U.S ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF INSPECTOR GENERAL

Catalyst for Improving the Environment

Evaluation Report

EPA Can Improve Implementation of the Risk Management Program for Airborne Chemical Releases

Report No. 09-P-0092

February 10, 2009

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Abbreviations

CAA	Clean Air Act
CFR	Code of Federal Regulations
EPCRA	Emergency Planning and Community Right-to-Know Act
EPA	U.S. Environmental Protection Agency
FTE	Full-Time Equivalent
OAR	Office of Air and Radiation
OECA	Office of Enforcement and Compliance Assurance
OEM	Office of Emergency Management
OIG	Office of Inspector General
OSWER	Office of Solid Waste and Emergency Response
RMP	Risk Management Plan
TRI	Toxics Release Inventory

Cover photo: Damage from an explosion and fire at a polyvinyl chloride manufacturing facility in 2004. Vinyl chloride monomer, the primary raw ingredient for polyvinyl chloride and a regulated substance under the Risk Management Program, fueled the explosion and fire. The surrounding community was evacuated as a result of this accident. (Photo courtesy of U.S. Chemical Safety and Hazard Investigation Board)

U.S. Environmental Protection Agency
Office of Inspector General

09-P-0092
February 10, 2009

At a Glance

Catalyst for Improving the Environment

Why We Did This Review

The purpose of the Risk Management Program under Section 112(r) of the Clean Air Act is to reduce the likelihood of airborne chemical releases that could harm the public, and mitigate the consequences of releases that do occur. We conducted this review to assess U.S. Environmental Protection Agency (EPA) implementation and oversight of this program.

Background

Under the Risk Management Program, stationary sources that have more than the threshold quantity of regulated substances on-site in any one process must implement a risk management program. All covered facilities must submit a Risk Management Plan (RMP) to EPA that describes and documents the facility's hazard assessment, and its prevention and response programs. Facilities must update and re-submit these plans at least every 5 years and when changes occur.

For further information, contact our Office of Congressional, Public Affairs and Management at (202) 566-2391.

To view the full report, click on the following link: www.epa.gov/oig/reports/2009/20090210-09-P-0092.pdf

EPA Can Improve Implementation of the Risk Management Program for Airborne Chemical Releases

What We Found

EPA can improve its program management and oversight to better assure that facilities covered by the Clean Air Act's Risk Management Program submit or re-submit an RMP. EPA had not established national procedures for identifying covered facilities that had not submitted RMPs. For the 5 States reviewed, we identified 48 facilities in 3 States that reported large amounts of covered chemicals stored on-site that had not filed RMPs. These facilities are potential RMP non-filers. For example, 10 such facilities reported having over 100,000 pounds of ammonia on-site at one time, which is 10 times greater than the regulatory threshold. Further, the status of nearly one-third (452 of 1,516) of the facilities EPA identified in 2005 as being past their due date for re-submitting an RMP had not been resolved and updated in the RMP National Database as of March 2008. Also, State permitting agencies did not properly include program requirements as a condition of facilities' Title V operating permits. When properly administered, the Title V process can help ensure that covered facilities submit RMPs to EPA and comply with program requirements.

EPA can also strengthen its inspection process to provide greater assurance that facilities comply with Risk Management Program requirements. EPA had not inspected or audited over half (296 of 493) of the high-risk facilities identified by EPA's Office of Emergency Management (OEM). Since most States have not accepted delegation of the program, EPA is responsible for ensuring compliance for over 84 percent of facilities nationwide. Of the 296 uninspected high-risk facilities managed by EPA, 151 could each impact 100,000 people or more in a worst-case accident. Accident data suggest uninspected high-risk facilities are more than five times as likely to have an accident than uninspected lower-risk facilities.

EPA has made efforts to improve the program. OEM funded studies to assess facility accident rates and used this information to develop and distribute a list of high-risk facilities to help regions better prioritize inspection efforts.

What We Recommend

We recommend that EPA implement additional management controls to identify facilities with regulated chemicals that have not filed RMPs. We also recommend that EPA develop inspection requirements to target higher-priority facilities for inspection and track its progress in completing inspections of these facilities. The Agency concurred with all of our recommendations.

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

OFFICE OF
INSPECTOR GENERAL

February 10, 2009

MEMORANDUM

SUBJECT: EPA Can Improve Implementation of the Risk Management Program for Airborne Chemical Releases
Report No. 09-P-0092

FROM: Wade T. Najjum
Assistant Inspector General for Program Evaluation

TO: Barry Breen
Acting Assistant Administrator for Solid Waste and Emergency Response

Catherine McCabe
Acting Assistant Administrator for Enforcement and Compliance Assurance

Elizabeth Craig
Acting Assistant Administrator for Air and Radiation

This is our report on the subject evaluation conducted by the Office of Inspector General (OIG) of the U.S. Environmental Protection Agency (EPA). This report contains findings that describe the problems the OIG has identified and corrective actions the OIG recommends. This report represents the opinion of the OIG and does not necessarily represent the final EPA position. Final determinations on matters in this report will be made by EPA managers in accordance with established audit resolution procedures.

The estimated cost of this report – calculated by multiplying the project's staff days by the applicable daily full cost billing rates in effect at the time – is $517,983.

Action Required

In accordance with EPA Manual 2750, you are required to provide a written response to this report within 90 calendar days. You should include a corrective actions plan for agreed upon actions, including milestone dates. We have no objections to the further release of this report to the public. This report will be available at http://www.epa.gov/oig.

If you or your staff have any questions regarding this report, please contact me at (202) 566-0832 or najjum.wade@epa.gov, or Rick Beusse at (919) 541-5747 or beusse.rick@epa.gov.

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Chapter 1
Introduction

Purpose

The purpose of the Risk Management Program under the Clean Air Act (CAA) is to reduce the likelihood of airborne chemical releases that could harm the public, and mitigate the consequences of releases that do occur. We conducted this review to assess the U.S. Environmental Protection Agency's (EPA's) implementation and oversight of this program. The objectives of our review were to determine whether:

- Procedures are in place to provide reasonable assurance that all facilities subject to Risk Management Program regulations have submitted Risk Management Plans (RMPs), and

- The inspection process provides reasonable assurance that covered facilities comply with Risk Management Program requirements.

Background

In 1984, an accidental release of a hazardous chemical caused thousands of deaths and injuries in Bhopal, India. In reaction, Congress passed the 1986 Emergency Planning and Community Right-to-Know Act (EPCRA) to help communities plan for emergencies involving hazardous substances. However, EPCRA did not require facilities to assess or reduce risks from chemical accidents. Subsequently, in 1990, Congress amended Section 112 of the CAA to enact a program to prevent releases of certain hazardous chemicals and to mitigate the consequences of such releases to the surrounding community.

EPA issued the Risk Management Program rule in 1996 to meet CAA Section 112(r)(7) requirements. Under the Program, stationary sources that contain more than the threshold quantity of any of 140 regulated substances (77 toxic and 63 flammable substances) in a process are required to conduct a worst-case release assessment and prepare and submit an RMP to EPA. The RMP describes and documents the facility's hazard assessment, and must include the results of an off-site consequence analysis for a worst-case chemical accident at the facility. Facilities whose worst-case release assessment shows that the public could be exposed during such a release, and/or the covered process has had a significant accidental release of a regulated substance during the 5 years prior to the RMP submission, are subject to additional requirements. These facilities must also implement a prevention program, an emergency response program, and an overall management system to supervise the implementation of all required program elements. Facilities were required to submit their first RMPs by June 21, 1999,

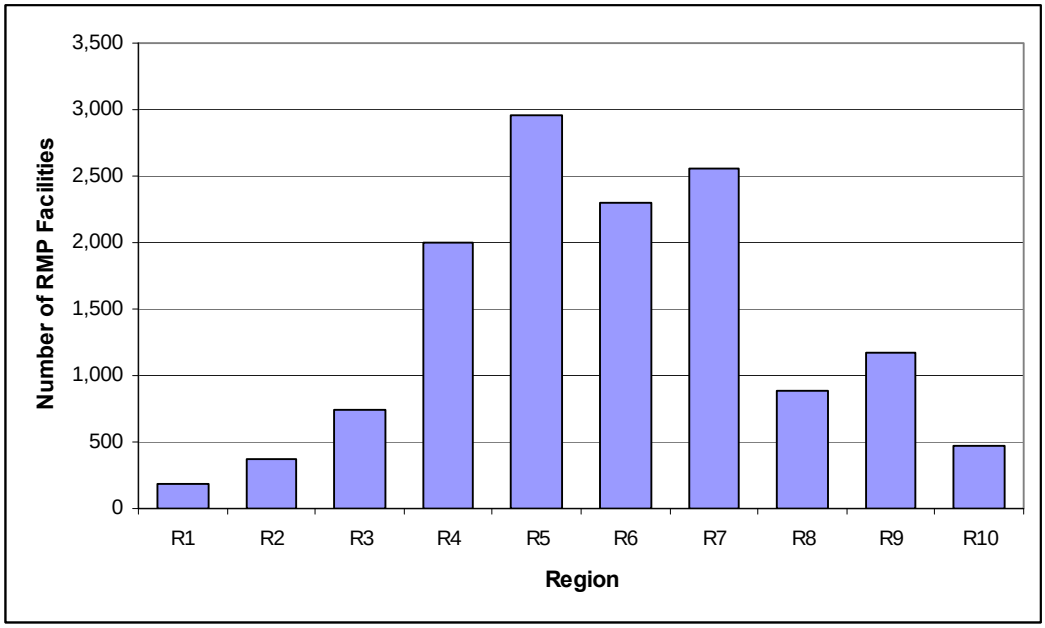
and must update them at least every 5 years. Facilities must also update their RMPs when on-site regulated substances or processes change.

Facilities subject to the Risk Management Program submit their RMPs to the RMP Reporting Center, which is overseen by EPA's Office of Emergency Management (OEM) within the Office of Solid Waste and Emergency Response (OSWER). The RMP Reporting Center maintains all the RMP-related information submitted by the facilities, and compiles that information in the RMP National Database, which is updated on a continuous basis. The database contains all the information in the plans submitted by individual facilities, including restricted off-site consequence analysis information. The data in the RMP National Database represent all facilities that have ever submitted an RMP.

Universe of Facilities Regulated by Risk Management Program Rule

As of November 29, 2007, 13,672 facilities had active RMPs on file with EPA. The number of RMP facilities varies greatly by EPA region. Figure 1.1 shows the total number of RMP facilities located in each region.

Figure 1.1: Number of RMP Facilities by EPA Region [1]



Source: OIG-developed figure from data obtained from EPA's RMP National Database.
[1] = Includes RMP facilities in States with delegated programs.

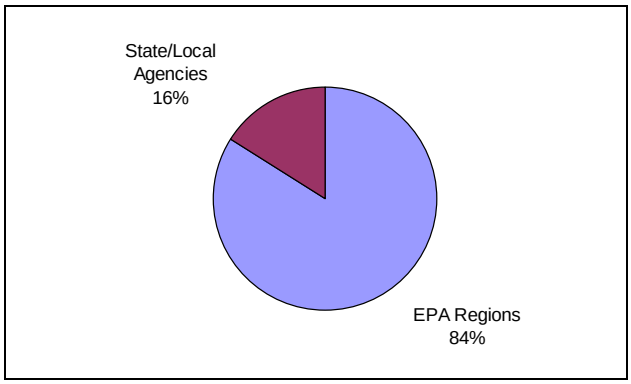
Facilities that have filed RMPs represent over 200 industries, ranging from refrigerated warehouses to petroleum refineries. Many of these facilities are also regulated under other safety/hazards programs, such as Section 302 of EPCRA (82.9 percent) and the Occupational Safety and Health Administration's Process Safety Management program (52.6 percent). The three most commonly reported substances subject to the Risk Management Program requirements are anhydrous ammonia, chlorine, and flammable mixtures.

Because of differences in the amounts, toxicity levels, and properties of chemicals held in a process and the location of the facilities, the risk and potential impact of an accident varies greatly among RMP facilities. Depending on the facility, the population potentially impacted in a worst-case release scenario ranges from zero to over 10 million for a single facility, as reported in facility RMPs submitted to the RMP National Database. More specifically, 550 of the facilities in EPA's RMP National Database reported that 100,000 people or more could potentially be impacted during a worst-case release at the facility.

Implementation of Risk Management Program

Although the Risk Management Program is required by the CAA, it is overseen by EPA's OEM in OSWER. EPA directly implements most of the Program, since very few State and local agencies have taken delegation of the Program. As of February 2008, only nine States and five local agencies had accepted full or partial delegation. Of the 13,672 active RMP facilities, EPA regions were responsible for overseeing compliance for 11,529 facilities, while delegated State and local agencies were responsible for 2,143. Figure 1.2 shows a comparison by percentage.

Figure 1.2: Percentage of RMP Facilities Managed by EPA Regions versus States and Local Agencies



Source: OIG-developed table from data obtained from EPA's RMP National Database.

Noteworthy Achievements

In 2002, EPA entered into a cooperative agreement with the University of Pennsylvania's Wharton School to analyze the RMP data submitted between 1999 and 2005. This analysis considered any statistical associations between the characteristics of the reporting facilities (such as size and location, quantity of chemicals held in a process, company financial performance, and socioeconomic characteristics of the host community for the facility) and the frequency and severity of accidents. The Wharton School also analyzed accident histories and identified industry sectors with a high number of reported accidents, such as petroleum refining, chemical manufacturing, and refrigerated warehousing and

storage. Results of this study, completed in 2007, have helped EPA to prioritize inspections based on risk.

In 2007, OEM developed and distributed a list of high-risk facilities to help regions better prioritize inspection efforts. In addition, the Office of Enforcement and Compliance Assurance (OECA) and OEM jointly revised their national guidance for Fiscal Year 2009. The revised guidance includes additional specific risk-related factors the regions should consider when selecting facilities to inspect. These factors include the same factors OEM based its high-risk list on, as well as the accident history of the facility over the past 5 years.

Scope and Methodology

We conducted several analyses using data from the RMP National Database, inspection and audit records obtained from EPA regions and delegated States and local agencies, and the Toxics Release Inventory. We focused on activities conducted from 1999 to December 2007 to ensure compliance with the RMP provisions of the Risk Management Program Rule under CAA Section 112(r)(7). We conducted our evaluation from November 2007 to July 2008.

We interviewed staff and managers from EPA's OEM, OECA, Office of Air and Radiation (OAR), and all 10 EPA regions and 4 States. We also obtained data from all EPA regions and 9 States and 5 local agencies with delegation of the Risk Management Program. In addition, we obtained and reviewed applicable Program policies, procedures, guidance, performance measures, and reporting requirements from these offices and agencies.

We conducted this evaluation in accordance with generally accepted government auditing standards. Those standards require that we obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our evaluation objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our objectives.

In addressing the second objective, we limited our assessment to whether full Risk Management Program on-site inspections or audits (i.e., conducted using the complete Program audit or inspection checklists) were conducted at facilities that had active RMPs on file with EPA. We did not assess the effectiveness of inspections or audits conducted. Given the significant number of facilities that had not received on-site inspections or audits, we believe sufficient data were gathered to address our objective.

Additional information on our scope and methodology is in Appendix A.

Chapter 2
Improvements Needed in Management and Oversight of Processes for Identifying Covered Facilities

EPA needs to improve its management and oversight of the CAA Risk Management Program to provide reasonable assurance that covered facilities submit or re-submit RMPs as required. Specifically:

- Our limited review of existing chemical data for 5 States identified 48 facilities in 3 States that reported large amounts of covered chemicals stored on-site that had not filed RMPs. These facilities may be subject to the RMP rule and thus required to file RMPs.
- The status of almost one-third of the facilities identified in 2005 as being past their anniversary date for RMP re-submission had not been resolved and updated in the RMP National Database as of March 2008.
- Permitting agencies did not correctly incorporate the Risk Management Program requirements into the operating permits of large stationary sources (CAA Title V facilities) in the eight States reviewed.

EPA's Risk Management Program procedures and guidance did not specify what activities regions or States should conduct to identify potential RMP non-filers and how often they should conduct those activities. In addition, EPA's procedures and guidance did not establish timelines to assess the status of facilities that had not re-filed their RMPs after 5 years. For Title V facilities, most of the States contacted were unaware of EPA's guidance on how to address the Program during the Title V permit process. As a result of these conditions, some facilities subject to the Program may not be preparing RMPs and taking adequate measures to prevent accidents or mitigate the consequences of such accidents to the public. Further, without a plan detailing the chemicals located on-site and the risks associated with those chemicals, first responders may not have the information necessary to safely and effectively respond to a chemical accident.

Regulations Require All Covered Facilities to Submit an RMP

Risk Management Program regulations (Title 40, Code of Federal Regulations (CFR), Part 68) require all covered facilities to submit an RMP that describes the facility's risk management program and the potential off-site impacts that could result from a worst-case release. Facilities must update and re-submit these plans at least every 5 years. If a facility closes, the facility is required to formally de-register from the Program. In addition, 40 CFR Part 68 requires Title V permitting agencies to include Risk Management Program requirements as a condition of the Title V permit for covered facilities. According to 40 CFR Part 68 and clarifying guidance issued by EPA in 1999, permitting agencies are

required to verify whether a covered facility has submitted an RMP, regardless of whether the agency has delegation of the Risk Management Program.

Existing Data Can be Used to Identify Facilities

Using existing data available to EPA, we identified 62 facilities with large on-site quantities of covered chemicals. From this initial list of 62, we identified 48 facilities that may be subject to the Risk Management Program but have not filed RMPs (i.e., potential non-filers). We conducted a search using the 2006 Toxics Release Inventory (TRI) and found that this search can be an effective way to identify facilities that may be subject to the Program. We used the Maximum Amount of Chemical On-site data element[1] to search for facilities in four States (Colorado, North Carolina, Pennsylvania, and Texas) with on-site quantities of chlorine, ammonia, or hydrogen fluoride well above the Program thresholds. We selected these chemicals because they are the toxic chemicals most involved in accidents at RMP facilities. We then searched the RMP National Database (current as of November 29, 2007) to determine whether the facilities identified in our TRI search had filed an RMP. After we identified potential non-filers for each of the four States, we discussed the results with EPA regional staff to gather additional information on the facilities.

We identified 39 facilities as potential non-filers because the amounts of chemicals stored on-site, as reported to TRI, were well above the Risk Management Program thresholds and the facilities had not submitted an RMP to EPA. Staffs in the regions that cover these facilities were able to provide information as to why they believe 14 of the facilities we identified were likely not RMP non-filers. However, they agreed to conduct additional work to determine whether the remaining 25 facilities need to submit RMPs.

Three of the remaining 25 facilities were large coal-fired electric utilities in Pennsylvania. Many utilities across the nation have begun using a technology called selective catalytic reduction to reduce nitrogen oxide emissions. This technology requires facilities to store a large amount of anhydrous ammonia on-site. Region 3 staff told us the coal-fired utilities we identified in our TRI search may be using this type of technology, and thus may be subject to the Risk Management Program requirements. The three facilities each reported having over 100,000 pounds of ammonia on-site at one time, which is 10 times greater than the Risk Management Program regulatory threshold.

We conducted a similar review for potential non-filers by using chemical data collected under EPCRA. We selectively tested for non-filers in one State,

[1] This data element reports the total amount of a given chemical stored on-site at one time. Since the Risk Management Program threshold amount is based on the amount of a chemical used, stored, manufactured, handled, or moved on-site in any one process and not the total amount stored at the facility, the Maximum Amount of Chemical On-site reported in TRI may not necessarily mean the facility is required to submit an RMP. For this reason, we selected amounts well over the Risk Management Program threshold.

Oklahoma, because Oklahoma had a readily available electronic database of EPCRA data.[2] We obtained 2008 data[3] from Oklahoma and identified 23 facilities that reported amounts of chlorine, ammonia, or hydrogen fluoride on-site at levels well above the program's thresholds but had not submitted an RMP to EPA. Eleven of the 23 facilities were in industry sectors typically subject to the Program, such as ammonia refrigeration and fertilizer facilities.

We provided EPA regional offices with lists of the 62 facilities identified during our searches and discussed the status of these facilities with regional staff. Table 2.1 presents the results of our searches using TRI and EPCRA data.

Table 2.1: Results of TRI and EPCRA Searches for Potential Non-Filers

State	Facilities with Large Amounts of Chemicals On-Site	Data Source	Results of Discussions with Regional Offices	Facilities Requiring Additional Follow-up
Colorado	2	TRI	Region 8 provided information indicating these facilities are likely NOT required to submit RMPs.	0
North Carolina	10	TRI	Region 4 and North Carolina provided information indicating these facilities are likely NOT required to submit RMPs.	0
Pennsylvania	13	TRI	Region 3 told us 11 facilities could be potential non-filers, and plans to contact or inspect them to determine if they need to submit RMPs.	11
Texas	14	TRI	Some of the facilities may be potential non-filers, and Region 6 plans to contact them to determine if they need to submit RMPs.	14
Oklahoma	23	EPCRA	Several of the facilities had submitted RMPs for facilities in the same city but at different addresses. Region 6 plans to follow up to clarify this apparent discrepancy and determine whether the remaining facilities need to file RMPs.	23
Total	**62**			**48**

Source: OIG analysis using TRI data, EPCRA Tier II data, and the RMP National Database.

We discussed activities to identify non-filers with eight regions. The regions we contacted reported undertaking various activities to identify non-filers, including reviewing industry data, State-maintained EPCRA data, data from the National

[2] Because facilities report EPCRA data to State and local emergency responders, the data are generally maintained at the State or local level. Unlike TRI, the data are not maintained by EPA.

[3] Under EPCRA, facilities are required to report the amount of certain hazardous chemicals they store on-site to State and local emergency responders. Chemicals reported under EPCRA in amounts over the Risk Management Program threshold may not necessarily mean the facility is covered by the Program since the threshold is based on amounts in individual processes, not the total amount stored at the facility.

Reporting Center, and conducting on-site non-filer inspections. However, these activities and their frequency varied by region, and staff from two regions we contacted were not aware of the ability to search TRI using the Maximum Amount of Chemical On-site data element.

The universe of facilities subject to the Risk Management Program requirements is continuously changing, as new facilities open and existing ones close, de-register, or make process or operational changes. While the regions conduct various activities to identify non-filers, EPA has not established national procedures to identify methods and timelines for conducting non-filer searches. Without procedures and methods in place to identify these facilities on a regular basis, some covered facilities may fail to submit an RMP and take the actions required by the Program regulations to prevent, deter, and mitigate accidents.

Status of Facilities Not Re-Filing RMPs Needs to be Resolved

Facilities must update their RMPs at least every 5 years. According to the RMP National Database (current as of March 28, 2008), 664 facilities had not re-submitted a plan by their 5-year anniversary date. This equates to about 5 percent of the total universe of RMP facilities. Some of these facilities may be closed or are no longer subject to the Risk Management Program. However, they have not de-registered and were still listed as active facilities in the RMP National Database as of March 28, 2008. Of these 664 facilities, 452 were more than 2 years past their 5-year anniversary.

OEM distributes monthly reports to the regions listing facilities that have not re-filed their RMPs or de-registered by their 5-year anniversary date. OEM distributed the first of these reports in September 2005, which was a year after most facilities should have submitted their first 5-year update. This report identified 1,516 facilities past their 5-year anniversary date. We compared the September 2005 report to the facilities past their 5-year anniversary date in March 2008. This comparison showed that the number of past-due facilities in the RMP National Database decreased between September 2005 and March 2008, from 1,516 facilities to 664 facilities. However, the status of 452 (or 29.8 percent) of the 1,516 facilities originally identified in September 2005 was still unresolved as of March 2008. In addition, 13 facilities that met one or more of the high-risk facility criteria discussed in Chapter 3 were on both the September 2005 and March 2008 lists, meaning their status had remained unresolved for at least 2.5 years.

Table 2.2 compares, for each region, the number of facilities past their 5-year anniversary date in September 2005 to the number in March 2008.

Table 2.2: Number of Facilities Past 5-Year Anniversary Date in 2005 and 2008

Region	No. of Facilities Past 5-Year Anniversary Date as of September 2005	No. of Facilities Past 5-Year Anniversary Date as of March 2008	No. of Facilities Past 5-Year Anniversary Date as of March 2008 that were on Original September 2005 Report
1	51	6	3
2	49	9	4
3	10	3	0
4	178	82	55
5	471	208	179
6	428	204	143
7	156	51	21
8	52	34	22
9	105	66	25
10	16	0	0
Total	**1,516**	**664**	**452**

Source: OIG analysis using data from the RMP National Database.

As shown in Table 2.2, all of the regions had a lower number of unresolved facilities in March 2008 than in September 2005, due to activities undertaken by the regions. For example, Region 6's RMP Enforcement Coordinator told us that in 2005 and 2006 Region 6 sent 373 formal CAA Section 114 letters to facilities that had not re-submitted, resulting in Region 6 assessing penalties at 100 facilities. The coordinator also informed us that 91 facilities either were no longer subject to the Program or could demonstrate they had attempted to update their RMPs. Further, approximately 130 letters were returned undeliverable due to facility closures, relocations, or incorrect information in the original RMP. Region 3 staff told us that they started an initiative in 2004 to identify facilities that re-filed their RMPs late. This initiative resulted in settlement agreements with fines at about 60 facilities that failed to re-submit their plans.

Despite these activities, some regions still had a relatively large number of unresolved facilities in March 2008. Other than the reports it sends to the regions listing the facilities that are past their anniversary, EPA does not have specific procedures or timelines in place for following up with facilities that are late in re-submitting their plans.

Some of the facilities that remain unresolved may be closed facilities that did not de-register. To address this issue, OEM provided guidance to the regions in 2006 on how to remove closed facilities from the universe of active facilities in the RMP National Database. To remove a facility from the active universe, the region must verify that a facility is closed or no longer in operation, and that covered chemicals are no longer present at levels above the regulatory thresholds. Verification requires a site visit or other credible, documented evidence. However, closed facilities still appeared as active in the RMP National Database.

We found evidence that 7 of 13 high-risk facilities on both the September 2005 and March 2008 lists were no longer in operation but had not been removed from the active list of facilities in the RMP National Database. Without an accurate picture of the regulated universe in the RMP National Database, Program staff may not be able to effectively plan and prioritize compliance assurance activities, such as inspections.

Since March 2008, Regions 3 and 8 took additional actions to resolve past-due facilities. Staff from these regions told us they had since resolved the status of the past-due facilities that we identified as unresolved in the RMP database in March 2008.[4] Appendix B provides more information about regional activities to identify non-filers.

Program Requirements Not Properly Addressed during Title V Permit Process

CAA Title V permitting agencies did not properly address Risk Management Program requirements during the Title V permit process. Title V sources are the largest stationary sources of air pollution. Approximately 16 percent (2,222) of the RMPs filed with EPA were for Title V facilities. Although Title V facilities are a small part of the overall universe of RMP facilities, over half of the facilities on OEM's high-risk list are Title V facilities.

According to 40 CFR Part 68.215(a), Title V operating permits should include a statement listing the Risk Management Program requirements as a condition when applicable. However, permits in only three of eight States reviewed specifically identified the Program's requirements as a condition of the Title V permit when applicable. The remaining five States used conditional language in their Title V permits, regardless of whether the facility was subject to the Program's requirements. An example of the conditional language from one of the State's permits follows:

> *When and if the requirements of 40 CFR Part 68 become applicable, the Permittee shall comply with all applicable requirements of 40 CFR Part 68.*

An OAR manager confirmed that the Title V permit should contain a statement that definitively establishes these requirements as a condition of the permit when the requirements are applicable to the facility. The OAR manager also told us that conditional statements, such as the one above, are not sufficient for incorporating the Risk Management Program provisions into the Title V permit. The manager also told us that if a facility is not subject to Program requirements,

[4] During interviews with Regions 3, 6, and 8, we provided staff with lists of the past-due facilities we identified in the RMP National Database in March 2008. Because we did not interview any of the other regions about late re-filers, we provided the lists to only these three regions; other regions may also have taken additional steps to resolve past-due facilities since March 2008.

the permit should not contain any statements regarding CAA Section 112(r) provisions.

Additionally, 40 CFR Part 68.215(e) requires that Title V air permitting agencies verify that the source owner or operator has registered and submitted an RMP or a revised plan when required. Specifically, the regulation states:

> *The air permitting authority or the agency …shall, at a minimum: (1) Verify that the source owner or operator has registered and submitted an RMP or a revised plan when required by this part.*

We interviewed staff from four of the eight States to determine how they addressed the Risk Management Program during the permit application and issuance process. Based on these interviews, none of the States independently verified during the permitting process whether a covered facility had registered and submitted an RMP or revised plan, if required. Specifically:

- Two States required facilities to say in their permit application and annual compliance certifications if they had submitted an RMP, but did not independently verify this. The States did not request that the facility submit a copy of the plan to the State, nor did they check the RMP National Database to see if the facility had a plan on file. Staff from these States asked us about obtaining access to the RMP National Database because they thought the information in the RMPs was restricted and not available to the public.

- Two States did not ask facilities to say in their permit application whether they were subject to the Risk Management Program requirements. Staff from the two States said they do not ask about the requirements because the States do not have delegation of the Program. Staff told us they assumed EPA was responsible for verifying whether covered facilities had submitted plans.

EPA's "Title V Program Responsibilities Concerning the Accidental Release Prevention Program" guidance, issued in 1999, recognizes that State and local agencies with permitting authority may not have delegation of the Risk Management Program. The guidance states that these activities are the responsibility of the permitting agency, regardless of whether the State has accepted delegation for the Program. However, staff from three of the four States we contacted told us they were not aware of EPA's guidance.

In at least one instance, EPA's oversight of the Title V program did not identify deficiencies pertaining to incorporating Program requirements into the Title V permit process. We found that one State in Region 9 did not incorporate the Risk Management Program's requirements into its Title V permits and did not ask permit applicants whether they were required to submit an RMP. However, the Region's comprehensive evaluation of this State's Title V program, conducted in

2005, did not report any concerns pertaining to Risk Management Program requirements.

Title V permits provide a comprehensive accounting of all applicable CAA operating requirements for a facility, and require that facilities certify compliance with these requirements annually. Accordingly, the Title V permitting process provides a management control for identifying facilities subject to the Risk Management Program requirements, and ensuring that these facilities comply with these requirements. However, if States do not properly incorporate the Risk Management Program requirements into the Title V permits where applicable, this control is not available. In addition, the public is not provided with accurate information regarding the specific regulations applicable to the facility. This is of particular importance for the Risk Management Program, since RMP information is not readily available to the public due to security concerns.

Conclusions

EPA can improve its procedures, guidance, controls, and oversight for ensuring that facilities have submitted or re-submitted an RMP as required. EPA should establish procedures for periodic reviews to identify potential non-filers that include the use of TRI and other useful search methods. In addition, EPA should establish timelines for resolving the status of facilities and removing closed facilities from the active list of facilities. Addressing RMP status during the Title V permitting process can also help ensure that covered facilities file their RMPs with EPA and comply with the Risk Management Program's requirements. These actions can help provide an accurate and complete picture of the Program universe, which regulators need to prioritize and select facilities for inspection.

Recommendations

We recommend that the Assistant Administrator for Solid Waste and Emergency Response:

2-1 Strengthen controls to identify facilities that did not file RMPs by:

- Revising Headquarters operating guidance to specify how often the regions should conduct reviews to identify non-filers, and establish milestones for reviewing and removing inactive facilities from the RMP National Database.

- Incorporating the TRI search methodology and other effective methodologies used by EPA regions (e.g., using the EPCRA and TRI on-site compliance evaluations) into the new Headquarters guidance for regions to use in identifying potential non-filers.

- Updating the RMP National Database to de-activate closed facilities.

2-2 Ascertain whether the facilities we identified through our TRI and EPCRA data searches are subject to Risk Management Program requirements and, if so, take appropriate action to ensure that these facilities comply with Program requirements.

We recommend that the Acting Assistant Administrator for Air and Radiation:

2-3. Instruct Title V permitting authorities on the proper procedures for identifying and including Risk Management Program requirements in Title V permits – including guidance on how to verify whether facilities have submitted RMPs – and monitor implementation of these requirements.

Agency Comments and OIG Evaluation

OSWER and OAR agreed with all of the recommendations in Chapter 2. OSWER noted that OEM and OECA have been working in coordination for the past several years on some of the issues we identified. A summary of the Agency's response to each recommendation and our analysis follows.

- ***Recommendation 2-1:*** OSWER stated that it will provide guidance to the regions by December 2009. The guidance will specify when regions should conduct reviews for non-filers and what methodologies they should use for these reviews, as well as a timeline for reviewing and removing inactive facilities from the RMP National Database. We believe the Agency's planned action meets the intent of this recommendation. The recommendation will remain open in our tracking system pending our receipt and approval of the Agency's final corrective action plan.

- ***Recommendation 2-2:*** OSWER commented that several regions are in the process of reviewing the facilities we identified in our TRI and EPCRA searches to determine if they are indeed covered by the Risk Management Program requirements and need to submit an RMP. The Agency stated that, depending on the outcome of the reviews, it would take "appropriate action" to ensure that the facilities comply with the requirements. The Agency anticipates that this review should be completed by September 2009. We believe the Agency's planned action should achieve the intent of this recommendation. The recommendation will remain open in our tracking system pending our receipt and approval of the Agency's final corrective action plan.

- ***Recommendation 2-3:*** OAR stated that it will remind Regional Air Directors about the 1999 Title V permitting guidance and instruct them to inform State Title V program managers of its existence as well. OAR also submitted a corrective action plan with milestones for these actions. We have accepted the corrective action plan for Recommendation 2-3, and the

recommendation will be "closed" in our tracking system upon issuance of this report. In accordance with Order 2750, the Agency is responsible for tracking completion of this corrective action in the Management Audit Tracking System.

Appendix C contains the full texts of OSWER's and OAR's responses to the draft report.

Chapter 3
Many High-Risk Facilities Have Not Been Audited or Inspected

Over half of the high-risk RMP facilities identified by OEM have never received an on-site inspection or audit. Further, over 65 percent of all active RMP facilities had not received an on-site inspection or audit since inception of the Risk Management Program in 1999. Since most States have not accepted delegation of the Program, EPA is responsible for ensuring compliance for the majority of facilities nationwide. However, EPA has a limited number of inspectors to conduct on-site inspections/audits. To encourage more effective use of limited resources, OEM began distributing lists of high-risk facilities to the regions in May 2007. The regions are not required to inspect these higher-risk facilities before lower-risk facilities, but we believe a more rigorous risk-based approach is warranted. We noted 162 facilities that could each impact 100,000 people or more under a worst-case scenario accident have never been inspected or audited by EPA or a delegated State or local agency. Accident data suggest that un-inspected high-risk facilities are more than five times as likely to have an accident as un-inspected lower risk facilities.

Oversight Includes Audits and Inspections

Title 40 CFR Part 68.220 requires implementing agencies (EPA regions or delegated State and local agencies) to periodically audit RMPs, and requires revisions when necessary to ensure compliance with RMP requirements. These audits are referred to as 68.220 audits. OEM guidance states that full compliance with Program regulations cannot be determined without on-site or independent verification of the information submitted in an RMP. Thus, 68.220 audits can include on-site verification of compliance with the facility's RMP.[5]

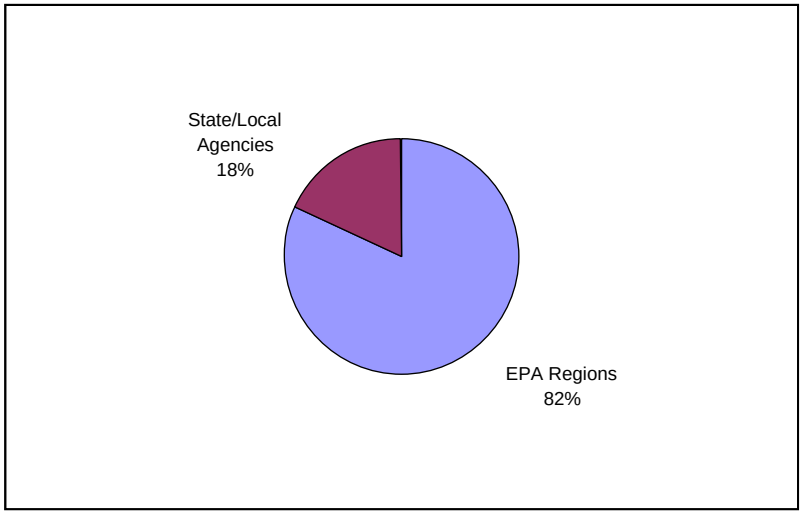
Compliance inspections under CAA Section 114 authority are more comprehensive than 68.220 audits in that they require an on-site visit and review of compliance with all aspects of the Program's regulations, not just those related to the facility's risk management plan. Further, inspections can result in direct enforcement actions. As the Program has matured, EPA's oversight emphasis has moved from audits to federally enforceable inspections. Since Fiscal Year 2007, OECA's National Program Manager Guidance has stated that regions should conduct inspections and "may include periodic 68.220 audits" as part of their compliance program. OECA includes only inspections – not audits – in its performance measure for the Risk Management Program, and encourages regions

[5] Although 68.220 audits need not be conducted on-site, we included only 68.220 audits that were conducted on-site in addressing the objectives of this evaluation.

to devote their resources to inspections rather than audits. However, OEM includes both RMP inspections and audits in its performance measures.

Although OECA has a general requirement that regions inspect 5 percent of their total number of regulated facilities each fiscal year (beginning with Fiscal Year 2007), some regions have negotiated to conduct a smaller number of inspections because of limited resources. To help regions prioritize their inspections, in 2007 OEM identified a list of 402 facilities as Tier 1 facilities and a list of 213 as Tier 2 facilities.[6] After eliminating de-registered[7] facilities, the numbers of Tiers 1 and 2 facilities decreased to 390 and 208, respectively, as of November 29, 2007. The majority of these high-risk facilities (493 of 598) are located in areas where the Program is managed by EPA regions.

Figure 3.1: Percentage of OEM High-Risk Facilities Managed under EPA Regions and Delegated State/Local Agencies as of November 29, 2007



Source: OIG analysis based on OEM's high-risk list and the RMP National Database.

In Fiscal Year 2009, OEM and OECA revised their National Program Manager Guidance to state that regions should consider the following risk-related factors in deciding which facilities to inspect:

- Facilities whose reported RMP worst-case scenario population exceeds 500,000 people;
- Facilities holding any RMP-regulated substance on site in an amount more than 10,000 times the RMP threshold quantity for the substance;

[6] Criteria for listing Tiers 1 and 2 facilities include the population impacted in a worst-case release scenario, the amount of chemical held in a process that is above the regulatory threshold quantity, and the worst-case release scenario endpoint distance.

[7] A de-registered facility has submitted a letter to the RMP Reporting Center stating that it is no longer covered by the Risk Management Program rule and the reasons why. Reasons for de-registering include replacing regulated substances in a facility's processes with unregulated substances and decreasing the quantity of regulated substances in a facility's processes to below threshold levels.

- Facilities whose reported RMP worst-case scenario endpoint distance equals or exceeds 25 miles;
- Facilities that had one or more significant accidental releases within the previous 5 years; and
- Other facilities where information possessed by the regional offices indicates the facility may be high-risk.

The first three factors are the same criteria OEM used to develop its list of Tier 1 facilities.

We obtained on-site inspection and audit data from all 10 EPA regions and all State and local agencies with delegated programs. We then determined the percentage of all RMP facilities that had received an on-site inspection or audit from EPA or a delegated State/local program since the inception of the Program in 1999. We also determined the extent to which EPA regions or State and local agencies had inspected high-risk facilities using three separate criteria, as follows:

1. High-risk facilities identified by OEM (Tier 1 plus Tier 2 facilities), which considers the amount of covered chemicals held in a process, potential population impact, and the magnitude of area impacted by a worst-case release scenario.
2. Facilities that could impact 100,000 people or more during a worst-case release.
3. Facilities with a Wharton School hazard index score in the top 5 percent of all facilities under the jurisdiction of their implementing agency.[8]

It is important to note that identifying a facility as inspected/audited does not necessarily indicate adequate compliance oversight occurred. In many cases, several years passed since the last inspection/audit, and conditions at the facility could have changed. For example, 23 percent of facilities inspected/audited by EPA or State/local agencies were inspected/audited 4 years ago or more. Further, from 26 to 30 percent of high-risk facilities (depending on risk type) were last inspected/audited 4 years ago or more.

Significant Percent of High-Risk Facilities Not Inspected or Audited

EPA had inspected/audited about 26 percent of its active facilities in the November 29, 2007, Risk Management Program universe. In contrast, State/local delegated programs had inspected/audited over 70 percent of their facilities. Appendix D shows the percentage of facilities inspected/audited by EPA regions and delegated State/local agencies.

[8] The OIG calculated the hazard indices for RMP facilities using a formula developed by Wharton School researchers that takes into account the volume of chemical(s) above the regulatory threshold and the number of regulated chemicals held in a process at the facility.

Inspection rates for high-risk facilities were greater than for all facilities, but a significant number of these high-risk facilities remained uninspected. The EPA regions had inspected only 40 percent of the high-risk facilities identified by OEM since the program's inception in 1999. Region 3 had the highest inspection rate of OEM's high-risk facilities (96 percent), while Region 6 had the lowest (15 percent). With the exception of Regions 2, 3, and 4, the inspection/audit rates of high-risk facilities – whether they are among any one of the risk types – were generally low. All regions had inspection/audit rates of over 60 percent for facilities that appeared on all three lists except for Region 6 (0 percent) and Region 9 (55 percent). The overall inspection rates for high-risk facilities were much greater in delegated State/local programs than the EPA programs. Table 3.1 below shows inspection/audit rates by each risk type.

Table 3.1: Inspection/Audit Rates of High-Risk Facilities by EPA Region and Delegated State/Local Agencies as of December 31, 2007

EPA Region or Delegated States/ Locals	OEM High-Risk Facilities (Tier 1 + Tier 2 facilities)			Facilities Impacting ≥100,000 in a Worst-Case Release Scenario			Facilities with the Highest 5% of Hazard Indices in Their Respective Region			Facilities on All Three Lists		
		Inspected/ Audited			Inspected/ Audited			Inspected/ Audited			Inspected/ Audited	
	No.	No.	%	No.	No.	%	No.	No.	%	No.	No.	%
1	6	3	50	8	5	63	10	6	60	3	2	67
2	18	17	94	21	21	100	15	11	73	6	6	100
3	23	22	96	36	33	92	35	28	80	11	11	100
4 [a]	31	25	81	31	27	87	23	19	83	7	6	86
5	88	45	51	77	62	81	127	36	28	29	23	79
6 [b]	185	28	15	155	31	20	116	9	8	33	0	0
7	48	12	25	16	8	50	129	20	16	8	6	75
8	20	13	65	10	6	60	45	15	33	2	2	100
9	56	23	41	73	24	33	59	20	34	20	11	55
10	18	9	50	12	6	50	24	12	50	4	3	75
EPA Subtotal	493	197	40	439	223	51	583	176	30	123	70	57
Delegated States/ Locals	105	90	86	111	95	86	115	96	83	34	29	85
Total [c]	**598**	**287**	**48**	**550**	**318**	**58**	**698**	**272**	**39**	**157**	**99**	**63**

Source: OIG analysis based on data obtained from the RMP National Database, all 10 EPA regions, and State/local agencies with program delegation.

[a] Most facilities in Region 4 are managed under delegated programs. The universe and inspection rates for these facilities are reflected under the delegated States/locals category.
[b] Since December 31, 2007, Region 6 has inspected an additional 12 facilities on the OEM list of high-risk facilities as of 8/29/08. This includes five facilities that appeared on all three lists.
[c] Totals do not include inspections/audits performed by the non-delegated State programs in California, Louisiana, and Nevada because we did not assess the scope of these inspections/audits and these data are not routinely reported to EPA. Region 9 staff told us that California has conducted over 4,900 inspections under its State accident prevention program, and Nevada conducts comprehensive reviews of all facilities under its State program at least once every 5 years.

While Table 3.1 shows three different methods of identifying high-risk facilities, we did not assess whether one method was better than another. Further, we recognize that other methods for identifying high-risk and priority facilities may

be useful. Also, in some instances, circumstances may dictate that non-RMP facility inspections (e.g., CAA Section 112(r) General Duty Clause inspections) should take precedence over RMP facility inspections. Appendix E presents the total number of all RMP facility, General Duty Clause, and non-filer-related on-site inspections or audits reported by each region.

The Risk Management Program regulations and EPA guidance cite a facility's accident history as a factor for selecting facilities to audit or inspect. Past accident history can be an indicator of unsafe operating practices and thus these facilities may present a greater risk to the public. However, since 1999, EPA has only conducted full RMP inspections or audits at about 39 percent of the facilities that have reported accidents in their RMPs. Facilities were required to report covered chemical accidents in their original RMP submittals. Effective April 9, 2004, facilities were required to update the chemical accident section of their submitted RMP within 6 months of the accident. Appendix F shows inspection/audit rates for facilities that reported accidents in their RMPs.

Factors Limiting EPA's Ability to Inspect/Audit RMP Facilities

Three factors appeared to limit EPA's ability to conduct on-site audits or inspections and thus ensure that facilities comply with Risk Management Program requirements. These factors were: (1) the fact that few State or local agencies had accepted delegation of the Program, (2) the relatively low number of EPA inspectors available to conduct oversight, and (3) limited training. Given these limitations, we believe an inspection approach that targets high-risk facilities and most effectively uses limited resources is needed.

Few States Have Taken Delegation of the Program

Generally, EPA grants delegation of authority for State and local agencies to implement and administer CAA programs. However, only 9 States and 5 local agencies of the total 114 agencies receiving air grant funds from EPA have accepted delegation of the Risk Management Program.[9] The majority of the States (6 of 9) and local agencies (4 of 5) that have accepted delegation are in Region 4. One factor for this was Region 4's decision to attach Section 105 air grant funds to the Risk Management Program. For example, where Region 4 States declined to request delegation of the Program, Region 4 withheld a percentage of that State's air grant funds.

[9] The nine delegated States are Delaware, Florida, Georgia, Kentucky, Mississippi, North Carolina, New Jersey, Ohio, and South Carolina. The five local agencies are Allegheny County (Pennsylvania), Buncombe County (North Carolina), Forsyth County (North Carolina), Jefferson County (Kentucky), and Mecklenburg County (North Carolina). Although Puerto Rico and the Virgin Islands have technically been granted delegation of the Program, Region 2 has assumed responsibility for implementing the Program in these territories because of the territories' funding constraints and/or failure to adequately implement the Program.

Two States – New Jersey and Delaware – had programs in place before EPA issued its Risk Management Program regulations. Both of these States requested and received delegation of the federal Program from EPA. These two States operate fee-based programs whereby RMP facilities pay fees to the State to cover the cost of administering the program. At least three States – California, Nevada,[10] and Louisiana – implement State programs without delegation of the federal Program from EPA.

We discussed the use of air grants and Title V permit fees to fund the Risk Management Program with EPA's OAR staff. OAR staff told us that if a State accepted delegation of the Risk Management Program, its Title V permit fees should be used to fund Program compliance and enforcement activities for Title V sources. CAA Section 105 grant funds could be used to fund these activities for non-Title V sources. However, OAR does not specifically designate a portion of the Section 105 grant funds for the Risk Management Program. The Headquarters grant allocation includes the category "Air Toxics Implementation," which encompasses the Risk Management Program. The regions have the discretion to specifically designate a portion of these funds to the Program. However, only Region 4 has exercised this option.

We also discussed EPA's options for increasing the number of State delegated programs. OAR staff said the air toxics section of the CAA (Section 112) is less forceful than other sections in promoting State acceptance of program delegation. EPA cannot insist that States accept delegation. For example, CAA Section 112 states:

> ***Each State may develop*** [emphasis added] *and submit to the Administrator for approval a program for the implementation and enforcement . . .*

In contrast, for the National Ambient Air Quality Standards, CAA Section 107 states:

> *Sec. 107. (a)* ***Each State shall have the primary responsibility*** [emphasis added] *for assuring air quality within the entire geographic area comprising such State by submitting an implementation plan for such State which will specify the manner in which national primary and secondary ambient air quality standards will be achieved and maintained . . . .*

Since few State or local agencies have taken delegation of the program, EPA is responsible for ensuring compliance with the majority of facilities nationwide.

[10] According to Region 9's Enforcement Coordinator for EPCRA and the Risk Management Program, Nevada requested delegation of the Program but it was not accepted due to problems with the State's regulatory language.

Limited Number of EPA Full-Time Equivalents for Program

EPA regions have a limited number of Full-Time Equivalents (FTEs) available to inspect RMP facilities. Table 3.2 shows the number of Risk Management Program enforcement FTEs, as reported by EPA to Congress in October 2007, and the ratio of facilities-per-FTE. This ratio ranges from a low of 140 facilities-per-FTE in Region 1 to a high of 922 in Region 6. Collectively, the 10 EPA regions have a ratio of 473 facilities-per-FTE. This ratio is much greater than the 71 facilities-per-FTE for delegated State and local agency Programs.

Table 3.2: Ratio of Facilities per Enforcement FTE [a]

Region or Delegated States/Locals	Number of FTEs [b]	Number of Facilities	Ratio of Facilities per FTE
1	1.3	182	140
2	1.5	285	190
3	3.5	698	199
4	1.0	441	441
5	5.0	2,526	505
6	2.5	2,304	922
7	3.8	2,563	674
8	1.0	890	890
9	3.0	1,170	390
10	1.75	470	269
EPA Total	**24.35**	**11,529**	**473**
Delegated States/Locals	**30.19**	**2,143**	**71**

Source: OIG analysis using regional FTE data reported to Congress by EPA, delegated programs' FTE data obtained from EPA or directly from the delegated program, and data obtained from the RMP National Database.

[a] FTEs may perform other duties in addition to inspecting RMP facilities, such as providing training and outreach to facilities and conducting General Duty Clause and non-filer inspections.
[b] FTEs do not include Senior Environmental Employment program employees. In 2007, EPA reported to Congress that 19 such employees worked as inspectors in the Risk Management Program. If these inspectors spent 100 percent of their time on the Risk Management Program, the ratio of facilities-per-FTE for EPA regions as a whole would be 266, which is still higher than the 71 for delegated State/local agencies.

Further, delegated State and local agencies generally have less geographic area to cover than their EPA counterparts. In addition, some regions told us that they had limited travel funds for Risk Management Program inspections.

OSWER supplements regional FTEs by providing each region with $150,000 in extramural funds. Some regions have used these funds for grants or other agreements to enlist inspection support from the States in the region. For example, Region 7 has used its extramural funding to award grants to its States to assist in conducting limited reviews of Risk Management Program requirements at agricultural facilities. In 2004 and 2005, Region 5 had an agreement with the Illinois Department of Agriculture to conduct federally-enforceable inspections of agricultural facilities. The Illinois inspectors received the same training as EPA Risk Management Program inspectors, and conducted about 500 inspections

during that period. Staffs in Regions 6 and 7 noted a disparity in funding since each region receives the same amount of extramural funds regardless of the total number of facilities in its Region.

Some Inspectors Have Not Received Basic and Advanced Training

In addition to having a limited number of inspectors to conduct on-site inspections of RMP facilities, not all EPA inspectors have received the required Program training. EPA Order 3500.1 requires that RMP inspectors have "Risk Management Plan Techniques" training. However, when we started our evaluation, EPA regional staff in four regions told us that not all of their inspectors had this training and EPA had not offered this course in several years. Further, staff from three regions and two delegated States said inspectors would benefit from more advanced training, such as industry- or process-specific training. Funding has been a barrier to obtaining the necessary training.

In lieu of EPA-provided training courses, staff from some regions said they used alternative methods to train their RMP inspectors. Region 6 managers told us they had implemented a "train-the-trainer session" in which one inspector was sent to the training and this inspector later presented the material to other inspectors. Region 6 staff also noted that the Region has sent RMP inspectors to the Occupational Safety and Health Administration's Process Safety Management[11] training and to Process Safety Management/Risk Management Program training provided by private vendors. Region 7 hired a contractor to teach the RMP Techniques training course to its staff in the fall of 2005.

Prior to our field work, EPA took steps to address the training issues by updating the curriculum for the RMP Techniques course. EPA conducted the updated RMP Techniques training class in June 2008 and October 2008. OEM officials told us they plan to continue to offer the RMP Techniques course once a year or more as needed.

EPA Does Not Require Inspection of High-Risk Facilities

In May 2007, OEM and OECA started providing lists of high-risk facilities and encouraging regions to inspect these facilities. However, EPA does not require or track inspection of high-risk facilities, and only requires regions to inspect 5 percent of their facilities each fiscal year. Further, OECA and the regional inspectors do not routinely identify and agree upon which specific facilities to inspect. In contrast, EPA has implemented more rigorous requirements for other inspection programs. For example, States submit a list of planned inspections of facilities subject to air toxics emissions standards to EPA regions for approval.

[11] The Occupational Safety and Health Administration's Process Safety Management standard is very similar to EPA's Risk Management Program, and many of the EPA's Program's requirements are based on that other agency's standards.

We contacted four EPA regions with low inspection rates for OEM's high-risk facilities to discuss their regional strategies for prioritizing inspections and found the following.

- **Region 5's** Chemical Emergency Preparedness and Prevention Section Chief told us the Region selects facilities for inspection based on off-site consequence analysis population impacts, and OEM did not object to this inspection strategy. The Chief said Region 5 has ranked all its facilities based on population impacts and is working its way through that list. Inspection data showed that Region 5 has inspected 81 percent of facilities that could impact 100,000 people or more in a worst-case release scenario (see Table 3.1).

- **Region 6's** RMP Enforcement Coordinator told us the Region prioritizes inspections based on geographic distribution; industry sector; accident history; and risk factors such as quantity of chemicals stored on-site, population impacts, and environmental receptors in a worst-case release scenario. He also said that to maximize inspection resources, staff inspect nearby facilities that may not necessarily meet the above criteria. This allows them to inspect multiple facilities during the same inspection trip. They also limit the extent to which they inspect multiple facilities owned and operated by a common "parent entity." In addition, managers told us that beginning in Fiscal Year 2008 the Region implemented a more risk-based targeting strategy for Title V facilities subject to the Risk Management Program. Accordingly, Region 6 has inspected an additional 12 facilities on OEMs' high-risk list during Fiscal Year 2008.

- **Region 7's** RMP Team Leader told us the Region prioritizes facilities to inspect based on accident history and industry sector. The Team Leader told us that because the Risk Management Program rule is a performance-based standard, facilities that have had accidents have the highest inspection priority. In terms of industry sector, Region 7 staff said they have focused on inspecting ammonia refrigeration facilities, refineries, and drinking water facilities for various reasons, including accident history, proximity to population centers, and security issues.

- **Region 9** staff told us the Region bases its initial list of facilities to inspect on the criteria OEM used to develop its high-risk lists. It then adds other facilities that are of concern to residents or local agencies, and facilities that have reported releases to the National Response Center. Region 9 staff also said that to most effectively utilize their resources, they place an additional focus on facilities in States, such as Arizona, that do not have their own risk management or accident prevention programs.[12]

[12] Two States in Region 9 – California and Nevada – have accident prevention programs that were established prior to EPA's Risk Management Program.

We also discussed inspection strategies with Region 10. Region 10 uses a prioritization methodology that considers a number of criteria, including number of reported accidental releases, population impacted by a worst-case scenario, and location in environmentally sensitive areas. Region 10's strategy also includes inspections to detect non-filers.

The accident rates of never-inspected facilities support an inspection strategy that targets high-risk facilities. As shown in Table 3.3, about 29 percent of the never-inspected high-risk facilities identified in OEM's high-risk list have had accidents. On the other hand, only about 5 percent of the never-inspected lower-risk facilities (i.e., facilities not on OEM's high-risk list) have had accidents. This suggests that never-inspected high-risk facilities are more than 5 times as likely to have an accident as never inspected lower risk facilities. The higher accident rate for never-inspected high-risk facilities also suggests that OEM's high-priority criteria are successful in identifying facilities that are more likely to have accidents. According to data filed by facilities in the RMP National Database, there were 162 uninspected facilities listed on OEM's high-risk list that could each impact 100,000 people or more in a worst-case release scenario.

Table 3.3: Accident Rates for Uninspected Facilities

	Number of Never-Inspected Facilities	Number with Accident(s)	Percent with Accident(s)
OEM High-Risk Facilities	311	91	29
Non-OEM High-Risk Facilities	8,795	406	5

Source: OIG-developed table based on inspection/audit data received and data in the RMP National Database.

Impact of Accidents at RMP facilities

The cost of accidents at RMP facilities can be significant in terms of human injuries and deaths as well as financial. For example, 1,490 accidents were reported to EPA by the current universe of RMP facilities. These accidents resulted in over 40 worker deaths, nearly 1,500 worker injuries, over 300,000 people being sheltered in place, and over $1 billion in on-site and off-site damages. These effects, along with the accident rate of never-inspected high-risk facilities, show the importance of prioritizing inspections based on risk.

We noted that accidents occurred at two RMP facilities in Region 6 after we began our evaluation, and neither facility was ever inspected/audited by the Risk Management Program office. One of these facilities was on OEM's list of Tier 1 facilities. These accidents resulted in one worker death, multiple injuries, and significant on-site monetary damage. In a worst-case scenario, over 35,000 people could have been impacted by each of these accidents.

Conclusions

Although nearly 10 years have passed since the inception of the Risk Management Program in 1999, EPA regions have only inspected/audited about 40 percent of OEM's high-risk facilities. These inspection/audit rates were much lower than those of delegated States and local agencies. Given the limited number of EPA resources to implement the Program, we believe a more rigorous risk-based inspection approach is warranted. Prioritization of inspections based on risk is important because of the significant effects of past accidents and the higher accident rates of never-inspected high-risk facilities. If a covered facility has not been inspected, EPA does not have reasonable assurance that the facility has taken measures to operate safely. This can put the public, employees, and first responders at risk in case of an accident.

Recommendations

We recommend that the Assistant Administrator for Solid Waste and Emergency Response:

3-1 Provide the Risk Management Program required training courses to ensure that all Program inspectors are adequately trained, and provide industry-specific training when warranted.

3-2 Explore strategies for providing additional resources to those regions with high facility-to-FTE ratios to ensure that high-risk facilities are inspected expeditiously.

We recommend that the Assistant Administrator for Enforcement and Compliance Assurance:

3-3 Develop and implement a risk-based inspection strategy that incorporates regional input on high-risk facilities to prioritize facilities for inspection based on risk and other priority measures.

3-4 Revise the performance expectation for the Risk Management Program to incorporate the inspection of the high-risk facilities developed in response to Recommendation 3-3.

3-5 Track which high-risk facilities have been inspected by the regions and/or delegated State/local agencies and develop procedures to provide expeditious inspection coverage of those high-risk facilities not inspected by the regions or State/local agencies.

Agency Comments and OIG Evaluation

OSWER and OECA agreed with all recommendations in Chapter 3, and noted that they had taken steps in the past few years that support several of our recommendations. A summary of the Agency's response to each recommendation and our analysis follows.

- ***Recommendation 3-1:*** OSWER stated that it has scheduled another Risk Management Plan Techniques training course for February 2009 and is planning an additional course for the fall of 2009. OSWER noted that by the end of 2009, it will have trained approximately 100 RMP inspectors.

- ***Recommendation 3-2:*** OSWER stated that it is "beginning to explore various options for getting additional resources to Regions with a high number of high-risk facilities to improve the inspection rate of these facilities."

- ***Recommendation 3-3:*** OECA stated that it is working with OSWER to develop a more "rigorous" definition of a high-risk facility, which they expect to incorporate into their National Program Manager Guidance for Fiscal Year 2010. According to the Agency, with this new definition, "[r]egions will be better equipped to identify and target high-risk facilities for inspections."

- ***Recommendation 3-4:*** OECA stated that it is working with OSWER to revise the performance expectation in the Fiscal Year 2010 National Program Manager Guidance to incorporate the inspection of high-risk facilities.

- ***Recommendation 3-5:*** OECA stated that it is working with OSWER to develop a mechanism for tracking which high-risk facilities have not been inspected.

We believe the general actions outlined in OSWER's and OECA's responses meet the intent of our recommendations. The recommendations will remain open in our tracking system pending our receipt and approval of the Agency's final corrective action plan. Appendix C contains the full texts of OSWER's and OECA's responses to the draft report.

Status of Recommendations and Potential Monetary Benefits

RECOMMENDATIONS						POTENTIAL MONETARY BENEFITS (in $000s)	
Rec. No.	Page No.	Subject	Status[1]	Action Official	Planned Completion Date	Claimed Amount	Agreed To Amount
2-1	12	Strengthen controls to identify facilities that did not file RMPs by: • Revising Headquarters operating guidance to specify how often the regions should conduct reviews to identify non-filers, and establish milestones for reviewing and removing inactive facilities from the RMP National Database. • Incorporating the TRI search methodology and other effective methodologies used by EPA regions (e.g., using the EPCRA and TRI on-site compliance evaluations) into the new Headquarters guidance for regions to use in identifying potential non-filers. • Updating the RMP National Database to de-activate closed facilities.	O	Assistant Administrator for Solid Waste and Emergency Response	12/2009		
2-2	13	Ascertain whether the facilities we identified through our TRI and EPCRA data searches are subject to Risk Management Program requirements and, if so, take appropriate action to ensure that these facilities comply with Program requirements.	O	Assistant Administrator for Solid Waste and Emergency Response	9/2009		
2-3	13	Instruct Title V permitting authorities on the proper procedures for identifying and including Risk Management Program requirements in Title V permits – including guidance on how to verify whether facilities have submitted RMPs – and monitor implementation of these requirements.	O	Assistant Administrator for Air and Radiation	4/27/2009		
3-1	25	Provide the Risk Management Program required training courses to ensure that all Program inspectors are adequately trained, and provide industry-specific training when warranted.	O	Assistant Administrator for Solid Waste and Emergency Response	12/2009		
3-2	25	Explore strategies for providing additional resources to those regions with high facility-to-FTE ratios to ensure that high-risk facilities are inspected expeditiously.	O	Assistant Administrator for Solid Waste and Emergency Response			
3-3	25	Develop and implement a risk-based inspection strategy that incorporates regional input on high-risk facilities to prioritize facilities for inspection based on risk and other priority measures.	O	Assistant Administrator for Enforcement and Compliance Assurance			
3-4	25	Revise the performance expectation for the Risk Management Program to incorporate the inspection of the high-risk facilities developed in response to Recommendation 3-3.	O	Assistant Administrator for Enforcement and Compliance Assurance			

RECOMMENDATIONS						POTENTIAL MONETARY BENEFITS (in $000s)	
Rec. No.	Page No.	Subject	Status[1]	Action Official	Planned Completion Date	Claimed Amount	Agreed To Amount
3-5	25	Track which high-risk facilities have been inspected by the regions and/or delegated States/local agencies and develop procedures to provide expeditious inspection coverage of those high-risk facilities not inspected by the regions or State/local agencies.	O	Assistant Administrator for Enforcement and Compliance Assurance			

[1] O = recommendation is open with agreed-to corrective actions pending
C = recommendation is closed with all agreed-to actions completed
U = recommendation is undecided with resolution efforts in progress

Appendix A

Details on Scope and Methodology

To determine whether procedures were in place to provide reasonable assurance that all facilities subject to the Risk Management Program regulations had submitted RMPs (first objective), we:

1. Reviewed the 2006 TRI to identify facilities in four States (Colorado, North Carolina, Pennsylvania, and Texas) that reported having on-site quantities of ammonia, chlorine, or hydrogen fluoride at levels well above the Risk Management Program thresholds. We used TRI data from 2006 because that was the most recent year for which TRI data were available. We then reviewed the RMP National Database (current as of November 29, 2007) to determine whether these facilities had filed RMPs with EPA. For all four States, we met with EPA regional staff to discuss whether the facilities may be subject to Program requirements and should submit an RMP to EPA.

2. Reviewed 2008 EPCRA data provided by Oklahoma to identify facilities that reported having on-site quantities of ammonia, chlorine, or hydrogen fluoride at levels above the Risk Management Program thresholds. We then reviewed the RMP National Database (current as of November 29, 2007) to determine whether these facilities had filed RMPs with EPA. If they had not, we provided their names and amounts of reported chemicals to EPA regional staff to determine whether they may be subject to Program requirements and should submit an RMP to EPA.

3. Reviewed the RMP National Database to identify facilities that had not re-filed an RMP 5 years after the original RMP, as required by 40 CFR Part 68. We compared this list of facilities to a similar list developed by EPA in September 2005 to determine how many of the facilities from the 2005 list remained unresolved in the RMP National Database.

4. Reviewed a sample of Title V permits from eight States (Arizona, Colorado, Florida, Georgia, Illinois, Iowa, New York, and North Carolina), to determine whether the Title V permitting agencies were identifying the status of Risk Management Program facilities during the permit application process and correctly incorporating the Program requirements in the facilities' Title V permits, as required by regulation and EPA guidance. We also interviewed staff from four of the eight States (Arizona, Colorado, Illinois, and New York) to determine whether they verified if RMP-covered sources had submitted an RMP, as required by regulation and EPA guidance.

To determine whether the inspection process provides reasonable assurance that covered facilities comply with Risk Management Program requirements (second objective), we:

1. Compared the Risk Management Program active universe as of November 29, 2007, with the inspections/audits completed as of December 31, 2007, to determine the percentage of active facilities inspected or audited. To complete this analysis, we requested and obtained lists of inspections/audits completed between the inception of the Program in 1999 and December 31,

2007 from all implementing agencies (i.e., EPA regions and delegated State and local agencies).

2. Determined whether high-risk facilities were inspected/audited by comparing lists of these facilities with the inspections/audits completed as of December 31, 2007. We used three lists of high-risk facilities: (1) OEM's lists of Tiers 1 and 2 facilities; (2) facilities that could impact 100,000 people or more in a worst-case release scenario, which we developed using data from the RMP National Database; and (3) facilities with the highest 5 percent of hazard indices in their respective implementing agency. We developed this list by calculating the hazard index of each facility using the Wharton School's formula.[13]

3. Determined whether the November 29, 2007, universe of facilities that had accidents as reported in their RMPs have ever been inspected/audited by comparing these facilities with the inspections/audits completed as of December 31, 2007. We obtained the lists of inspections/audits completed since the inception of the program from all implementing agencies as described above.

4. Determined the ratio of FTE staff assigned to enforcement of the Risk Management Program in each implementing agency to the number of facilities for which that agency is responsible. We used EPA FTE information provided in the October 2007 EPA written response to questions from the Senate Committee on Environment and Public Works. With regard to delegated States and local agencies, we requested FTE information directly from the State or through the appropriate EPA regional contacts. We then compared these ratios among EPA regions and delegated State and local agency programs.

Prior Reports

The EPA OIG has not conducted any prior audits or evaluations of the CAA 112(r) Risk Management Program. In July 2002, the Government Accountability Office issued a report on chemical facilities' reporting requirements under EPCRA and CAA 112(r) for the Risk Management Program. This report (*Emergency Response Community Views on the Adequacy of Federally Required Chemical Information*), noted that although EPA took steps to try to identify the full universe of sources subject to the Risk Management Program requirements, the total number of facilities required to submit RMPs was uncertain. The report also noted that EPA had only reviewed about 15 percent of the submitted RMPs and did not have a complete picture of the accuracy of most plans; the number of onsite inspections conducted by the regions varied from 2 to 145.

We also reviewed the following reports from other federal agencies that touched on the CAA 112(r) Risk Management Program.

- **National Transportation Safety Board Hazardous Materials Accident Report: *Hazardous Materials Release from Railroad Tank Car with Subsequent Fire***

[13] The Wharton School's hazard index is defined as "the sum over all chemicals of $\log_2$ (maximum quantity of inventory on-site/threshold), or, alternatively, as the number of chemicals times $\log_2$ of the geometric mean of the maximum-to-threshold quantity ratio."

***Riverview, Michigan,* July 14, 2001 (Report No. NTSB/HZM-02/01):** This report noted that the number of inspectors EPA has to oversee operations covered by the Risk Management Program is limited compared to the number of covered facilities.

- **U.S. Chemical Safety and Hazard Investigation Board Investigation Report: *Refinery Explosion and Fire,* March 20, 2007 (Report No. 2005-04-I-TX):** This report noted that EPA enforcement of the Risk Management Program requirements has relied primarily on reviews of submitted RMPs rather than on-site inspections.

Limitations

In addressing the second objective, we limited our assessment to whether on-site inspections or audits were conducted. We did not assess the effectiveness of inspections or audits conducted. Given the significant number of facilities that had not received on-site inspections or audits, we believe sufficient data were gathered to address our objective.

In addition, we did not independently verify the accuracy of data in the RMP National Database nor perform a detailed assessment of the database's controls. However, we discussed data controls with OEM staff, reviewed reports of prior Risk Management Program studies conducted by Wharton School researchers that addressed RMP data accuracy, and interviewed the authors of these prior reports. Wharton researchers found that key data elements, such as facility location, the number of employees, quantity of listed chemicals in covered processes, and accident history (e.g., definition of reportable accident), could be interpreted in different ways. Although these differing interpretations could impact data accuracy in either direction (under-reporting or over-reporting), the researchers believed that hazards and adverse events were more likely to be under-reported than over-reported. Inaccurate reporting of accidents could impact one of our report's findings. During our review, we used the accident history reported in the RMP National Database to identify facilities with prior accidents to determine whether facilities with accidents had ever been inspected. If this field was under-reported, then the number of facilities with accidents would be larger than the number we identified for our review. Even if additional facilities had accidents that were not reported in the RMP National Database, we believe our analysis was sufficient to demonstrate that a significant number of facilities reporting accidents had not received on-site inspections or audits.

In determining the numbers of on-site inspections and audits conducted, we only included activities that were on-site Risk Management Program compliance inspections or audits. For example, we did not include desk audits, General Duty Clause inspections, accident investigations, compliance assistance visits, or inspections at facilities not regulated under the Risk Management Program rule. We did not include accident investigations because the objective of such an investigation does not include evaluating whether a facility has complied with all elements of the Risk Management Program rule. All of these activities provide varying degrees of oversight and could improve compliance with the Program. However, as noted in EPA's National Program Manager Guidance, regions should conduct on-site CAA 112(r) Risk Management Program inspections, and OEM has provided regions with an audit checklist as guidance to ensure that the regulatory requirements are met by the facilities. The above actions do not address all the elements in OEM's audit checklist.

Appendix B

Regional Activities to Identify Non-Filers

We obtained information on activities to identify RMP non-filer from eight regions. Examples of regional non-filer activities follow.

Region 2: The Region used various data sources, including telephone books, Dun and Bradstreet Numbers industry data, and EPCRA Tier II data obtained from States.

Region 3: The Region used TRI data searches in the past and plans to start using them again. The Region has also used EPCRA Tier II data from States and information from the National Pollutant Discharge Elimination System.

Region 4: The Region looked for RMP non-filers during EPCRA and TRI on-site inspections.

Region 6: Regional air inspectors checked facilities' RMP status when conducting CAA Full Compliance Evaluations. In the early years of the Program (2000-2001), the Region used North America Industry Classification System codes to target certain industries likely to be covered.

Region 7: Based on inspection data provided to the OIG, the Region conducted 160 on-site non-filers inspections during 2000-2007. In addition, the Region has used TRI searches in the past, and identified only a few non-filers using that method.

Region 8: The Region looked for RMP non-filers during on-site inspections for the EPCRA and Comprehensive Environmental Response, Compensation, and Liability Act programs. The Region has also used data sources such as TRI and Dun and Bradstreet industry data.

Region 9: Based on inspection information provided to the OIG, the Region conducted 208 on-site inspections to identify non-filers during 2000-2007. The Response, Planning and Assessment Branch Chief said the Region uses TRI, Tier II, and other EPA-tracked environmental data to identify potential non-filers for inspection.

Region 10: The Region employed standardized procedures using TRI and other sources of information to identify potential non-filers, and conducted on-site inspections of these potential non-filers. The Risk Management Program Leader told us that very few of the facilities they identified using TRI searches were required to submit RMPs. Based on inspection data provided to the OIG, the Region conducted 104 on-site non-filer inspections during 2000-2007, as well as over 1,000 off-site activities to determine if facilities should submit an RMP. The Region reported identifying 16 non-filers since 2004.

Appendix C

Agency Responses

Response from the Office of Solid Waste and Emergency Response

January 15, 2009

SUBJECT: OSWER Response to OIG Draft Evaluation Report, "EPA Can Improve Implementation of the Risk Management Program for Airborne Chemical Releases"

FROM: Susan Parker Bodine /s/
Assistant Administrator

TO: Bill A. Roderick
Deputy Inspector General
Office of Inspector General

Thank you for the opportunity to review and comment on the Draft OIG Evaluation Report, "EPA Can Improve Implementation of the Risk Management Program for Airborne Chemical Releases". The Office of Solid Waste and Emergency Response (OSWER) has completed its review and concurs with the proposed recommendations specific to OSWER. We have outlined below our planned completion dates for the recommendations. Additionally, we have several specific editorial comments on the factual accuracy of the draft report which we have included in the attached copy of the report.

On the whole, we agree with the findings and recommendations discussed in the report. For the past several years, we have been working in close coordination with the Office of Enforcement and Compliance Assurance (OECA) on several of these issues. It is encouraging that the findings in the report show we are moving in the right direction, and we will continue working to further improve the implementation of the Risk Management Program. Below is our response to the recommendations.

In Chapter 2, recommendations 2.1 and 2.2 state:

- Strengthen controls to identify facilities that did not file Risk Management Plans (RMPs) by:

  - Revising Headquarters operating guidance to specify how often the regions should conduct reviews to identify non-filers, and establish milestones for reviewing and removing inactive facilities from the RMP National Database.

  - Incorporating the Toxics Release Inventory (TRI) search methodology and other effective methodologies used by EPA regions (e.g., using the Emergency Planning and Community Right-To-Know Act (EPCRA) and TRI on-site compliance

evaluations) into the new Headquarters guidance for regions to use in identifying potential non-filers.

- Updating the RMP National Database to de-activate closed facilities.

o Ascertain whether the facilities we identified through our TRI and EPCRA data searches are subject to Risk Management Program requirements and, if so, take appropriate action to ensure that these facilities comply with Program requirements.

For recommendation 2.1, OSWER will provide guidance to Regions by December 2009, which specifies how and when Regions should conduct reviews to identify non-filers as well as the methodologies to be used for those reviews. This guidance will also include a timeline for reviewing and removing inactive facilities and de-activating closed facilities from the RMP National Database.

For recommendation 2.2, several Regions are in the process of reviewing the TRI and EPCRA facilities identified in the data search and determining if those facilities are covered by the RMP requirements and need to submit a RMP. Those reviews should be completed in September 2009. Depending upon the outcome of these reviews, we will take appropriate action to ensure that these facilities comply with the RMP requirements.

In Chapter 3, recommendation 3.1 and 3.2 state:

o Provide the Risk Management Program required training courses to ensure that all Program inspectors are adequately trained, and provide industry-specific training when warranted.

o Explore strategies for providing additional resources to those regions with high facility-to-FTE ratios to ensure that high-risk facilities are inspected expeditiously.

As stated in the report, in early 2008, we revised the RMP Inspector's Training course and provided two training sessions in June 2008 and October 2008. Additionally, we have scheduled the next training session in Region 6 for February 2009 and will be scheduling another session in the fall of 2009. These training sessions include our Regional inspectors as well as inspectors from RMP Implementing agencies. By the end of 2009, we will have trained approximately 100 RMP inspectors. In addition, we are beginning to explore various options for getting additional resources to Regions with a high number of high risk facilities to improve the inspection rate of these facilities.

We would also like to point out that our office has been and will continue to work closely with OECA as we continue to further our efforts in implementing the Risk Management Program. Specifically, as noted in your report, OSWER and OECA jointly revised their National Program Manager Guidance to provide the regions with specific risk-related factors to be considered in deciding which facilities to inspect. Currently, OSWER and OECA are working together to develop a more exact definition of what defines a high-risk facility and we expect to

incorporate the new definition into the National Program Managers Guidance for Fiscal Year 2010.

Again, we appreciate the opportunity to comment on this draft report. If you have any questions or comments, please contact Kim Jennings at (202) 564-7998.

Attachment

Response from the Office of Air and Radiation

January 27, 2009

MEMORANDUM

SUBJECT: Draft Evaluation Report: EPA Can Improve Implementation of the Risk Management Program for Airborne Chemical Releases
Assignment No. OPE-FY08-0001

FROM: Elizabeth Craig /s/
Acting Principal Deputy Assistant Administrator
Office of Air and Radiation

TO: Wade T. Najjum
Assistant Inspector General for Program Evaluation

We appreciate the Office of Inspector General (OIG) efforts in completing the draft report entitled "EPA Can Improve Implementation of the Risk Management Program for Airborne Chemical Releases" (Assignment No. OPE-FY08-0001). The Office of Air Radiation (OAR) concurs with comment on the OIG's recommendation 2-3.

OAR has issued multiple guidance documents to the Regions and States on how to implement the requirements of the Accidental Release Prevention Program, specifically, the requirements of Section 112(r) in the context of the Title V program. The April 20, 1999 memorandum entitled "Title V Program Responsibilities Concerning the Accidental Release Prevention Program" from Steven J. Hitte to the Region Air Program Managers provides specific information related to implementation of the Risk Management Program and those aspects highlighted by recommendation 2-3. Nonetheless, we recognize that because the guidance is nearly 10 years old, its implementation would benefit from a reminder to the Regional Air Division Directors of the existence of this guidance as outlined in the attached action plan. A similar reminder from the Regions to the States would also be beneficial. Therefore, we will instruct the Regional Air Division Directors to ensure that the State Title V Program Managers are reminded of the existence of the guidance and that it is being properly implemented. As indicated in the Action Plan, this information will also be posted on the Region 7 website with the rest of the Title V Program materials.

If you have additional questions after reviewing this response, please do not hesitate to request clarification from either Michael Boucher at (919)541-7627 or Juan Santiago at (919)541-1084. Thank you again for the assistance and effort.

Attachment

cc: Pete Cosier, OAR Audit Follow-up Coordinator
Michael Boucher, OAQPS Audit Follow-up Coordinator

Rick Beusse, Director for Program Evaluation, Air Issues, OIG
OIG Juan Santiago, OAQPS Title V Group Leader

Action Plan

Number	Recommendation	Planned Corrective Action	Planned Completion
2.3	Instruct Title V permitting authorities on the proper procedures for identifying and including Risk Management Program (RMP) requirements in Title V permits – including guidance on how to verify whether facilities have submitted RMPs – and monitor implementation of these requirements.	Obtain from the Office of Emergency Management the procedure for access to the RMP database for distribution. Remind the Regional Air Division Directors of the existence of this guidance and post this information on the appropriate website. Instruct the Regional Air Division Directors to inform State Title V Program Managers of the guidance and the links for obtaining it.	Within 90 days.

Response from the Office of Enforcement and Compliance Assurance

January 23, 2009

MEMORANDUM

SUBJECT: Response to the Office of Inspector General Draft Evaluation Report, "EPA Can Improve Implementation of the Risk Management Program for Airborne: Chemical Releases," Assignment Number OPE-FY08-0001 (December 18, 2008)

FROM: Catherine R. McCabe /s/
Acting Assistant Administrator

TO: Wade T. Najjum
Assistant Inspector General
Office of Program Evaluation
Office of Inspector General

Thank you for the opportunity to review and comment on the draft evaluation report titled, "EPA Can Improve Implementation of the Risk Management Program for Airborne Chemical Releases," Assignment Number OPE-FY08-0001. The Report focuses on improving EPA's implementation of the Clean Air Act's Risk Management Program (Report), and includes recommendations to the Office of Solid Waste and Emergency Response (OSWER), Office of Air and Radiation (OAR), and Office of Enforcement and Compliance Assurance (OECA).

In summary, OECA agrees with the Report's recommendations and has taken important steps in the past several years that support several recommendations. OECA is committed to further enhancing its targeting efforts and improving the tracking of Risk Management Program (RMP) inspections. This response is limited to recommendations specifically made to OECA.

- Recommendation 3-3: Develop and implement a risk-based inspection strategy that incorporates regional input on high-risk facilities to prioritize facilities for inspection based on risk and other priority measures.

  OECA concurs with this recommendation. OECA is working with OSWER and the Regions to develop an approach for targeting high-risk facilities to make the best use of limited inspection resources. As part of this effort, we will develop a more rigorous definition of a high-risk facility. OECA expects to incorporate the new definition into the National Program Managers Guidance for Fiscal Year 2010. With the new definition, Regions will be better equipped to identify and target high-risk facilities for inspections.

- Recommendation 3-4: Revise the performance expectation for the RMP to incorporate the inspection of the high-risk facilities developed in response to Recommendation 3-3.

OECA concurs with this recommendation. OECA and OSWER are working jointly to revise the performance expectation for inspection in the National Program Managers Guidance for Fiscal Year 2010.

- Recommendation 3-5: Track which high-risk facilities have been inspected by the regions and/or delegated State/local agencies and develop procedures to provide expeditious inspection coverage of those high-risk facilities not inspected by the regions or State/local agencies.

  OECA concurs with this recommendation. OECA is working with OSWER to develop an appropriate tracking mechanism to assist Regions in identifying high-risk facilities that have not been inspected. The Agency believes existing coordination procedures with State and local agencies can be used to leverage limited resource and ensure high-risk facilities are inspected first.

In addition to responding to the Report's recommendations, we would also like to offer technical clarifications:

1) The Report describes inspections and audits conducted under section 68.220 of the RMP regulations. The Report appears to imply that inspections and audits are equally effective in assuring compliance with the regulations. In fact, the two activities are very different. Inspections cover the entire scope of the RMP, while audits are confined only to the requirements of Subpart G of the regulations. In addition, section 68.220 audits cannot result in enforcement actions, should the audit uncover deficiencies. The section 68.220 audits can only result in requiring revisions to the risk management program. For these two reasons, OECA requires Regions to conduct inspections, not audits, in order to meet their performance commitments. OECA has also strongly encouraged Regions to devote their limited resources to conducting inspections rather than the more limited audits. Most Regions have moved in this direction and no longer conduct any audits. We suggest the final report be more precise in highlighting this distinction.

2) We would also like to request the revision of two sentences:
   a) Page 5 (second paragraph) states: "…As a result of these conditions, all facilities subject to the Program may not be preparing RMPs and taking adequate measures to prevent accidents or mitigate the consequences of such accidents to the public..." This sentence implies that no facilities are preparing RMPs when some have. We request the sentence is revised to read, "As a result of these conditions, not all facilities subject to the Program may ~~not~~ be preparing RMPs and taking adequate measures to prevent accidents or mitigate the consequences of such accidents to the public."

   b) On page 15 (second paragraph), a sentence states: "However, OECA revised its National Program Manager Guidance in Fiscal Year 2009 to state regions should consider the following risk-related factors in deciding which facilities to inspect." OECA recommends revising the sentence to read, "OECA and OSWER revised the National Program Manager Guidance. Both offices worked harmonize the guidance and the language for both is now identical."

Again, we appreciate the opportunity to review and comment on this Report. Should you have any questions or concerns regarding this response, please contact OECA's Audit Liaison, Gwendolyn Spriggs on 202-564-2439.

cc: Adam Kushner, OECA/OCE
Margaret Schneider, OECA/OAP
Lauren Kabler, OECA/OCE
Gwendolyn Spriggs. OECA/OAP

Appendix D

Overall Inspection/Audit Rates of RMP Facilities

The following table shows the number of active RMP facilities, as of November 29, 2007, and the percentage of facilities inspected/audited at least once by EPA regions and delegated State and local agencies. The table does not include inspections/audits performed by non-delegated State and local agencies with programs similar to the Risk Management Program (e.g., California, Louisiana, and Nevada) because we did not assess whether these inspections/audits were comprehensive, and EPA does not routinely collect data on these inspections. Further, implementing offices may have conducted on-site inspections and audits at more facilities than reflected in these totals, since we only counted inspections of facilities currently shown as active in the RMP National Database. If a facility was inspected but was de-registered as of November 29, 2007, that inspection would not be reflected in these totals.

Table D-1: Percentage of Facilities Inspected/Audited by EPA Regions and Delegated State and Local Agencies

Region or Delegated States/Locals	Number of Active Facilities in 11/29/07 Universe	Number of Facilities with At Least One On-site Inspection/Audit	Percent of Facilities Inspected/Audited
1	182	101	55
2	285	132	46
3	698	256	37
4 [a]	441	388	88
5	2,526	681	27
6	2,304	518	22
7	2,563	257	10
8	890	445	50
9	1,170	140	12
10	470	136	29
EPA Subtotal [b]	**11,529**	**3,054**	**26**
Delegated States/ Locals Subtotal	**2,143**	**1,512**	**71**
Total [c]	**13,672**	**4,566**	**33**

Source: OIG analysis based on data obtained from the RMP National Database, all 10 EPA regions, and State/local agencies with program delegation.

[a] Most facilities in Region 4 are managed under delegated programs. The universe and inspection rates for these facilities are reflected under the delegated States/locals category.
[b] Does not include inspections/audits performed by non-delegated State and local agencies with programs similar to the Risk Management Program (e.g., California, Louisiana, and Nevada) because we did not assess whether these inspections/audits were comprehensive, and EPA does not routinely collect data on these inspections.
[c] Regions and delegated States/locals may have conducted more on-site inspections and audits than reflected in these totals because we only counted inspections of facilities currently shown as active in the RMP National Database. If a facility was inspected but was de-registered as of November 29, 2007, that inspection would not be reflected in these totals.

Appendix E

On-Site Risk Management Program-Related Inspections and Audits by EPA Region

The following table shows the total number of EPA regionally conducted, CAA Section 112(r)-related, inspections and audits for the period October 1, 1999 (Fiscal Year 2000) through December 31, 2007 (the first quarter of Fiscal Year 2008). The table includes inspections of facilities that filed RMPs with EPA as well as inspections of facilities that had not filed RMPs. The non-RMP facility inspections include inspections to assess facility compliance with the General Duty Clause of CAA Section 112 (r) and inspections to identify facilities that may be subject to the Risk Management Program provisions but which had not submitted RMPs.

Table E-1: CAA Section 112(r)-Related On-Site Inspections and Audits, by Fiscal Year

Region	2000	2001	2002	2003	2004	2005	2006	2007	2008[a]	Totals
1	0	14	16	18	33	23	26	28	8	166
2	83	87	63	86	29	48	39	40	13	488
3	13	38	40	38	53	63	49	55	15	364
4	0	38	86	122	76	80	74	96	15	587
5	0	0	3	44	264	377	41	63	3	795
6	1	2	7	74	90	155	96	158	33	616
7	72	49	57	27	29	33	84	101	32	484
8	16	67	134	79	66	116	65	73	33	649
9 [b]	34	16	6	34	62	29	71	56	20	328
10	20	22	25	23	43	37	54	43	1	268
Totals	**239**	**333**	**437**	**545**	**745**	**961**	**599**	**713**	**173**	**4,745**

Source: Data from regions and EPA's Integrated Compliance Information System database.

[a] Fiscal Year 2008 data as of December 31, 2007.
[b] Region 9 reported 36 additional inspections but could not provide us with inspection dates.

Appendix F

Inspection/Audit Rates for Facilities Reporting Accidents

The following table shows the percentage of active RMP facilities reporting accidents in their RMPs that were inspected or audited by EPA or State/local agencies. We only determined whether a facility reporting an accident was ever audited or inspected. We did not assess whether the inspection or audit occurred before or after an accident. In some cases, the audit or inspection may have occurred prior to the accident, and thus the inspection or audit was not conducted in response to the accident. Our analysis does not include accident investigations that did not include a full Risk Management Program inspection or audit. EPA regions or State and local agencies may have conducted investigations of accidents at these facilities that are not reflected in this table.

Table F-1: Inspection/Audit Rate of Facilities that Reported Accidents in their RMPs

EPA Region or Delegated States/Locals	Number of Active Facilities in 11/29/07 Universe with Accidents	Number Inspected/Audited as of 12/31/2007	Percent Inspected/Audited as of 12/31/2007
1	8	4	50
2	18	15	83
3	60	43	72
4 [a]	35	32	91
5	165	55	33
6	210	43	20
7	127	47	37
8	37	28	76
9	82	18	22
10	24	10	42
EPA Subtotal	**766**	**295**	**39**
Delegated States/ Locals Subtotal	**178**	**152**	**85**
Total [b]	**944**	**447**	**47**

Source: OIG analysis based on data obtained from the RMP National Database, all 10 EPA regions, and State/local agencies with program delegation.

[a] Most facilities in Region 4 are located in States with delegated programs. The universe and inspection rates for these facilities are reflected under the delegated States/locals category.
[b] Totals do not include inspections/audits performed by non-delegated State and local agencies with programs similar to the Risk Management Program (e.g., California, Louisiana, and Nevada) because we did not assess the scope of these inspections/audits, and EPA does not routinely collect these data. Region 9 staff told us that California has conducted over 4,900 inspections under its State accident prevention program, and that Nevada conducts comprehensive reviews of all facilities under its State program at least once every 5 years.

Appendix G

Distribution

Office of the Administrator
Acting Assistant Administrator for Solid Waste and Emergency Response
Acting Assistant Administrator for Enforcement and Compliance Assurance
Acting Assistant Administrator for Air and Radiation
Acting Regional Administrators, Regions 1 - 10
Director, Office of Emergency Response, Office of Solid Waste and Emergency Response
Office of General Counsel
Agency Follow-up Official (the CFO)
Agency Follow-up Coordinator
Acting Associate Administrator for Congressional and Intergovernmental Relations
Acting Associate Administrator for Public Affairs
Audit Follow-up Coordinator, Office of Solid Waste and Emergency Response
Audit Follow-up Coordinator, Office of Enforcement and Compliance Assurance
Audit Follow-up Coordinator, Office of Air and Radiation
Audit Follow-up Coordinators, Regions 1 - 10
Deputy Inspector General