



U.S. ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF INSPECTOR GENERAL

Chemical Import Data May Help EPA Identify Facilities That Need to File or Update Risk Management Plans

Report No. 14-N-0239

April 28, 2014



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Abbreviations

EPA U.S. Environmental Protection Agency
OIG Office of Inspector General
RMP Risk Management Plan

Cover photo: Truck trailer for transporting chlorine parked at a risk management program-regulated chlorine repackaging facility in Arizona.
(U.S. Chemical Safety and Hazard Investigation Board photo)

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At a Glance

Why We Did This Review

While conducting work as part of an Office of Inspector General evaluation of a U.S. territory's implementation of its delegated Clean Air Act programs, we obtained and analyzed data on imports of hazardous substances to the United States. We obtained this data to help us determine whether facilities may have hazardous substances onsite in amounts that would require them to prepare risk management plans (RMPs) under the Clean Air Act Section 112(r) risk management program.

The work performed and disclosed in this report does not constitute an Office of Inspector General evaluation conducted in accordance with generally accepted government auditing standards issued by the Comptroller General of the United States.

This report addresses the following EPA theme:

- *Taking action on toxics and chemical safety.*

For further information, contact our public affairs office at (202) 566-2391.

The full report is at:
www.epa.gov/oig/reports/2014/20140428-14-N-0239.pdf

Chemical Import Data May Help EPA Identify Facilities That Need to File or Update Risk Management Plans

What We Found

Import data showed large shipments of anhydrous ammonia and chlorine to ports and facilities across the United States for which facilities may need to prepare an RMP or revise their RMPs. We identified four types of situations that could indicate facilities need to prepare or revise RMPs to reflect large amounts of regulated chemicals, as follows:

- Imports of chemicals above the reporting threshold to facilities with no RMP.
- Return shipments of large empty containers to facilities with no RMP.
- Imports of chemicals in amounts greater than the amount reported in the facility's RMP.
- Large shipments of regulated chemicals for which consignee information was not available.

Given the potential public harm if an accidental release were to occur at a facility using or storing substances at or above threshold levels, the U.S. Environmental Protection Agency may want to use chemical import data to help determine whether facilities have a sufficient RMP in place.

Additional analyses and/or onsite inspections are needed to determine whether the facilities described above are complying with risk management program requirements. Because of the sensitive nature of the information we developed, we will provide the agency with our detailed analyses separately from this report.

If facilities subject to the risk management program are not preparing RMPs, they may not be taking adequate measures to prevent accidents or mitigate the consequences of such accidents to the public. Further, without a plan detailing the chemicals located onsite and the risks associated with those chemicals, first responders may not have the information necessary to safely and effectively respond to a chemical accident.

We make no formal recommendations, but we encourage the agency to use the information we developed to determine whether the facilities we identified need to prepare or revise RMPs. We also encourage the agency to assess whether it should develop procedures for using import and export data as a method for identifying potential RMP non-filers.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

THE INSPECTOR GENERAL

April 28, 2014

MEMORANDUM

SUBJECT: Chemical Import Data May Help EPA Identify Facilities That Need to File or Update Risk Management Plans
Report No. 14-N-0239

FROM: Arthur A. Elkins Jr. 

TO: Lawrence M. Stanton, Director
Office of Emergency Management
Office of Solid Waste and Emergency Response

This report provides you with information we obtained while conducting another Office of Inspector General (OIG) evaluation on a U.S. territory's implementation of U.S. Environmental Protection Agency (EPA) authorized programs. The information in this report may help the EPA in assuring that facilities comply with risk management program regulations designed to protect the public from accidental airborne releases of hazardous chemicals. Specifically, this information could help identify facilities that:

- Have not filed the required risk management plans (RMPs) with the EPA.
- May need to update their RMPs.

The work performed and disclosed in this report does not constitute an EPA OIG evaluation conducted in accordance with generally accepted government auditing standards issued by the Comptroller General of the United States. The information we obtained is not sufficient by itself to conclude whether these facilities need to prepare or update RMPs. However, given the potential public harm if an accidental release were to occur at a facility using or storing these substances at or above threshold levels, we are providing this information to you so that the EPA can take appropriate actions to determine whether these facilities are complying with applicable risk management program regulations.

Background

As required by Clean Air Act Section 112(r)(7), the EPA issued the risk management program rule in 1996. The rule requires stationary sources that have more than the threshold quantity of any of 140 regulated substances (77 toxic and 63 flammable) onsite in any one process to implement a risk management program. A facility's risk management program must include a hazard assessment, a prevention program and an emergency response program.

All covered facilities must submit an RMP to the EPA that describes their risk management program. Compliance with risk management program requirements helps to prevent accidents and mitigate the harm to human health and the environment from those that do occur. A facility's failure to follow program requirements could lead to accidental releases of harmful chemicals and/or inadequate responses to protect the public when such accidents occur. Between October 2008 and March 2012, 323 facilities reported 460 accidents to EPA. These accidents caused over \$264 million in onsite and offsite damages. Further, the accidents resulted in 14 worker fatalities, over 330 worker injuries, and over 64,000 people being sheltered in place.

The two most commonly reported toxic substances subject to risk management program requirements are anhydrous ammonia and chlorine. Both substances can cause eye, skin and respiratory tract burns. Exposure to high concentrations of either substance can be fatal. The threshold quantities for anhydrous ammonia and chlorine are 10,000 pounds and 2,500 pounds, respectively. The EPA's Office of Emergency Management, within the EPA's Office of Solid Waste and Emergency Response, manages the risk management program.

Scope and Methodology

While conducting work as part of an OIG evaluation of a U.S. territory's implementation of its EPA-authorized air programs, we obtained and analyzed data on international imports of hazardous substances to the United States and its territories for the period July 1, 2013, to January 21, 2014. This data was based on vessel manifests collected by U.S. Customs and Border Protection.¹ We obtained this data to help us determine whether facilities may be storing or using hazardous substances in amounts that would require them to prepare RMPs.² While reviewing this data, we noticed large shipments of regulated substances, as well as empty containers for these regulated substances, to various ports and facilities across the United States. We compared the import data to the EPA's RMP National Database records for the facilities or companies that received the shipments to determine whether the facilities had filed an RMP or had reported amounts consistent with the amounts imported.

We also learned that the Department of Commerce's Census Bureau, through the Automated Export System, electronically collects and maintains U.S. export data. We did not review this data as it is not readily available and exempt from public disclosure. However, this data may be useful to the EPA as another source for identifying potential RMP non-filers.

Chemical Shipping Data May Show Facilities That Need to Prepare or Update RMPs

Import data showed large shipments of anhydrous ammonia and chlorine—as well as empty containers for these substances—to ports and facilities in Alabama, Arizona, California, Connecticut, Florida, Louisiana, Mississippi, New York/New Jersey area, North Carolina, Texas and Virginia. In comparing this data to the EPA's RMP National Database, we identified four types of situations that could indicate facilities would need to prepare RMPs or revise their RMPs to reflect large amounts of covered chemicals, as follows:

¹ The international import data we used came from a commercial company that obtained vessel manifests from the U.S. Customs and Border Protection.

² We did not conduct audit work to verify or test the accuracy of this information.

- 1. Imports of chemicals above the reporting threshold to facilities with no RMP.** Imports of chemicals above the reporting threshold could indicate that these facilities are storing or using these chemicals in amounts over the RMP threshold. We identified four facilities—in California, Connecticut, Florida and Texas—that received from one to 11 shipments of anhydrous ammonia over the approximately 6-month period. Each shipment weighed from 15,000 to more than 56 million pounds. These facilities have not filed RMPs with the EPA, according to the RMP National Database.³
- 2. Return shipments of large empty containers to facilities with no RMP.** Return shipments of empty containers could indicate that these facilities are producing and/or storing chemicals for export in amounts over the RMP threshold. We identified two facilities—in California and North Carolina—that received shipments of empty chlorine containers. Based on the size of these empty cylinders, we estimated that these facilities may have produced and/or stored between 4,700 and 16,200 pounds of chlorine. Neither facility has an RMP on file with the EPA. We identified a third facility—in Arizona—that received return shipments of empty anhydrous ammonia containers. Based on the size of these empty cylinders, we estimated that this facility may have produced and/or stored from 34,000 to more than 40,000 pounds of anhydrous ammonia. The facility has an RMP on file with the EPA but the RMP does not include anhydrous ammonia.
- 3. Imports of chemicals in amounts greater than the amount reported in the facility's RMP.** This information could indicate that a facility is using or storing regulated chemicals in amounts greater than what the facility reported on its RMP. We identified one facility—in Texas—that imported more than 33 million pounds of anhydrous ammonia on two different dates, which is 43.8 percent more than its RMP-listed process of 23 million pounds of anhydrous ammonia.
- 4. Large shipments of regulated chemicals and empty containers for which consignee information was not available.** The unavailability of this information⁴ makes it difficult to identify facilities that may be storing, producing and/or using chemicals in amounts over the RMP threshold that may not have filed RMPs or need to update their RMPs. Consignee information was not available for 23 shipments of anhydrous ammonia to two ports in Louisiana, each weighing over 700,000 to more than 87 million pounds; and one shipment of chlorine, weighing approximately 550,000 pounds, to a port in Alabama. We also identified 15 return shipments of empty anhydrous ammonia containers to the Port of New York and New Jersey. Based on the sizes of these containers, we estimated facilities may have produced and/or stored between 16,000 and more than 68,000 pounds of anhydrous ammonia.

Additional analyses and/or onsite inspections are needed to determine whether the facilities described above are complying with risk management program requirements. Because of the sensitive nature of the information we developed, we will provide the agency with our detailed analyses separate from this report.

³ The addresses of two of the four facilities appeared to be corporate addresses; as such, we searched the RMP National Database for all facilities with these company names and did not find any facilities with the same names.

⁴ Under 19 CFR 103.31(d), a consignee may request from U.S. Customs and Border Protection confidential treatment of both its name and address on inward manifests, as well as confidential treatment of the shipper's name and address.

We believe this information would also be useful to the ongoing work of the Chemical Facility Safety and Security Working Group, as it assesses methods that federal and state agencies can use to identify chemical facilities that have not met or are otherwise out of compliance with regulatory safety and security requirements.⁵

Suggestions to EPA

We encourage the EPA to:

- Determine whether the facilities we identified without RMPs are required to prepare and submit RMPs to the EPA.
- Determine whether the facilities with RMPs that imported substances in excess of the amounts reported on their RMPs should amend their RMPs to account for large quantities of regulated chemicals.
- Obtain consignee information from the U.S. Customs and Border Protection for large imports of RMP-regulated substances and empty containers to ports in Alabama, Louisiana and the New York/New Jersey area and determine whether these facilities are complying with RMP requirements.
- Assess whether the EPA should develop procedures for using manifest data from U.S. Customs and Border Protection and electronic export information from the Department of Commerce as a method for identifying potential RMP non-filers.
- Based on results of the above assessment, determine whether to share with the Chemical Facility Safety and Security Working Group this approach of identifying potential facilities that are not in compliance with regulatory safety and security requirements using manifest data and electronic export information.

This report is for your information. Providing this information to the agency in this form does not preclude the OIG from looking at these issues in the future. The agency is not required to provide a written response to this report. Should you choose to provide a response to this final report, we will post your response on the OIG's public website, along with our memorandum commenting on your response. You should provide your response as an Adobe PDF file that complies with the accessibility requirements of Section 508 of the Rehabilitation Act of 1973, as amended.

We will post this report to our website at <http://www.epa.gov/oig>.

If you or your staff have any questions regarding this report, please contact Carolyn Copper, Assistant Inspector General for Program Evaluation, at (202) 566-0829 or copper.carolyn@epa.gov; or Rick Beusse, Director, Air Evaluations, at (919) 541-5747 or beusse.rick@epa.gov.

⁵ The Chemical Facility Safety and Security Working Group was established under Executive Order 13650 on Improving Chemical Facility Safety and Security (issued on August 1, 2013), and is co-chaired by the EPA, the Department of Homeland Security, and the Department of Labor.

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