

# **BASICS OF RISK MANAGEMENT PLANNING: ACCIDENTAL RELEASE PREVENTION**

## **GET THE FACTS**

### **On the Final Rule: Clean Air Act section 112(r)**

Preventing accidental releases of hazardous chemicals is the shared responsibility of industry, government, and the public. The first steps toward accident prevention are identifying the hazards and assessing the risks. Once information about chemicals is openly shared, industry, government, and the community can work together toward reducing the risk to public health and the environment. Important new provisions in the Clean Air Act advance the process of risk management planning and public disclosure of risk. These requirements will affect facilities that produce, handle, process, distribute, or store certain chemicals. The final rule for risk management planning was promulgated on 20 June 1996.

#### **MANAGING CHEMICALS SAFELY**

Section 112(r) of the amended Clean Air Act (CAA), signed into law 15 November 1990, mandates a new federal focus on the prevention of chemical accidents. The objective of section 112(r) is to prevent serious chemical accidents that have the potential to affect public health and the environment. Under these requirements, industry has the obligation to prevent accidents, operate safely, and manage hazardous chemicals in a safe and responsible way. Government, the public, and many other groups also have a stake in chemical safety and must be partners with industry for accident prevention to be successful.

The risk management planning requirements of CAA section 112(r) complement and support the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). A milestone in federal actions, EPCRA helps local communities prepare for and respond to chemical accidents. It requires communities to develop emergency response plans, based on information from industry concerning hazardous chemicals. Under the new CAA requirements, stationary sources (facilities) must identify and assess their chemical hazards and carry out certain activities designed to reduce the likelihood and severity of accidental chemical releases. Information summarizing these activities will be available to state and local governments, the public, and all other stakeholders. Using this information, citizens will have the opportunity to work with industry to reduce risks to the community from chemical accidents.

In the broadest sense, risk management planning relates to local emergency preparedness and response, to pollution prevention facilities, and to worker safety. In a more focused sense, it forms one element of an integrated approach to safety and complements existing industry codes and standards. The risk management planning requirements build on OSHA's Process Safety Management Standard, the chemical safety guidelines of the Center for Chemical Process Safety of the American Institute of Chemical Engineers, and similar standards of the American Petroleum Institute and Chemical Manufacturers Association, as well as the practices of many other safety-conscious companies.

#### **IT'S THE LAW**

CAA section 112(r) mandates that EPA publish rules and guidance for chemical accident prevention. These rules must include requirements for sources to develop and implement risk management programs that incorporate three elements: a hazard assessment, a prevention program. These programs are to be summarized in a risk management plan (RMP) that will be made available to state and local government agencies and the public.

## **WHO'S COVERED**

Any source with more than a threshold quantity of a listed "regulated substance" in a single process must comply with the regulation. "Process", in terms of the regulation, means manufacturing, storing, distributing, handling, or using a regulated substance in any other way. Transportation, including pipelines and vehicles under active shipping orders, is excluded. On 31 January 1994, EPA promulgated a final list of 139 regulated substances: 77 acutely toxic substances, 63 flammable gases and volatile liquids, and Division 1.1 high explosives as listed by DOT. The final list rule established threshold quantities for toxics ranging from 500 to 20,000 pounds. For all listed flammables, the threshold quantity is 10,000 pounds. EPA proposed modifications would exclude facilities handling explosives, exploration/production facilities for oil and gas, and gasoline.

EPA estimates that approximately 66,000 sources will be covered by the rule, assuming the proposed list amendments are adopted. The universe includes chemical manufactures, other manufactures, certain wholesalers and retailers, drinking water systems, wastewater treatment works, ammonia refrigeration systems, utilities, and federal facilities. Sources with at least one covered process must comply with the rule by June 20, 1999.

## **THREE LEVELS OF COMPLIANCE**

The final risk management planning regulation (40 CFR part 68) defines the activities sources must undertake to address the risks posed by regulated substances in covered processes. To ensure that individual processes are subject to appropriate requirements that match their size and the risks they may pose, EPA has classified them into three categories ("Programs").

**Program 1** requirements apply to processes for which a worst-case release, as evaluated in the hazard assessment, would not affect the public. These are sources or processes that have not had an accidental release that caused serious offsite consequences. Remotely located sources and processes using listed flammables are primarily those eligible for this program.

**Program 2** requirements apply to less complex operations that do not involve chemical processing (e.g., retailers, propane users, non-chemical manufactures, and other processes not regulated under OSHA's PSM Standard).

**Program 3** requirements apply to higher risk, complex chemical processing operations and to processes already subject to the OSHA PSM.

## **RMP BASICS**

Sources with processes with a regulated substance above a threshold quantity will be required to carry out the following elements of risk management planning.

- *An offsite consequence analysis that evaluates specific potential release scenarios, including worst-case and all alternative scenarios.*
- *A 5-year history of certain accidental releases of regulated substances from covered processes.*
- *A integrated prevention program to manage risk.*
- *An emergency response program.*
- *An overall management system to supervise the implementation of these program elements.*
- *A risk management plan (RMP), revised at least once every five years, that summarizes and documents these activities for all covered processes.*

Based on their limited potential for serious offsite consequences, sources are not required to implement a prevention program, an emergency response program, or a management system for Program 1 processes. Sources with processes in Program 2 and Program 3 must address each of the above elements.

## **LINKS**

The OSHA PSM Standard (29 CFR 1910.119) reflects the key elements that the petrochemical industry, trade associations, and engineering societies have deemed essential to safe management of hazardous substances for complex, chemical-processing operations. EPA has adopted OSHA's PSM requirements as the Program 3 prevention program, with only minor changes in terminology. With a few exceptions, processes assigned to Program 3 are already subject to the OSHA PSM Standard; the remaining Program 3 processes are in industry sectors that have a significant accident history.

EPA has worked closely with other regulatory programs that focus on risk management issues for hazardous chemicals in order to foster co-ordination and reduce burden. EPA and the National Response Team have prepared Integrated Contingency Plan Guidance to assist sources subject to multiple regulations in preparing a consolidated emergency response plan. Further, EPA believes that many of the prevention program requirements for Program 2 processes and the emergency response program requirements can be satisfied without additional effort because of existing compliance with other federal and state regulations, industry standards and codes, and good engineering practices.

## **MAKING IT WORK**

To document compliance with the rule and provide risk information, all sources must submit to a central location a risk management plan that includes a registration, an executive summary, a 5-year accident history, and offsite consequence analysis information. Sources with Program 2 and 3 processes also must submit information in the RMP regarding compliance with requirements for the prevention program and the emergency response program.

EPA is developing a reporting mechanism and form to collect RMPs in a way that encourages electronic submission. This will make risk management planning information available far more widely to the public and at a far lower cost than would traditional reporting. To support electronic submission and reduce the reporting burden, EPA has standardized the RMP requirements. With the

exception of the executive summary, data elements will be primarily check-off boxes, yes/no answers, or numerical entries.

An “implementing agency” will oversee these requirements and receive the RMPs. It will audit and inspect a percentage of sources each year and require whatever revisions to the RMPs are necessary. Under CAA section 112(l), states may request that EPA delegate the authority to serve as the implementing agency to a state or local agency with the appropriate expertise, resources, and authority. States may implement their own programs, although the law demands that program requirements must be as stringent as EPA’s and must include all EPA-regulated substances and processes. Approximately 30 per cent of the sources subject to the risk management program requirements must also comply with Title V of the Clean Air Act, which requires permits for emission of air pollutants. Section 112(r) is an application requirement for Title V permits.

### **HELP FOR SMALL BUSINESS**

Small and medium-sized enterprises may receive information about CAA section 112(r) through the Small Business Assistance Program in each state, through the Federal Small Business Assistance Program, through the network of Small Business Development Center across the country, through the EPCRA Hotline, and through a range of electronic outlets.

To make compliance easier for small businesses, EPA is working with industry groups to develop model risk management programs. Initially, these model programs will be developed for ammonia refrigeration, propane handling, and water treatment operations. The RMP Offsite Consequence Analysis Guidance will eliminate the need for covered small operations to invest in computer modeling programs and to answer complex technical questions (e.g., how to model liquefied gases) related to this element of the hazard assessment.

### **LOOKING AHEAD**

As this final rule is implemented, EPA plans to publish general technical guidance, guidance for states on implementation, guidance for Local Emergency Planning Committees on ways to use RMP information in the community, and additional model plans for certain industry sectors and regulated substances. In addition, the Agency will produce training packages and disseminate training through a variety of educational outlets. Workshops, in co-operation with industry and engineering societies, will also be presented around the country, as well as teleconferences to introduce the new risk management planning requirements to a diversity of stakeholders.

With risk management planning as the basis for accident prevention, everybody wins. Industry has an opportunity to demonstrate excellence in safety. Government can show effective, efficient leadership in developing sensible requirements. And communities will have a powerful right-to-know tool, as citizens work together toward reducing chemical risks to public health and the environment.