepted Good Engineering Practice,” commonly referred to as RAGAGEP, and to require employers to evaluate updated versions of RAGAGEP for the purposes of identifying and implementing relevant changes to work practices and equipment. OSHA has not provided in its Background Documents the specific definition it intends to propose for RAGAGEP, however. Given the extensive discussions OSHA has had with the regulated community (including with AFPM specifically) on this topic, OSHA should have been able to provide specific language for small businesses to review. In light of the history on this issue in particular, we ask that OSHA allow small businesses to comment on its proposed RAGAGEP definition prior to moving to a proposed rule stage in this rulemaking.

The regulatory framework for dealing with RAGAGEP has been thoroughly addressed in the extensive settlement negotiations between OSHA and AFPM relating to OSHA’s 2015 Enforcement Memorandum that endeavored to define RAGAGEP. While OSHA has the right to develop regulation through proper notice-and-comment rulemaking, it received and accepted much of industry’s feedback on the issue of how RAGAGEP should be defined and treated by covered employers during the settlement negotiations of the legal challenge to the 2015 Enforcement Memorandum. If OSHA did not intend to actually adopt the position it agreed to in

that settlement, it should not have entered into the settlement, and left the validity of the interpretation to the U.S. Court of Appeals for the District of Columbia Circuit. For OSHA to have gone through the settlement process as it did, only to revert to its original 2015 position in this rulemaking, would not reflect good faith on OSHA’s part, and could influence future settlement negotiations with the Agency.

AFPM urges OSHA to adopt the position it agreed to in the carefully crafted settlement with AFPM, in any proposed revision to the PSM Standard. However, because the Background Documents do not clarify what OSHA is considering, we offer the following comments.

The 2015 Enforcement Memorandum definition of RAGAGEP is flawed and should not be adopted for several reasons. First, OSHA’s 2015 interpretation blurred the commonsense meaning of the critical terms “should” and “shall,” essentially converting non-mandatory recommendations in non-mandatory documents into mandatory legal obligations. The 2015 interpretation also undermined the plain regulatory language that allows employers to set their own internal standards, and further, it impermissibly elevates published (non-regulatory) industry guidance to the level of legally-binding obligations. Company or site-specific equipment standards are often based on a compilation of codes and standards, and also include or are based on internal company requirements that derive from years of operating experience with the process.

We also note that OSHA’s 2015 interpretation and likely the reforms under consideration here, will undermine the performance-based nature of employers’ interaction with RAGAGEP, which has historically allowed employers to identify the RAGAGEP they will follow, replaced

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28 See Process Safety Management of Highly Hazardous Chemicals; Explosives and Blasting Agents, Final Rule, 57 FR 6356 (Feb. 24, 1992) (explaining “the purpose of this proposed provision is to make sure that process equipment is inspected and tested properly, and that the inspections and tests are performed in accordance with appropriate codes and standards. The phrase suggested by rulemaking participants: ‘recognized and generally accepted good engineering practices’ is consistent with OSHA’s intent. The Agency also believes that this recommended phrase would include appropriate internal standards of a facility . . .”).
with a more prescriptive requirement that mandates implementation of updates to RAGAGEP across the board. This proposal deviates immensely from current practice; which OSHA has neglected to demonstrate is deficient.

The challenge of tracking and implementing RAGAGEP updates is magnified by the fact that a multitude of industry guidance documents are updated on a regular basis, often annually, and issued not because the guidance is no longer valid or adequate, but because the standard-setting organization requires a regular review of all standards (or profits from the sale of an updated version). OSHA’s 2015 interpretation was based on the flawed premise that if a code or consensus standard is re-published or updated, the older version is no longer adequate.\textsuperscript{29} In fact, many standards and codes specify whether they should be applied retroactively after there have been updates, a recognition by the standard-setting organization that the older versions may remain perfectly adequate.

From a small employer’s perspective, it is important to note here that many recommended industry practices are developed based on the experiences of larger facilities; thus, standards and codes are often based on large, complex facilities and may not be appropriate for smaller businesses. Small companies in particular need the flexibility to evaluate the full spectrum of changes and determine which are applicable to its processes.

\textbf{2. Underestimated Costs}

The burden and cost to review and consider implementation of all updates to all applicable RAGAGEP on an on-going basis could be staggering. American Petroleum Institute (\textquotedblright API\textquotedblright) guidance documents are extremely relevant for employers in our industry. As of June 2016, API

\textsuperscript{29} \textit{RAGAGEP In Process Safety Management Enforcement}, Memorandum from Thomas Galassi to Regional Administrators and State Plan Designees (June 5, 2015) \textit{modified by} Memorandum from Thomas Galassi to Regional Administrators and State Plan Designees (May 11, 2016).
maintains 685 standards and recommended practices.\textsuperscript{30} The American Society for Testing and Materials ("ASTM") has published approximately 12,000 technical standards.\textsuperscript{31} The American National Standards Institute ("ANSI"), the American Society of Mechanical Engineers ("ASME"), and the National Fire Protection Association ("NFPA") publish a combined total of approximately 1,500 standards. Virtually all of these standards update periodically; many of them annually.\textsuperscript{32}

OSHA predicts that review of RAGAGEP for updates would cost approximately $28,000. Based on the volume of standards, we believe this cost estimate is extremely low. While we cannot complete a cost analysis until the Agency clarifies its intent, we anticipate that complying with the definition and RAGAGEP review process described in the 2015 Enforcement Memorandum, for instance, would require at least one full time engineer dedicated only to this review on a continuous basis throughout the year. That would simply cover the literature review, and does not include any of the resources or costs associated with implementing changes to practices or undertaking capital projects to update equipment to address updates to RAGAGEP.

In sum, RAGAGEP must remain flexible, allowing employers to tailor their approaches to the hazards and complexities of their operations. RAGAGEP includes more than just industry standards and codes, and any definition OSHA considers must include internal standards set by internal engineers with specific experience in the subject process. Reverting back to the 2015 interpretation regarding RAGAGEP would create an enormously burdensome new process. Accordingly, OSHA should leave the PSM Standard as it is currently drafted, or codify the

\textsuperscript{30} API, About, Standards (2016), available at \url{http://www.api.org/about}.


definition of RAGAGEP it agreed to in the 2016 settlement, which will allow critical safety personnel to spend their time on activities that materially improve safety, such as ensuring safe operation in the field, rather than conducting a never-ending literature review.

E. Emergency Planning and Coordination with Local Emergency Responders

OSHA is considering including a requirement in a revised PSM Standard to require consultation with local emergency responders when preparing facility emergency action plans and conducting regular emergency drills. Furthermore, OSHA indicates it is considering a requirement for employers to evaluate the response capabilities of local responders to handle the types of emergencies that may occur in their PSM-covered processes.

1. Requiring Consultation with Local Responders is Unnecessary and Redundant.

We believe requiring the type of consultation and coordination with and evaluation of local emergency responders in the PSM Standard is wrongly-placed, duplicative of (but not necessarily aligned with) other existing regulatory requirements, and does not recognize the limited use and capability of local responders in PSM emergency situations.

First, regulations promulgated pursuant to the Emergency Planning and Community Right-to-Know Act (“EPCRA”) and Superfund Amendments and Reauthorization Act, as well as the Department of Homeland Security’s Chemical Facility Anti-Terrorism standards, Department of Transportation regulations (e.g., 29 C.F.R. Part 172 Subpart H), and EPA’s current RMP standard already require facilities to disclose information about chemicals at their facilities and coordinate with outside emergency responders. Furthermore, OSHA’s own Hazardous Waste Operations and Emergency Response Standard (“HAZWOPER”) dictates how emergency response operations in connection with hazardous releases must be done at employers’ sites, and OSHA’s Emergency
Action Plan standard and Emergency Planning and Response provisions of PSM establish how an employer must prepare for an emergency situation, including a catastrophic release.\textsuperscript{33}

More fundamentally, though, pursuant to these other regulations, employers are already obligated to work with local emergency responders to provide public as well as confidential information about their facilities, the hazardous chemicals stored or used on site, and the facilities’ emergency action plans. OSHA presents no evidence that systems already in place are insufficient. Accordingly, rather than simply adding a layer of bureaucracy to the regulatory framework in which employers and local responders operate, OSHA should carefully assess current regulations to determine whether there are actual gaps that should be addressed by the PSM Standard.

2. Policy Considerations

From a policy standpoint, OSHA must recognize emergency response issues reach beyond the scope of PSM. Local responders have to address numerous emergency situations, such as those involving confined spaces and rescues from heights. To the extent OSHA believes there are deficiencies in regulations related to employer coordination with emergency responders, or the capabilities of local responders, the PSM Standard is not the place to fix those problems, as its purpose is narrowly-focused.\textsuperscript{34} Accordingly, if this is a legitimate concern, it ought to encourage EPA to address it through the EPCRA program, propose a revision to HAZWOPER or other relevant regulations, or develop a new regulation related specifically to emergency response.

OSHA also must recognize the limited capabilities of much of the country’s local responder networks, and how those limitations are relevant to the regulatory reform OSHA is considering.

\textsuperscript{33} 29 C.F.R. 1910.120; \textit{see also} 29 C.F.R. 1910.38 and 29 C.F.R. 1910.119(n) \textit{et seq.}

\textsuperscript{34} \textit{See} 29 C.F.R. 1910.119, \textit{Purpose} (stating “This section contains requirements for preventing or minimizing the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals. These releases may result in toxic, fire or explosion hazards.”).
AFPM members generally do not rely on emergency responders to lead, or even participate inside their facilities’ fence line. In AFPM’s experience, the refining industry largely coordinates and controls emergency response inside their gates, relying on their own teams of highly-trained and well-equipped teams, or enters into mutual aid agreements across industry to ensure it is properly prepared for an emergency. In fact, if OSHA wishes to address the issue of local response, rather than adding another regulatory obligation to industry or local responders) it ought to spearhead an effort with state governments to fix the problem of local responders’ insufficient resources.

3. Emergency Drills

If OSHA insists on moving forward with a proposed revision to the PSM Standard in this area, it ought to, at minimum, make clear that emergency drill field exercise obligations may be satisfied by performing equivalent exercises under other federal or state laws. Many companies, for example, already run emergency response drills pursuant to other requirements, such as the HAZWOPER standard, and/or requirements of the U.S. Coast Guard, the Federal Emergency Management Administration (“FEMA”), or DOT’s Pipeline and Hazardous Materials Safety Administration (“PHMSA”). Drills conducted under these agencies’ requirements should fulfill any newly-created PSM requirement.

Further, effective emergency drills should be site-specific and dependent on the facility needs and circumstances. If an emergency drill requirement is included in the PSM Standard, it should give employers who understand the operating history and potential hazards presented by the facility, flexibility in determining the frequency and types of drills to be conducted.

The expense to coordinate with local responders, and in particular the costs associated with conducting emergency drills, is significant. OSHA estimates that it will cost a small petroleum

35 See e.g., 29 C.F.R. 1910.120(q)(2)(i) (requiring pre-emergency planning and coordination with outside parties).
refinery between $604 and $1,491 to conduct an emergency drill involving all site staff. This estimate increases significantly for larger facilities to between $13,519 and $53,149. However, the data gathered by AFPM shows that actual annual costs to implement an emergency drill requirement as contemplated by OSHA would far exceed these ranges.

AFPM’s data show a more accurate and realistic cost estimate for field exercises approaches nearly $30,000 per field exercise. AFPM’s higher estimate stems in part from understanding, through real world experience with these activities, that field exercises, even at small facilities, require nearly twice as many management hours as OSHA has assumed. AFPM also believes significantly more hours will be necessary from production staff to coordinate and implement drills than assumed, and adjusted up the unrealistic hourly wage estimates.

The cost calculation methodology for each exercise must account for not just planning and conducting the drills, but also for: (1) staging equipment; (2) setting up command centers; (3) curtailing production; (4) evacuating employees; (5) costs of frequent postponements due to local responders’ emergency demands; and (6) lost production time. When all cost factors are included, and realistic assumptions are aggregated, it becomes clear that OSHA’s estimates are not accurate.

In addition to cost, our experience informs how difficult it is to coordinate with emergency responders. They must be willing partners, and that may be challenging for a number of reasons, especially if local responders are overwhelmed by the new level demand placed on them by a regulation like OSHA is considering. Industry cannot be responsible for (and found liable when) local responders either are unable or unwilling to cooperate. In our members’ experience, local responders often decline invitations to the site and/or repeatedly cancel drills or visits. We expect these problems would become even more prevalent if every PSM-covered operation in the U.S. was suddenly required to engage local responders for regular and frequent drills, site visits and/or
regular consultation. In particular, the geographic realities of many small, rural companies and rural, often volunteer-based outside responders present serious obstacles to complying with an OSHA proposal requiring the type of activities and coordination OSHA is considering.\footnote{Depending on what exactly OSHA requires for these emergency drills, this requirement may be considered an impermissible unfunded mandate requiring municipalities to expend resources to comply. OSHA should be aware of this potentiality as it considers whether to pursue this proposal and what precisely would be required of the employer and/or local emergency responders.}

**F. Mechanical Integrity – Critical Equipment Redefined**

Section 1910.119(j) of the PSM Standard identifies a specific set of six enumerated types of equipment considered to be the universe of “critical” process equipment that must be included in the facility’s mechanical integrity program. The Preamble to the Standard states that the list of six types of equipment adopted in 1910.119(j)(1) are inclusive of what OSHA considers “critical” equipment in meeting the performance goals of the PSM standard.\footnote{See Process Safety Management of Highly Hazardous Chemicals; Explosives and Blasting Agents, Final Rule, 57 FR 6356 (Feb. 24, 1992) (explaining that there is certain equipment critical to all processes and OSHA has identified that equipment in 1910.119(j)(1); beyond that identified, it is within the employer’s discretion to determine any other equipment it deems critical).} OSHA is now considering amending the definition of “critical” equipment to include any equipment for which failure can lead directly to a release of highly hazardous chemicals, or equipment for which the employer takes credit in a PHA as a safeguard to reach an acceptable risk level.

The proposed new definition of “critical” equipment is too vague to provide meaningful comment, and for that reason would be too difficult to implement and enforce. Further, OSHA has provided no data to substantiate a need to expand the original scope of critical equipment. If OSHA is aware of an existing hazard with certain types of equipment, then it should identify those specific pieces of equipment in a proposed rule, and solicit stakeholder comment.

AFPM notes generally that the broad language OSHA advances in its Background Documents could pull in a slew of additional equipment at refineries and petrochemical facilities.
that are currently not covered under the mechanical integrity provisions of the PSM Standard. Initial estimates by members suggest that as much as 50% of their facilities’ equipment might fall within the amorphous language contemplated by OSHA, including, for instance, auxiliary equipment associated with utilities. This would entail significant expense to comply, diverting important resources away from real and necessary risk reduction activities.

In addition to the inevitable diversion of industry’s resources to areas of lesser risk, and the burden of dramatically expanding the mechanical integrity provisions of the PSM Standard, a major problem concerning any proposed definition that does not identify specific equipment, but rather presents a vague concept of criticality, is that the provision will be too susceptible to hindsight judgment, and inevitably will result in increased litigation and enforcement.

G. Stop Work Authority and Employee Participation

OSHA is considering proposing to include in the PSM Standard an explicit stop work authority program and a system requiring ongoing input from non-management employees and contractors. AFPM members already, universally, have established clear stop work policies at their facilities as well as mandatory employee participation in their PSM programs. While our industry strongly supports these programs and concepts, it finds OSHA’s intention to revise the PSM Standard in this regard as both unnecessary and possibly creating a serious risk that does not exist under current practices.

The Occupational Safety and Health Act guarantees all employees a fundamental right to refuse to undertake any unsafe work activity, and the Act explicitly prohibits an employer from retaliating against an employee who refuses to engage in an unsafe work practice or who stops

38 The proposed expansive definition of criticality appears to derive from a non-peer reviewed, non-consensus paper called *Why is Mechanical Integrity So Tough?* written by Michael Hazzan a decade ago. Mr. Hazzan was on the relevant mechanical integrity CCPS committee at the time he wrote this paper. It may be noteworthy that the CCPS did not at the time or since revise its approach to how criticality is defined based on Mr. Hazzan’s paper.
work to avoid being exposed to a hazardous situation. This right is deemed to provide employees the right to shut down processes in imminent danger situations in our industry. However, it is critical that all employees working in our facilities understand and appreciate the possible dangers created by improperly commencing shut-down procedures on a particular process.

Currently, employees in our industry understand both their rights to stop work/shut down operations, and also the process that must be followed to do so in the event of an imminent risk, including the specific operators who have knowledge as to how to commence shut down. AFPM is concerned that a general stop work authority revision to the PSM Standard either could be drafted or interpreted in a manner that might be inconsistent with how stop work authority presently is implemented in our industry. As a general rule, operators and other potentially-impacted employees in our industries have the authority to shut down a process when there is a risk of imminent danger, and when they are trained to know how to properly initiate safe shut-down practices.

In terms of employee participation, Section 1910.119(c)(1) already requires an employee participation program. This provision is very broad, and requires employee participation and feedback about each element of the PSM program. Thus, under the existing regulation, employees already play an active role in PSM.

Because we see no benefit to adding provisions to the PSM Standard that mandate practices that are already legally-required and in place, and because we see possible risk created by a new stop work authority provision being added to the PSM Standard, we urge OSHA to eliminate these considerations from any planned revisions to the Standard.

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39 See 29 C.F.R. 1977.4; 29 C.F.R. 1977.12(b)(2). Additionally, all employers have a general duty to "furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or likely to cause death or serious physical harm to his employees." 29 U.S.C. 654(a)(1).
40 29 C.F.R. 1910.119(c)(1)-(c)(3).
**H. Atmospheric Storage Tank Exemption**

OSHA asserts in the Background Documents that the long-standing PSM coverage exemption for atmospheric storage tanks was always intended to exclude processes that involve *only storage* (i.e., fuel depots or terminals). However, the current exemption, as interpreted by the OSH Review Commission, covers chemicals maintained in storage tanks that are interconnected to processes. OSHA proposes now to limit the atmospheric storage tank exemption to Petroleum Merchant Wholesalers to reflect the “only storage” concept it indicates was the original intent.

There is little evidence to suggest there remains a significant risk associated with Atmospheric Storage Tanks (“ASTs”). In refining and petrochemical manufacturing, catastrophic impacts of the type intended to be addressed by PSM involving ASTs are extremely rare, and for those rare incidents of which we are aware (most of which pre-date the PSM Standard), the conditions that led to the events do not reflect current industry practice or technology for safe handling and storage, and were of a type that would not have been avoided by PSM-coverage.

Regardless, there is already an adequate regulatory framework guarding against incidents involving highly hazardous chemicals stored in ASTs. For example, ASTs are effectively regulated under 29 C.F.R. 1910.106 (the flammable liquid storage standard), which prohibits the use of atmospheric storage tanks to store flammable liquid at or above boiling point temperatures, and establishes other requirements for tanks to minimize risks, such as requiring appropriate materials of construction, construction by good engineering design, use of venting and flame resistors, and eliminating and controlling ignition sources, as well as designating spacing, fire

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41 See *Secretary of Labor v. Meer Corporation*, 1997 (OSHRC Docket No. 95-0341).

42 See e.g., April 1962 Houston, TX; January 1977 Baytown, TX; January 1983 Texaco, NJ; December 1985 Naples Harbor, Italy; October 1991 St. Herblain, France; 1999 Laem Chabang, Thailand; 2005 Buncefield, U.K.; and April 2013 West, Texas.
resistant supports, and drainage. More broadly, the EPA as well as state authorities under the Spill Prevention Control and Countermeasure Plan ("SPCC") program and other state regulatory programs also require regular inspections, evaluations and integrity testing of ASTs. Accordingly, because there already exists a robust regulatory framework ensuring tank safety, and because OSHA has presented no evidence of unaddressed or unregulated hazards associated with storage tanks, a revision to the atmospheric storage tank exemption is not necessary.

I. Additions to Appendix A Chemicals

The original list of highly hazardous chemicals in Appendix A of the PSM Standard was compiled from nine different lists prepared by national and international organizations in 1992. OSHA requests input into updating the list or finding a way to more easily update it periodically. OSHA has not presented any evidence, however, to demonstrate that adding more chemicals or updating the threshold quantities of chemicals currently included in Appendix A is necessary.

Based on experience, threshold quantities set for the existing Appendix A chemicals have proven effective in preventing catastrophic releases. We are not aware of any significant increase in process safety catastrophic incidents involving a highly hazard chemical not already regulated by the PSM Standard, and none involving an Appendix A chemical maintained in a process at a volume below is presently listed threshold quantity. As OSHA explains in its Background Documents, the existing list of chemicals in Appendix A was created from several different comprehensive and reliable sources, and there has been no suggestion by OSHA of a deficiency.

Of the chemicals OSHA is considering adding to Appendix A, we strongly believe sodium hydroxide should not be included. It does not have similar qualities nor does it present similar

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44 See e.g., 40 C.F.R. 112.7.
potential hazard outcomes as the current Appendix A chemicals; thus, it should not be regulated in the same manner. Moreover, the chemical is commonly used and is present in many products. Inclusion of this chemical on Appendix A, therefore, likely would add significant compliance obligations – and very significant new administrative and cost burdens – upon a huge swath of companies, without any safety justification for its inclusion. OSHA’s and the regulated community’s PSM resources are better spent focused on currently covered chemicals. Accordingly, we encourage OSHA to reconsider any revisions to Appendix A, at least until further evidence is developed showing some safety vulnerabilities as a result of a gap in the list.

J. Chemical Reactivity

OSHA noted in its Background Documents that the chemical list in Appendix A of PSM includes a limited number of chemicals with reactivity hazards. OSHA is considering, therefore, either adding specific chemicals with known reactive properties to Appendix A or adding language to the scope provisions of the regulation that will extend coverage of the Standard to processes that mix substances within a listed functional group based on threshold heat of reaction properties.

Our industries see no significant risk from reactive chemicals that is not already being properly addressed through general health safety and environment (“HSE”) screens performed on chemical mixing before full-scale implementation in our facilities. Using these HSE screens in combination with information obtained through OSHA’s Hazard Communication Standard, 29 C.F.R. 1910.1200 (e.g., in Safety Data Sheets and chemical labels), we are able to adequately protect against risks associated with reactive chemicals in our facilities.

As to the specific approaches OSHA is considering to identify reactive chemicals for PSM coverage, we note that chemicals were originally included by OSHA on Appendix A because of their intrinsic hazards, but as CSB has pointed out, numerous reactives are binary pairs, which are
only hazardous based on the circumstances of their use. Accordingly, reactivity cannot be adequately addressed in a list-based rule. Adopting the two lists of the New Jersey Toxic Catastrophe Prevention Act (“TCPA”), or any other list-based model, would not account for the differentiation in risk based on the unique operating conditions and circumstances of each process.

Likewise, attempting to regulate reactive chemicals based on reactivity characteristics is also an ineffective and inefficient way to address reactivity hazards, and will be extraordinarily burdensome for employers. Relying on heat of reaction in particular, as the Background Documents purport to do, is misplaced. Heat of reaction is purely a thermodynamic factor, which is a poor barometer for how hazardous a chemical can be in a reaction.

The heat of reaction proposal OSHA is considering does not provide any limitation as to how employers should determine which reactions to test. As described by OSHA, it appears employers would have to test every pair of chemicals on site, even those for which there is no reasonable scenario in which they would ever mix with each other, and test them in all conceivable conditions (e.g., different vessels, under different pressures and temperatures, with various impurities, etc.). This could require an unworkable system involving thousands upon thousands of analyses, most without any bearing on any future real-world scenario. This analysis also assumes a literature review on the chemicals and their properties. Overall, such a revision to the Standard would present an enormous financial and time burden for employers ranging, according to OSHA’s own estimates, from $1,000 to $6,000 each time an employer is required to determine the outcome of a reaction. We believe that estimate is too low, but regardless, assuming the thousands of analyses that would be required, the cost could be an insurmountable burden for employers.

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45 Hazard Investigation: Improving Reactive Hazard Management, U.S. Chemical Safety and Hazard Investigation Board (October 17, 2002).

46 Kinetic testing, which shows how fast chemicals burn/react, is more informative of the nature of a reactive hazard.
OSHA seems to see New Jersey as some sort of model of success for regulating chemical reactivity, but we have seen no evidence that covered facilities in New Jersey have better process safety performance records than their peer facilities around the country. Indeed, based on reports from the regulated community in New Jersey, the chemical reactivity rule in New Jersey creates a massive paperwork exercise that drives virtually no process safety improvement.

In sum, “reactivity” is a chemical-specific and process-dependent determination, which is far too complex to be effectively regulated by a narrow, prescriptive regulatory provision. In certain industries, this cost could be prohibitive depending on the number of reactions and size of the business, both financially and at a resource level. This is particularly problematic in light of the fact that the tests would for the most part not even be informative as to the potential hazards present at the facility. Accordingly, we do not believe a revision of the Standard to address reactive chemicals is necessary. More broadly, before proceeding with a proposal to revise the Standard to include reactive chemicals, either by list or reactivity testing, we urge OSHA to conduct further study in this area to develop a sound and feasible approach to regulating reactive chemicals.

K. Certifying Rejected PHA Findings

Based on a theory that the process of reviewing and addressing PHA recommendations would be improved by requiring a written certification, OSHA is considering amending the PHA provisions of the PSM standard to require a manager’s “sign-off” that hazards identified in the PHA are otherwise adequately addressed whenever an employer rejects a PHA recommendation.

The PSM Standard and OSHA’s existing guidance already require that the resolution of PHA findings be documented.47 A decision to not implement a specific PHA recommendation is

47 See 29 C.F.R. 1910.119(e)(5); see also Petroleum Refinery Process Safety Management National Emphasis Program, CPL 03-00-004, OSHA (June 7, 2007).
a “resolution” of the recommendation, and therefore, that determination must, by regulation, be documented. Asking a manager to sign his or her name to a document confirming the reasonableness of the company’s rationale for rejecting the recommendation, would not change the manner in which PHA recommendations are resolved or improve process safety.

The only possible purpose for this proposal is to create legal exposure for specific management personnel, even though the decisions around resolving recommendations are typically made by and through a team analysis (as contemplated by the Standard). Indeed, the management personnel who will likely be required to “sign-off” on some new certification record (e.g., plant managers or PSM coordinators) are less likely to have been involved in conducting the individual engineering analysis necessary to make the determination on whether and what to implement. Moreover, singling out one person to certify is not consistent with the PHA framework, which requires a team approach.49

PHA teams sometimes recommend solutions that may, upon further review (often review by more technically expert resources), turn out to be bad or unsafe solutions, or the review process reveals better alternative solutions to the hazard that the PHA recommendation intended to address. The proposal OSHA is considering could compel a manager to implement the original recommendation, even if it could create more problems, or results in foregoing a better solution, simply out of fear of individual liability for certifying a rejection of a PHA recommendation.

There is no evidence from OSHA’s NEP inspections, or from high profile incidents, CSB findings, or OSHA’s citation history that a critical mass of catastrophic incidents (or even a single

48 See, e.g., CPL 2-2.45A (REVISED), CH-1, Process Safety Management of Highly Hazardous Chemicals -- Compliance Guidelines and Enforcement Procedures, Sept. 13, 1994 (“OSHA considers an employer to have “resolved” the [PHA] team’s findings and recommendations when the employer either has adopted the recommendations, or has justifiably declined to do so.”).

49 29 C.F.R. 1910.119(e)(4) (“a team with expertise in engineering and process operations”).
incident) has occurred because a PHA recommendation was rejected without documenting the reasons why, and certainly not because an individual manager did not sign a related piece of paper. Accordingly, we believe the existing documentation process is sufficient to ensure proper and complete PHA recommendation resolutions are reached. We urge OSHA to forego any related revisions to the PHA requirements.

L. Written Management System

As OSHA points out in the Background Documents, the PSM Standard does not require coordination of all program elements into a single written system. OSHA opines that this causes difficulties for updates to the program and access to all relevant information. Accordingly, OSHA is considering requiring employers to develop and implement a written PSM program management system, which would include written procedures for all elements specified in the PSM Standard, as well as new, broadly applicable record retention policies.

Many of the elements of the PSM Standard already require documentation and designate specific retention periods. The items that do not require documentation were determined to not need documentation by OSHA, through thoughtful analysis, stakeholder feedback, and careful consideration when the PSM standard was originally implemented. The same is true for those PSM elements that set specific retention requirements. Retention was determined to be necessary for those specific elements for which a safety-focused reason is advanced by retention.  

No such reasoning has been presented here in this blanket documentation and retention proposal.

To develop a written PSM program management system, including ensuring all components of the Standard are memorialized in a written policy would be costly, create an even

\[50\] See e.g., OSHA’s discussion regarding retention of incident investigations for five years to be used and reviewed during subsequent updates or revalidations pursuant to a process hazard analysis in See Process Safety Management of Highly Hazardous Chemicals; Explosives and Blasting Agents, Final Rule, 57 FR 6356 (Feb. 24, 1992).
more cumbersome administrative burden for employers implementing their PSM programs, particularly for small employers, and seems to be simply a paperwork exercise. This would be an unnecessary financial burden on employers with minimal, if any, safety benefit. Process safety will not improve from the creation of yet another level of administrative process and OSHA should not burden the PSM Standard with any additional paperwork intensive provisions unless and until it can document actual and substantial safety benefits from such an exercise.

IV. Comments About OSHA’s Other “Minor” Modifications

OSHA included in its Background Documents a set of items characterized as “minor” “clarifications.” Based on our industry’s significant experience implementing PSM programs to comply with the PSM Standard, we recognize that the purported “minor” “clarifications” being considered by OSHA are neither minor nor clarifications of some already existing requirements. To the contrary, they all represent new requirements, regulatory changes, and significant new burdens for employers. We note that EPA in its RMP proposed rule also attempts to make changes it similarly described as merely “ministerial” changes, and therefore did not discuss how the changes would improve safety or perform any cost estimates associated with the changes it characterized as ministerial. The items OSHA is characterizing as minor clarifications, like the supposed ministerial changes EPA proposed, would significantly change current requirements and add costs that would be extraordinarily high and impose undue burdens.

Proposals like these still require a “[n]otice of a proposed rule [that] include[s] sufficient detail on its content and basis in law and evidence to allow for meaningful and informed comment . . . .” Indeed, “general notice that a new standard will be adopted affords the parties

52 See id.
scant opportunity for comment.”54 OSHA and EPA must “describe the range of alternatives being considered with reasonable specificity. Otherwise, interested parties will not know what to comment on, and notice will not lead to better-informed agency decision-making.”55

Here, OSHA proposes several changes to the text of the PSM Standard with little to no explanation of the changes in the Background Documents, much less any discussion of their safety benefits or costs. These stealth changes inhibit meaningful participation in the rulemaking process by small businesses and the regulated community because it leaves the SERs and the public guessing as to the basis and purpose of the changes. At the end of the day, it is OSHA’s burden to provide a reasoned basis and purpose for proposed changes to a regulation. Unless and until OSHA provides a detailed explanation of its stealth changes to the PSM Standard, any and all such changes should be excluded from further rulemaking. More importantly, we also ask that OSHA follow the full notice-and-comment rulemaking process as to each of these items, including a throughout evaluation of the economic impact and safety benefit of implementing each proposal.

While by no means comprehensive, AFPM provides some thoughts on and concerns with OSHA’s “minor clarifications”:

A. Adding Language to Mechanical Integrity Provisions

OSHA proposes to add language to the mechanical integrity provisions of the PSM Standard that go well beyond the current requirements. While the language included in OSHA’s first two bullets relating to operating or functioning “outside of acceptable limits” and “not operating as defined by the process safety information” does not seem on its face to be problematic, the third bullet expanding the scope of “deficiencies” covered by 29 C.F.R. 1910.119(j)(5) to

55 Id.
include anything that “poses a potential risk of release of a hazardous or toxic chemical,” is extremely vague and overbroad and may be improperly interpreted to include every engineered clamp or relief valve or interlock. This vague language leaves too much room for OSHA to second guess how an employer assesses compliance with the Standard. The economic impact of this regulatory change would be significant, and OSHA has presented no safety justification for this expansion. AFPM urges OSHA to eliminate the third bullet from the scope of deficiencies covered under Section 1910.119(j)(5) and provide additional understanding and background on the basis for the first two bullets included in the Agency’s Background Documents.

B. Updating Process Safety Information

OSHA proposes to mandate a continuous duty to update Process Safety Information over the life of a process. By no means would that be a clarification of an existing obligation. Indeed, OSHA offered a clear contrary interpretation on this issue in 2001:

\[\text{OSHA intended for the employer determination and documentation required by 29 CFR 1910.119(d)(3)(iii) to be completed prior to the implementation of the original PHA or startup of a PSM-covered process. Therefore, once an employer is in compliance with this requirement, there is no additional requirement per 29 CFR 1910.119(d)(3)(iii) for future determinations/documentation simply because a code or standard related to the covered equipment has been revised. After the employer has made this baseline determination and documentation, other PSM elements such as management of change, mechanical integrity, PHA-revalidation, pre-startup safety review, etc., are intended to address on-going safe operation and maintenance of PSM-covered equipment.}^{56}\]

A clarification might be explaining how the other elements of the PSM Standard specifically address on-going safe operation. It is not a clarification to reverse course and impose a new regulatory requirement that is the polar opposite of what was intended by OSHA when the PSM standard was originally promulgated.

\[\text{See Letter from OSHA to Mr. Rick Durham (January 30, 2001).}\]
Regardless, the intent of this proposal is that changes to a process that may affect safety are evaluated, considered in PHAs, and necessary updates to process information are made. Even though the law does not require the original PSI file to be updated, all of those practical circumstances are addressed elsewhere in the PSM standard. Specifically, management of change (“MOC”) ensures the safety impacts of any process, equipment or chemical change is carefully considered, and if those changes require updates to drawings or procedures, that those updates are made. Completed MOCs are required to be audited, and MOCs are reviewed as part of the five-year PHA revalidation cycle. Accordingly, the safety purpose OSHA is seeking with this proposal is already accomplished by the existing PSM standard, without the unnecessary paperwork burden this change would create, so this revision should be eliminated from further rulemaking efforts.

C. 1% Rule for Chemical Mixtures

The “minor” clarification that is seemingly most disingenuously described as such, is OSHA’s consideration of a change of the chemical mixture threshold for PSM coverage, from a pure or commercial grade mixture threshold (i.e., generally 99% pure covered chemical) to a completely opposite 1% rule. This change cannot in any way reasonably be described as a clarification – it involves reversing decades of interpretation, and requires OSHA to archive numerous interpretation letters.

Appendix A of the PSM Standard lists the “highly hazardous chemicals” that are covered by the Standard when they are present in quantities that exceed thresholds identified in Appendix A. For some of those chemicals, Appendix A also lists a specific concentration level at which that

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58 See 29 C.F.R. 1910.119(o)(1); see also Appendix C, 29 C.F.R. 1910.119; Letter from OSHA to Senator David Vitter (Feb. 1, 2010).
chemical in a mixture allows the mixture to count towards PSM coverage. Most of the chemicals in Appendix A, however, do not list a specific concentration level for which mixtures that contain those chemicals count. For decades, OSHA has applied a “commercial grade” or “pure grade” standard for setting the triggering concentration for mixtures with those chemicals. OSHA has long and consistently interpreted “commercial grade” to mean a typical maximum concentration of the chemical that is commercially available and shipped. Generally speaking, that meant the Appendix A chemical had to make up 99% of the chemical mixture before the mixture counted towards PSM coverage.

By an “interpretation” memorandum last year, OSHA attempted to abandon that decades old “commercial grade” standard, and substitute what is commonly referred to as the “1% rule.” OSHA reasoned in that new interpretation that a set trigger of 1% is more appropriate because it will result in consistent application and will account for the hazardous characteristics of chemicals at low levels.

This new interpretation, however, will significantly expand the number of processes covered by the PSM regulations, including, for example, most commercial mixtures of aqueous hydrochloric and hydrofluoric acid. Aside from just adding more covered processes, the proposal would also sweep into PSM coverage numerous operations that do not present a potential for a catastrophic release. Any change in a regulation that sweeps in significant numbers of covered entities cannot reasonably be considered a minor clarification. This is, without a doubt, an expansion.

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59 See e.g., Letter from OSHA to Mr. David B. Smith (Mar. 21, 1994).
60 See Process Safety of Highly Hazardous Chemicals and Covered Concentrations of Listed Appendix A Chemicals, Memorandum from Thomas Galassi to Regional Administrators and State Plan Designees (June 5, 2015). Rather than counting only those mixtures made up of 99% of an Appendix A chemical for PSM-coverage, OSHA intends to count Appendix A chemicals in mixtures when the Appendix A chemical makes up only 1% or more of a chemical mixture.
61 See id.
significant regulatory change that requires the full benefit of Administrative Procedures Act ("APA") notice-and-comment, and a rigorous economic and safety benefit analysis.

Furthermore, as we discussed above in connection with the recent RAGAGEP Enforcement Memorandum, legal challenge, and negotiated settlement, OSHA and industry are actively negotiating a settlement that would tailor this proposed regulatory change to the right set of chemicals. OSHA should take seriously the settlement position it takes in that negotiation, and if the legal challenge is settled, OSHA should develop a rule proposal that reflects that settlement, or leave the question for the D.C. Circuit to decide whether this regulatory change is appropriate.

**D. MOC for Organizational Changes**

OSHA believes there is confusion about the applicability of the PSM Standard to organizational changes, and proposes now to add language to the MOC provisions to clarify that organizational changes are covered changes. The current Section 1910.119(l) management of change provision, however, covers organizational changes. This coverage is reflected in an interpretation letter defining the organizational changes that need to be addressed under the MOC provision.62

OSHA should not expand the scope of MOC beyond this, to enter the business of regulating staffing decisions. Determinations such as eliminating operating positions and changing lines of reporting, are quintessentially business decisions made based on the needs and circumstances of the business. One specific organization change where OSHA has attempted to second-guess employers is staffing reductions. Staff reductions can sometimes eliminate inefficiencies and clarify lines of authority and responsibility. In fact, anecdotally, members report improvements in safety following staff reductions.

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Amending the MOC requirements of PSM to include blanket coverage of these types of decisions would permit Agency interference with decision-making into the selection of corporate structure and/or personnel. This could open the door to second-guessing personnel decisions after the fact, particularly for small employers whose changes in staffing and budget revisions are likely to impact PSM at the plant level more frequently.

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V. Conclusion

AFPM and its members appreciate the opportunity to review and provide comment on OSHA’s initial considerations regarding revisions to the PSM Standard, and sincerely share OSHA’s goal of promoting safety through robust process safety management systems and programs. It is unclear to us at this stage, however, whether any of OSHA’s potential revisions to the PSM Standard will achieve our shared objective.

Sufficient detail has not been provided for a thorough understanding and/or review of the impacts of the revisions under consideration. To the extent we do understand them, we have serious concerns, as outlined above, as to the import, impact, cost, and consequences of these potential changes. Importantly, we do not see how the contemplated changes will benefit industry in its efforts to operate comprehensive process safety management programs; indeed, we are concerned that most of the contemplated changes are designed to hamper our members’ ability to do so. Accordingly, we ask OSHA to table its current rulemaking plans.

As always, AFPM remains keenly interested in continuing dialog with OSHA if it chooses to move forward with revisions to the PSM Standard.