



# AMERICAN REFINING GROUP, INC.

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Re: Comments of American Refining Group, Inc., a small entity representative, concerning the Environmental Protection Agency's potential revisions to the Risk Management Program Regulations and Related Programs.

Dear Ms. Free:

American Refining Group, Inc. ("ARG") is pleased to submit these comments on the Environmental Protection Agency's ("EPA" or "Agency") proposed revisions to the Risk Management Program (RMP) Regulations and Related Programs. ARG is a small entity representative ("SER"), and since 1997, has operated a small refinery in Bradford, Pennsylvania. ARG produces approximately 11,000 barrels of petroleum products per day which are processed into specialty products such as solvents, distillate, waxes and base oil, and employs approximately 360 individuals.

## **I. General Concern with Proposed Changes to the RMP Rule**

There is no evidence that the current requirements in the RMP Rule for auditing, incident investigation, safer alternatives analysis, or Process Hazard Analysis (PHA) are deficient or in need of amending. ARG believes that when correctly implemented and enforced, these four requirements in the RMP Rule are very effective in reducing risks of

accidental releases and making the workplace safer for employees, the community and the environment.

Nor is there any data suggesting that the proposed changes to the requirements for auditing, incident investigation, safer alternatives analysis, and PHA's will be effective in reducing the risk of specific causative circumstances or events. Executive Order 13650 and the current proposal are in response to the recent tragic events, such as those that occurred in West, Texas. In the West, Texas incident, the facility did not comply with many existing safety regulations, and nothing in EPA's proposal addresses this. Making the regulation more burdensome, prescriptive and inflexible will not enhance process safety. Before EPA requires industry to undertake the extensive capital, procedural and training costs associated with these proposed changes, the Agency must demonstrate the need for and value of the changes. Without a clear demonstration by EPA that the current requirements in the RMP Rule are deficient and that the proposed changes will address those perceived deficiencies, ARG cannot support these proposed changes.

While ARG believes that there are benefits to strengthening the Local Coordination and Emergency Response requirements and recommends pursuing a proposed rulemaking for these topics, ARG does not believe those same benefits exist with the proposed changes to compliance audits, incident investigation, and Information Sharing or adding a Safer Alternatives Analysis (SAA) requirement for the reasons stated within these comments. Therefore, ARG recommends that EPA not take action on developing a proposed rulemaking on those topics.

## **II. EPA's Six Proposed Changes to the RMP Rule**

### **A. Third-Party Compliance Audits**

EPA's proposed changes would require independent audits following an RMP accident. These audits are to be performed by a third party that meets certain criteria for competence and independence. The auditor shall not provide any services to the audited company for the three years prior to the audit and for the next three years following the audit. By competent, EPA has set forth a four -part test: 1) knowledgeable in RMP requirements; 2) experienced with the facility and process being audited; 3) trained in proper audit techniques and; 4) being a licensed professional engineer. EPA estimates that such an independent audit will cost \$18,000 - \$49,000 per process audited.

EPA's proposal to require third-party audits seems to be premised on an assumption that third parties are more capable, more credible, or more objective than a facility's own employees. ARG disagrees with these assumptions. Increasing the requirements for compliance audits will not drive better behavior regarding the existing requirements to perform compliance audits already codified within the RMP Rule and will not motivate companies like West Fertilizer to implement audit programs.

First, in our experience the real experts on a facility's processes, equipment, and hazards are its own employees. The employers know the skills, experience, and training of their employees and select the appropriate employees to serve on the audit team. The selected employees are the proven linchpin of any effective auditing process. This proposal eliminates the most valuable asset in conducting an effective audit-- the employee as auditor.

Second, many third-party auditors are knowledgeable in the elements of the RMP Rule. But given the wide range of the covered processes, there are very few third-party

auditors who possess sufficient expertise to satisfy EPA's four-part competency test. There is, quite frankly, a shortage of competent third-party auditors with that level of specialized knowledge. Most third-party auditors lack firsthand knowledge regarding the subtleties of the processes at a facility, whereas auditors working at the facility have extensive firsthand knowledge of the processes being audited. As a result many "independent" auditors conduct superficial, checklist- oriented audits. This proposal will likely increase the number of those superficial audits.

Third, the proposed four-part test for a "competent" auditor is too rigorous. For example, the requirement of a "licensed professional engineer" is far too restrictive. A licensed engineer must have five years of engineering work experience and pass two demanding examinations. Many excellent engineers have decades of work experience in process safety but have never sought or professionally needed to be licensed. These engineers would be ineligible to serve as auditors which would further restrict the limited pool of competent auditors. Many EPA inspectors and most OSHA compliance officers are not engineers let alone licensed engineers. Implicit in the proposal is the presumption that these inspectors and compliance officers are not competent auditors. There are many aspects of RMP compliance that do not require the rigors of engineering which shows again how the proposed rule is far too restrictive.

Fourth, the proposal has defined "independent" in an unreasonable and highly restrictive manner that will exclude the vast majority of competent auditors. Four of the best sources of competent auditors are: 1) current employees; 2) employees who have retired; 3) employees who work for a sister facility; and 4) employees who work for a parent enterprise. These competent auditors know the processes, the hazards, the operating history and the proper audit process and are the best source of information for improving the



processes and eliminating potential hazards. Without any data to show that "independent auditors" actually improves auditing and process safety, EPA proposes the elimination of the most qualified auditors from serving as independent auditors.

There are many ways that EPA can ensure the integrity of the audit process. Most obviously, EPA can, and already does, review the structure of the source's audit process and the substance of the audit report. The audit report can discuss the quality and comprehensiveness of the audit and each employee auditor can sign it. During inspections, EPA and OSHA can interview the audit team and ask whether in the auditor's judgment the appropriate issues and recommendations were addressed. All of these options are more effective than independent auditors and in the small business community, are much more cost effective.

The proposal imposes a six-year ban on employment that extends to the company for which the auditor works. The vast majority of the excellent auditors work for companies that provide multiple services such as employee training, engineering services and a wide range of Process Safety Management (PSM)/RMP services such as facilitating Process Hazard Analysis conducting audits, and performing facility siting or relief valve studies. EPA's proposal would either bar these excellent auditors or deny access to their other valuable engineering and process safety services.

Moreover, the definitions of "competent" and "independent" are in conflict with each other. To be competent, an auditor must have knowledge about the process, which can only be gained by working in a facility. Yet working in a facility prevents that auditor from qualifying as "independent" for at least three years. This proposal makes the shortage of qualified auditors even more acute.

Fifth, this proposal does not address a real problem. Data from the Petroleum Refinery Process Safety Management National Emphasis Program (NEP) suggests that there is no significant problem with audits or auditors. Less than 5% of the 1088 alleged violations of the PSM Standard issued during the Refinery NEP involved compliance auditing issues. The vast majority of the facilities had conducted proper audits.

ARG also wants to point out that there is a very weak safety connection between an RMP incident and the benefits of an audit. An incident usually involves the simultaneous occurrence of multiple failures that a company seeks to identify in an incident report and then prevent their recurrence. It is a detailed review of a single event. An RMP audit is a high level review, focusing on 14 management systems.

The estimated cost of an independent audit is far higher than EPA has estimated. Most competent third-party auditors using representative sampling and a team of three auditors for a refinery charge in the neighborhood of \$125,000 to \$150,000 to conduct a RMP audit. The cost using in-house auditors is similar taking into account salaries, expense, and lost opportunity costs. EPA is considering a different methodology for conducting an audit in which all elements of the RMP Rule must be audited in all covered processes. This change in audit methodology will easily triple the estimated cost for a competent audit. In sum, this audit proposal will be expensive and will likely reduce the quality of audits and ARG does not recommend that EPA pursue these changes.

**B. Incident Investigation and Root Cause Analysis**

EPA has proposed requiring a root cause investigation into all RMP reportable accidents and near misses. This investigation must be conducted within 12 months of the incident, would identify the "fundamental system related reason" why the incident occurred and would include a list of "correctable failures in management systems." In the proposal,

EPA expanded the definition of reportable incident from, "incident that resulted in or could have resulted in a catastrophic release (includes "near miss") to a "catastrophic release" to mean "an accident with deaths, injuries, evacuations, sheltering in place, property damage and environmental damage." In addition, EPA has expanded the definition of "near miss" from "could have resulted in a catastrophic event" to include runaway reactions, fires or vapor cloud releases that did not result in impacts and some process upsets such as activation of interlocks or vapor release alarms. EPA has estimated that each incident investigation will cost \$1,800 - \$4,000.

The text of this proposal raises a concern over the meaning of "root cause investigation." The phrase, "root cause," has many different meanings. It can refer to a category of investigative methods such as Taproot, Apollo, or 5W's, or to a very structured method which seeks the "fundamental reason" that an incident occurred based on "failures in management systems." The text in EPA's proposal incorporates the key terms from that very structured method.

If EPA intends the latter meaning of "root cause," then ARG cannot support adopting such a narrow approach to determining the factors that contribute to an incident. One size does not fit all investigations: complex incidents may call for a more robust approach using quantitative tools and materials analysis, while less complex incidents may be investigated more effectively using a process much simpler than root cause analysis.

The purpose of requiring that incidents be investigated is to assure that owners and operators conduct effective investigations and determine the contributing factors for an incident. This proposal to use the root cause methodology will undercut this purpose and will result in ineffective incident investigations. For the last two decades, owners and operators, using different methodologies, have trained employees to conduct incident



investigations and have continually improved the quality of those investigations. By mandating the single method by which an incident investigation must be performed, all of the experience working with other methods would be lost and investigators would be forced to learn a new method called "root cause analysis." The root cause analysis is just one of many effective tools by which owners and operators conduct incident investigations. Requiring the use of a single methodology is a "one-size-fits-all" approach to incident investigation and the range and complexity of incidents are simply too diverse for such a limited methodology. In fact, it was recognition of the limitations of individual methodologies that led to the development of additional methodologies.

There is no inherently perfect or superior investigative methodology. A root cause investigation is not inherently superior to any other investigative method. The key to any excellent investigation is the quality of the team members conducting the investigation and the time and resources committed to that investigation.

The selection of a root cause methodology could reduce the safety benefit from an incident investigation. Root cause strives to find one single cause, and drives the team to find a "management system failure." 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 RMP regulation recognizes this and requires incident investigations to identify "contributing factors" leading up to the incident.<sup>1</sup>

These new definitions of "catastrophic release" and "near miss" significantly expand the scope of the RMP Rule. The RMP Rule currently defines a catastrophic release as "a major uncontrolled emission, fire or explosion involving one or more regulated substances that present imminent and substantial endangerment to public health and the

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<sup>1</sup> Incident investigation-A report shall be prepared at the conclusion of the investigation which includes at a minimum, the factors that contributed to the incident.



environment.” This definition is consistent with EPA’s mandate to protect the environment and public health. These proposed definitions focus on incidents that do not involve substantial endangerment to public health and the environment. Rather these incidents are exclusively within OSHA’s jurisdiction. For example, an occupational fatality or injury requiring hospitalizations must be reported to OSHA which is responsible for conducting an inspection. A small release of vapors that activates vapor alarms may pose an issue for employees in the immediate area but pose no offsite risk to public health or the environment.

More importantly, there is no definition of “near miss,” and previous EPA and OSHA rulemakings demonstrate the near-impossibility of promulgating a regulatory definition that could properly address the wide variety of processes, circumstances and potential scenarios that exist among RMP-covered facilities. The examples in this proposal are so broad that facilities would face an enormous and expensive burden of investigating a large number of events that provide little or no process safety value. For example, the activation of an interlock likely indicates good engineering, in that an engineer envisioned a potential concern and designed a mechanism to control it. With such activation, there is no release of regulated substance and no risk to the environment or public health. Requiring facilities to conduct a root cause investigation of all events that could fall into the undefined “near miss” category will detract resources from and dilute the value of investigations into high-learning value events. The existing regulatory language requiring investigation of incidents that “caused or could reasonably cause a catastrophic release” is as appropriate now as it was when the regulation was promulgated, and for the same reasons.

ARG does not support these changes as written to the existing regulation and does not recommend EPA pursue these changes.

A detailed investigation of an RMP incident will involve significant resources and cost far more than the EPA's estimate of between \$1,800 and \$4,000. Frequently, investigative teams of 4-6 employees work over a period of months to conduct such an investigation. The incident investigation may require special testing or an expert with specialized knowledge. The RMP Rule has an employee participation requirement and hourly employees usually earn time and half for their participation in an investigation. At the low end of the cost scale, a comprehensive investigation such as root cause analysis into an RMP incident will cost \$15,000 and could easily exceed \$100,000.

**C. Safer Alternatives Analysis**

EPA has proposed requiring petroleum refineries to consider inherently safer technologies and their feasibility during a PHA. The proposal mandates only an evaluation but wisely stops short of a requirement to implement.

This proposal will be expensive and provide very little, if any, safety improvement for existing processes. Back in the mid 1990's, EPA conducted extensive rulemaking concerning the implementation of inherently safer technologies and, took comments, listened to experts and concluded that "inherently safer technology analyses" would not produce additional benefits. EPA's rationale was that "[a]lthough some existing processes may be superficially judged to be inherently less safe than other processes, EPA believes these processes can be safely operated through management and control of the hazards without spending resources searching for unavailable or unaffordable new process technologies."<sup>2</sup> EPA reached the correct conclusion in 1996 and there is no new or additional data to dispute this. Even New Jersey and Contra Costa County, where SAA

<sup>2</sup> 61 Fed. Reg. at 31699 ("EPA has decided not to mandate inherently safer technology analyses. EPA does not believe that a requirement that sources conduct searches or analyses of alternative processing technologies for new or existing processes will produce additional benefits beyond those accruing to the rule already.").

("Safer Alternatives Analyses") analysis is currently required, have no data demonstrating that an SAA analysis provides any measurable benefit or reduces the frequency or severity of incidents.

PHA's and SAAs serve are two different engineering functions and are staffed differently. Most petroleum refining processes in this country were built decades ago. A PHA involves reviewing an existing process and considering the adequacy of the existing controls for that process. A PHA is staffed with employees knowledgeable in the process, including chemical engineers and employees from operations.

A SAA is entirely different than a PHA. SAA is most appropriate and effective in the design phase of a new process — well before the process is built. SAA is an operation and site-specific evaluation based on engineering judgment that considers and balances many variables including hazards, location, surrounding populations, exposures, technical feasibility, and economic feasibility. An SAA examines the entire operational life cycle of the products including manufacture, transport, storage, use, and disposal.

The staffing for an SAA review is different than the staffing for a PHA. The SAA review requires design engineers. This proposal requires the SAA review as a part of the PHA which is too late in the construction process and with the wrong team. Moreover, small facilities like ARG do not have staff design engineers to conduct an SAA review meaning the costly requirement to retain them..

The proposal uses the term "feasibility" and provides five feasibility factors: "economic, environmental, legal, social and technological." These five factors fail to provide adequate guidance and reasonable limitations on the feasibility component of the SAA review. For example, "economic" is defined as "economically impractical such that the process unit can no longer be financially operated." This standard ignores the reality of



global competition. It mandates even marginal improvements bringing a process close to insolvency. The practical result may be the closure of such processes and the termination of many jobs. Improvements must be evaluated in real terms weighing all relevant costs and benefits, and this is not spelled out in the proposal.

Another feasibility factor is the term “social” which is defined as negative social impacts such as a “visual or noise impact on the community” or an increase in “traffic congestion.” These are subjective concerns which are entirely unrelated to process engineering, process safety, or the prevention of accidental releases, and therefore have no role in the RMP rule.

The feasibility factors fail to address the full range of issues in the operational life of a project.<sup>3</sup> The proposal limits the purpose of the SAA review to preventing chemical accidents at the refinery which is a goal we all share but which differs from the current practices for an SAA review. An SAA review must examine the entire operational life of a product — risks in obtaining raw materials, the risks of processing the materials, distribution, consumer use and disposal. The risks need to be examined at every stage of a product’s life. This examination must consider the risks to the child who plays with the finished product as well as the risks to the environment in its disposal. The proposal limits the SAA review to only one phase of a product’s life — it’s processing. The five feasibility factors do not address any of these issues. The definition of “social” does not involve any impact on physical health or the issues in providing consumer products to children. The definition of “environmental” and “legal” simply paraphrase the current legal requirements by claiming that SAA recommendations must comply with the law. This overlooks the issue that even with lawful and proper disposal of chemicals; each chemical presents different

<sup>3</sup> EPA’s jurisdiction under the Clean Air Act (“CAA”) is limited and these feasibility factors exceed the mandate in Section 112(r) of the CAA.

hazards to the environment and different costs for its disposal. In sum, this proposal does not consider the full range of issues in the operational life of a product. Instead, it requires a facility to select a safer process without considering risks to the downstream consumer or to the environment in its disposal.

The feasibility factors in the proposed SAA provision provide no guidance on how to measure or balance risks or hazards. What makes SAA particularly complex is that there is no simple way to measure whether one process is safer than another or when a process is "safe enough." The proposal is silent on a multitude of critical questions: What does the PHA team measure? Does the team evaluate reduction in hazards or overall risk? Is that reduction measured quantitatively or qualitatively? Who or what is the required beneficiary of that reduction - the employees, the adjacent community, the environment? What level of risk is tolerable? If EPA were to require SAA analysis under the RMP, EPA will necessarily need to become involved in measuring, evaluating, and determining the tolerable level of risk.

As written, ARG will not support this addition to the rule and recommends that EPA not pursue it through the rulemaking process.

#### **D. Local Coordination**

EPA has proposed requiring facilities to coordinate annually with their Local Emergency Planning Committee ("LEPC")/emergency responders to ensure that adequate response capabilities exist and to allow LEPC/responders to request facilities to prepare emergency response programs.

We support the concept of coordination among facilities, LEPC and emergency responders. As written, the proposal does not address the wide range in skill sets, resources and commitment from the LEPCs. Some LEPCs are staffed with volunteers with little or no

resources. Some communities have yet to form an effective LEPC. In these circumstances, there is no practical way for facilities to coordinate with the LEPC.

We are also concerned with the portion of the proposal which empowers LEPCs to request that a facility develop an emergency response program. The adequacy of our response programs is a legal issue for a governmental entity such as OSHA, EPA and/or the Fire Marshall to evaluate. LEPCs do not have legal authority to evaluate the adequacy of such programs. Moreover, given the wide range of skill sets and resources, the proposal has no procedure to ensure that any request from an LEPC is both reasonable and necessary to ensure an adequate emergency plan.

**E. Emergency Response Exercises**

EPA has proposed requiring that facilities test their emergency response programs in the following ways: 1) conduct annual notification exercises; 2) conduct a field exercise every five years and; 3) table top exercises in interim years.

We support the frequencies of every five years for a "field exercise" and a table top exercise in the intervening years. The definition of field exercise needs to be broad enough to include many off-site activities and drills required by other state and federal regulations. Many companies run emergency response drills under their HAZWOPER plan ( 29 CFR 1920.120). Any RMP rule addressing this subject should ensure that the existing emergency response drills under HAZWOPER may satisfy this new requirement..

The costs for field exercises and drills, including equipment being put into place, establishing command centers, curtailing production, evacuating employees and getting local responders to participate, is much higher than EPA's estimate. There are long hours of planning, coordination and occasional postponement caused by a local emergency occurring just prior to the drill. There needs to be a provision in any final rule addressing



postponement and the enormous amount of time required to reschedule. Frequently, it takes a full year to reschedule a field exercise.

**F. Information Sharing**

EPA has proposed an increase in information provided to LEPCs, emergency responders and to the general public. More specifically, facilities would have to prepare a summary of each category of information and provide them to LEPCs and responders. These six categories are “. . . chemical hazard information; including incident investigation reports (with root cause findings); drill/exercise reports; compliance audits; accident history; and summary of the inherently safer technologies implemented or planned to be implemented.”<sup>4</sup> Facilities would also be required to provide existing public information in an easy format and hold public meetings once every five years and within 30 days of a reportable incident. Based on ARG’s discussions with other small refiners, we can report that the “Information Sharing” is the most disturbing aspect of the RMP proposal.

We are concerned with this proposal to provide six categories of information to LEPC’s and responders because it would be very time consuming, present the challenge of protecting businesses confidential information, trade secrets and security sensitive information; and would not provide any real assistance to emergency responders. For example, a summary of audit recommendations or SAA proposals being considered by the facility would not assist a responder in any way. As noted earlier, many LEPCs have not formed or are ineffective, and they would simply disregard any information provided. ARG recommends in lieu of producing these six categories of information, we would recommend that EPA revise the provision involving “local coordination” to require a discussion about these six categories of information and to allow the LEPCs and responders to request copies

<sup>4</sup> EPA’s Presentation, “Risk Management Modernization Rule, Small Business Advocacy Review Pre-panel Outreach Meeting with OMB/SBA” page 26.

of the documents that they consider useful. The LEPCs and the responders are in the best position to know what information they need to properly respond.

The proposal requires providing information in an easily accessible manner so that the public is aware of the risks from an accidental release, and the facility's capability to respond to that release. We are concerned that this will be a very time consuming and expensive task, and bear no relationship to the LEPC or facility's ability to respond to an incident. Moreover, chemical processes are very technical and require a basic knowledge of engineering and the physical sciences. Determining an "easily accessible manner" is very subjective and opens a myriad of difficult questions — such as what level of scientific knowledge should be assumed, who is the target audience, or what language should be selected? At little or no cost, there are an infinite set of options to learn about the facilities and the chemical processes through company websites, the internet and social media. The proposal has provided no information as to why these options are inadequate.

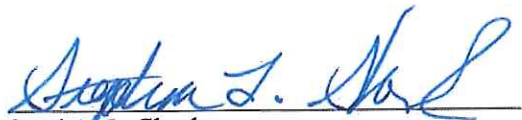
A public meeting within 30 days of an RMP incident provides several challenges. Within 30 days, the investigations are very far from complete. Typically, after 30 days, many investigative tasks are still open and the team does not know yet the cause of the incident. The critical information may present security or business confidentiality issues, and therefore could not be shared with the community. The cost to prepare for a public meeting is vastly greater than EPA's estimate. The cost to rent a facility and host the meeting averages about \$10,000 per meeting day and the time to prepare presentations and handouts averages four to eight man days for which salaries would need to be included in the estimate. A better alternative would be to include a brief information share/brief incident report at the County/Community LEPC meeting within nine months of the RMP incident. LEPC meetings are regularly scheduled and open to the public.

In the mid-1990's, there was an RMP requirement to hold public meetings and review worst case scenarios. In preparing for these public meetings, facilities spent weeks putting together presentations and handouts and in most cases, no one attended the meetings. We are very concerned that the lack of public attendance would continue and we would spend significant resources for no useful purpose.

### III. Conclusion

ARG would like to thank the Agency for reviewing our comments concerning the proposed revisions to the RMP Rule. We would like an opportunity to discuss these comments in greater detail either by phone or in person. We are committed to the safety of our processes, our employees and to the environment. We have serious concerns that the proposed changes will do very little to reduce chemical accidents, will be very expensive and will make it more difficult for SERs to compete in a global economy.

American Refining Group, Inc.



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