



U.S ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF INSPECTOR GENERAL

Catalyst for Improving the Environment

Evaluation Report

EPA Region 8 Needs to Better Manage the Risk Management Program for Airborne Chemical Releases

Report No. 09-P-0130

March 30, 2009



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Abbreviations

CAA	Clean Air Act
CFR	Code of Federal Regulations
ECEJ	Office of Enforcement, Compliance, and Environmental Justice
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPR	Office of Ecosystems Protection and Remediation
FY	Fiscal Year
MOU	Memorandum of Understanding
OECA	Office of Enforcement and Compliance Assurance
OEM	Office of Emergency Management
OIG	Office of Inspector General
RMP	Risk Management Plan
SEE	Senior Environmental Employment

Cover photo: Damage from a 2007 flash fire at an RMP-regulated natural gas processing facility in EPA Region 8. (EPA Region 8 photo)



At a Glance

Catalyst for Improving the Environment

Why We Did This Review

The purpose of the Clean Air Act (CAA) Risk Management Program is to reduce the likelihood of airborne chemical releases that could harm the public, and mitigate the consequences of releases that do occur. During our evaluation of U.S. Environmental Protection Agency (EPA) implementation of this program, we identified concerns with EPA Region 8's coordination and management of the Program that require the attention of Region 8 management.

Background

Under the CAA Section 112(r) Risk Management Program, stationary sources that contain more than the threshold quantity of any of the regulated substances on-site in a process must implement a risk management program. Within Region 8, the Office of Ecosystems Protection and Remediation (EPR) and the Office of Enforcement, Compliance, and Environmental Justice (ECEJ) are jointly responsible for implementing the Program.

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/2009/20090330-09-P-0130.pdf

EPA Region 8 Needs to Better Manage the Risk Management Program for Airborne Chemical Releases

What We Found

The two Region 8 offices jointly responsible for implementing the CAA 112(r) Risk Management Program have not effectively planned or coordinated compliance assurance activities. Further, regional operating guidance for the Program is inconsistent concerning the roles and responsibilities of each office. Consequently, over half of the high-risk facilities have never been audited or inspected, while duplicative oversight activities have been performed at lower-risk facilities. Further, cases of identified noncompliance remain unresolved.

Based on criteria such as amount of covered chemicals stored on-site and potential population exposed during a worst-case scenario, we identified 61 high-risk facilities in Region 8. The Region had never inspected or audited 38 of these 61 high-risk facilities (62 percent) since the Program's inception in 1999. Cumulatively, these 38 high-risk facilities could potentially impact over one million people during a worst-case chemical release. Although 38 high-risk facilities had never been audited or inspected, 59 lower-risk facilities received duplicative oversight by being both audited and inspected by the Region.

We reviewed nine cases that EPR referred to ECEJ for possible enforcement action because the facilities failed to certify they came into compliance after a program audit found noncompliance. ECEJ concluded that no enforcement action could be taken and returned the cases. Two of the facilities eventually certified they had come into compliance. However, no follow-up actions were taken by either office for the remaining seven facilities, and their compliance status has been unresolved for over 2 years. Cumulatively, these seven facilities could impact over 10,000 people in a worst-case chemical release scenario. Compared to other regions, Region 8 has taken fewer CAA Section 112(r)-related enforcement actions, and none have been taken at high-risk facilities.

Region 8 has partnered with North Dakota to gain assistance in oversight activities at RMP facilities. Since 2004, North Dakota has assisted Region 8 by conducting 40 audits at agricultural ammonia facilities.

What We Recommended

We recommended that the Regional Administrator develop (1) a strategy for implementing the Risk Management Program in Region 8 that defines program goals, performance measures, and organizational responsibilities; and (2) an oversight process to evaluate the Region's success in implementing the strategy. Region 8 agreed with our findings and recommendations, and has already completed the recommended actions.



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

OFFICE OF
INSPECTOR GENERAL

March 30, 2009

MEMORANDUM

SUBJECT: EPA Region 8 Needs to Better Manage the Risk Management Program for Airborne Chemical Releases
Report No. 09-P-0130

A handwritten signature in black ink that reads "Wade T. Najjum".

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

TO: Carol A. Rushin
Acting Regional Administrator, EPA Region 8

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 \$157,141.

Action Required

In accordance with EPA Manual 2750, we are closing this report upon issuance in our tracking system since your response to the draft report provided corrective actions that meet the intent of the draft report's recommendations. In accordance with OIG policy, we will periodically follow up to determine how well the Agency's corrective actions have addressed the report's recommendations. 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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Purpose

In November 2007, the Office of the Inspector General began an evaluation of the U.S. Environmental Protection Agency's (EPA's) implementation of the Clean Air Act (CAA) Section 112(r) Risk Management Program. The purpose of the Risk Management Program is to reduce the likelihood of airborne chemical releases that could harm the public, and mitigate the consequences of releases that do occur. The objectives of our evaluation were to determine whether (1) procedures are in place to ensure that facilities subject to the Risk Management Program regulations have submitted risk management plans (RMPs), and (2) the inspection process provides reasonable assurance that covered facilities comply with Risk Management Program requirements. Although we issued our report on EPA's overall Program performance in February 2009,¹ we are issuing this separate evaluation report due to specific concerns we identified in Region 8.

Background

In 1990, Congress amended CAA Section 112 to enact a program to prevent releases of certain hazardous chemicals and to mitigate the consequences of releases to the surrounding community. EPA promulgated the Risk Management Program rule (40 Code of Federal Regulations Part 68) in 1996 to meet the requirements of CAA Section 112(r)(7). 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 to prepare and submit a risk management plan (RMP) to EPA. Facilities were required to submit their first RMPs by June 21, 1999, and update them at least every 5 years or when on-site regulated substances or processes change. The Program regulations (40 CFR 68.220) also require implementing agencies to periodically audit facility RMPs and require revisions when necessary to ensure compliance with the requirements for RMPs. These audits are referred to as 68.220 audits.

Since very few States and local agencies have requested delegation of the Program, EPA is responsible for implementing the Program in most areas. None of the States in Region 8 have taken delegation, so the Region is directly responsible for all RMP facilities in the Region. EPA's Office of Emergency Management (OEM) in the Office of Solid Waste and Emergency Response is primarily responsible for managing the Program on a national level. OEM provides funding to the regions to assist in implementing the Program. Implementation activities include conducting audits and inspections, and providing technical assistance, outreach, and training. OEM also provides guidance to the regions regarding the Program's priorities and inspection strategies. In 2007, OEM distributed a list of high-risk facilities to the regions to encourage more effective use of the Program's resources and to help the regions better prioritize their inspection efforts. However, the regions are not required to inspect these higher-risk facilities before lower-risk facilities. Depending on the facility, the population potentially impacted in a worst-case release scenario ranges from zero to over 1.7 million for a single facility in Region 8, as reported in facility RMPs contained in the RMP National Database.

¹ *EPA Can Improve Implementation of the Risk Management Program for Airborne Chemical Releases*, Report No. 09-P-0092, February 10, 2009.

The Office of Enforcement and Compliance Assurance (OECA) sets performance expectations for Risk Management Program compliance assurance activities. OECA's National Program Manager Guidance for Fiscal Year (FY) 2009 states that regions should conduct Risk Management Program inspections at 5 percent of the total number of regulated facilities in the Region each fiscal year, and may include periodic 68.220 audits as part of their compliance program. According to OECA and OEM staff, RMP inspections conducted under CAA section 114² authority are more comprehensive than 68.220 audits and can result directly in enforcement actions. As the Program matured, EPA's oversight emphasis has moved from 68.220 audits to federally-enforceable inspections. OECA includes only on-site inspections – not 68.220 audits – in its performance measure for the Risk Management Program, while OEM includes both on-site inspections and on-site 68.220 audits in its performance measures.

Risk Management Program Organization and Responsibilities in Region 8

In Region 8, two separate offices jointly implement the Risk Management Program under a Memorandum of Understanding (MOU) issued in 1997. According to the MOU, the Office of Ecosystems Protection and Remediation (EPR) is responsible for conducting Risk Management Program audits (i.e., 68.220 audits) and the Office of Enforcement, Compliance, and Environmental Justice (ECEJ) is responsible for conducting all Section 112(r) inspections in the Region. The 1997 MOU also states that:

- EPR will coordinate all planned RMP audits with ECEJ;
- any serious compliance and enforcement-related matters encountered during an RMP audit will be discussed as soon as practicable and referred to ECEJ for investigation and possible enforcement action;
- ECEJ will conduct all RMP Section 112(r) inspections; and
- the Region will develop a protocol for interactions between EPR and ECEJ regarding RMP audits and investigations.

In 2004, Region 8 issued an Implementation Protocol (Interim Final) describing coordination activities between the two offices. The Protocol states that:

- inspections conducted by EPR must always be coordinated with ECEJ;
- RMP audits conducted by EPR can result in a Preliminary Determination Letter, which establishes deadlines for audited facilities to correct deficiencies;
- facilities missing one or more established deadlines documented in a Preliminary Determination Letter should always be referred to ECEJ for enforcement action, and when a referral is made, ECEJ and EPR will meet to discuss the best approach for addressing the noncompliance;

² Section 114 of the CAA provides EPA with the broad authority to inspect facilities for compliance with CAA requirements.

- EPR should coordinate requests and referrals to ECEJ via e-mail or an internal memorandum that includes a brief summary of the situation and audit results; and
- when ECEJ receives a referral from EPR, ECEJ will evaluate the referral and input the results of this evaluation into a Coordination Table located on the shared drive.

Allocation of Risk Management Program Resources in Region 8

EPR and ECEJ share the Risk Management Program resources provided to the Region from Headquarters. OEM provides the Region with funds to implement both the Risk Management Program and the Emergency Planning and Community Right-to-Know Act through the same account. The Region receives about \$150,000 annually in extramural funds to implement both programs. These funds are shared by EPR and ECEJ. The amount of funds received by ECEJ has increased from \$9,000 in FY 2005 to \$50,000 in FY 2008. In FY 2007 and FY 2008, EPR received an average of slightly more than two-thirds (\$104,500/year) and ECEJ received an average of almost one-third (\$45,500/year) of the extramural funds.

The Region also receives funding for 2.5 full-time equivalents (FTEs) from OEM for both the Risk Management Program and the Emergency Planning and Community Right-to-Know Act. According to EPR managers, 2.0 FTEs were assigned to EPR.³ OEM also funds five Senior Environmental Employment (SEE) Program employees in Region 8 to perform activities supporting several different programs, including the Risk Management Program. Four of the SEE employees are allocated to EPR and one is used by ECEJ to conduct inspections at RMP facilities. According to the former RMP Team Lead in EPR, the cumulative amount of time that the four SEE employees in EPR spend on Risk Management Program activities during a year is approximately equal to one full-time person. The SEE employees' remaining time is spent on other programs.

Noteworthy Achievements

Region 8 has partnered with North Dakota to conduct RMP audits of agricultural ammonia facilities. In 2004, EPR entered into an MOU with North Dakota's Departments of Agriculture and Insurance, under which the State conducts RMP audits at anhydrous ammonia storage facilities. Following the implementation of the MOU, EPR managers and staff told us that the State inspectors in North Dakota were trained to conduct audits at agricultural ammonia facilities. Although the MOU was not a delegation of authority under the Risk Management Program, EPR staff told us that the State has expressed interest in proceeding with delegation of the Program for agricultural ammonia facilities. Since 2004, North Dakota has assisted Region 8 by conducting 40 audits at RMP facilities.

Scope and Methodology

For our nationwide evaluation of EPA's implementation of the Risk Management Program, we interviewed staff and managers from EPA's OEM, OECA, Office of Air and Radiation, 10 EPA

³ EPR could not account for the remaining 0.5 FTE funded by OEM. ECEJ managers said they did not receive the 0.5 FTE. The Region had not resolved the allocation and usage of the 0.5 FTE as of November 2008.

regions, and 4 States with delegation of the Risk Management Program. We issued this report on February 10, 2009. As part of the nationwide evaluation, we conducted work in Region 8, where we identified several concerns with the Region's management of the Program. During our review of the Program in Region 8, we interviewed EPR and ECEJ staff and managers and reviewed guidance, procedures, budget reports, and other materials regarding the implementation of the Program by these offices. We obtained lists of audits and inspections completed since the inception of the Program from both EPR and ECEJ. We compared the lists of audits and inspections completed in Region 8 to the RMP National Database and the lists of high-risk facilities to identify facilities that have never been audited or inspected in Region 8. We also used the lists provided by EPR and ECEJ to track the referral process and coordination efforts between the two offices. We conducted our work from January 2008 to February 2009. Additional information on our scope and methodology is in Appendix A.

Results of Review

Region 8 has not managed the Risk Management Program efficiently or effectively. Two offices in Region 8 – EPR and ECEJ – are tasked with implementing the Program. However, these offices have not effectively coordinated their planning and compliance assurance activities. As a result, over half of the Region's 61 high-risk facilities have never been audited or inspected by the Region, while 59 lower-risk facilities were both audited and inspected. Further, seven cases of noncompliance identified through audits remained unresolved for more than 2 years, and the Region has taken a lower number of CAA 112(r)-related enforcement actions than other EPA regions.

EPR and ECEJ Have Not Effectively Coordinated Program Efforts

EPR and ECEJ have not coordinated activities and planning to best utilize resources and provide compliance assurance at RMP facilities. Although the Region has an MOU and an Implementation Protocol that outline the two offices' responsibilities and coordination procedures, neither office was consistently following the MOU or Implementation Protocol, and the two documents provided inconsistent guidance regarding each office's roles and responsibilities.

The 2004 Implementation Protocol states that "normal coordination" should occur between EPR and ECEJ, and that the two offices will have coordination meetings on an "as needed" basis to discuss issues of importance to either or both groups. However, coordination between the two offices was not sufficient to effectively manage the Program. EPR and ECEJ did not coordinate their compliance assurance activities to ensure that high-risk facilities are inspected or audited. Rather, each office planned its activities independent of the other and maintained separate lists outlining the facilities they planned to visit. The list of RMP facilities each office planned to audit or inspect was posted on the Region's shared drive so both offices could view the lists. However, this was the extent of planning coordination between the two offices.

The lack of coordination between the two offices continued during our field work. For example, in May 2008, EPR began conducting inspections under CAA Section 114 authority without

informing or coordinating with ECEJ.⁴ Coordination is particularly necessary when EPR conducts inspections because ECEJ may have to take enforcement actions on the deficiencies identified during those inspections. However, EPR and ECEJ disagreed on whether EPR staff should be conducting RMP inspections, and the MOU and Implementation Protocol contain conflicting information regarding responsibility for inspections. Specifically, the MOU states that “all Section 112(r) inspections will be conducted by 8ENF-T [ECEJ].” In contrast, the Implementation Protocol allows for inspections by EPR, but states that inspections conducted by EPR “must always be coordinated” with ECEJ.

Further, EPR and ECEJ were not coordinating cases referred from EPR to ECEJ for possible enforcement action as outlined in the Implementation Protocol. According to the Protocol, EPR and ECEJ have shared responsibility to maintain a Coordination Table on the Region’s shared drive that tracks the progress and outcome of enforcement referrals. However, this was not occurring at the time of our evaluation.

Majority of Region 8 High-Risk Facilities Not Audited or Inspected

Program guidance from OECA encourages regions to address public safety concerns by targeting RMP inspections based on several risk-related factors. However, Region 8 has duplicated its oversight efforts by conducting both audits and inspections at mostly lower-risk facilities, while the majority of the high-risk RMP facilities have never been audited or inspected since the Program’s inception in 1999.

Using three separate criteria, we identified 61 high-risk RMP facilities in Region 8.⁵ Between January 2000 and January 2008, Region 8 conducted audits at 519 facilities, but only 21 of those were high-risk facilities. Additionally, Region 8 conducted inspections at 86 RMP facilities, but only 9 of those were high-risk facilities. However, 7 of the 9 high-risk facilities inspected by ECEJ had previously been audited by EPR. Thus, 23 of the 61 high-risk facilities have been audited and/or inspected, while 38 (or 62 percent) have never been audited or inspected (see Table 1). Cumulatively, the 38 high-risk facilities that have not been audited or inspected could potentially impact over one million people during a worst-case chemical release.

Table 1: Audits and Inspections at the 61 High-Risk Facilities in Region 8, through January 2008

No. of High-Risk Facilities	No. of High-Risk Facilities Audited	No. of High-Risk Facilities Inspected After an Audit	No. of High-Risk Facilities Inspected Only	No. of High-Risk Facilities Audited and/or Inspected	No. of High-Risk Facilities Never Audited or Inspected
61	21	7	2	23	38

Source: OIG list of high-priority facilities in Region 8 and audit and inspection data provided by Region 8

⁴ An EPR manager told us in November 2008 that EPR was no longer conducting RMP inspections and would wait until EPR and ECEJ jointly developed a strategy for the Program before conducting RMP inspections in the future.

⁵ These 61 facilities appeared on one or more of the following lists: OEM’s list of high-priority facilities; the top 5 percent of facilities in terms of hazard indices; and facilities that could potentially impact 100,000 people or more in a worst-case release scenario.

Although most high-risk facilities have not been audited or inspected, many lower-risk facilities have been both audited and inspected. ECEJ had inspected a total of 86 RMP facilities since the inception of the Program, and 65 (or 76 percent) of these were facilities that had previously been audited by EPR. In addition, one of the facilities that EPR audited was previously inspected by ECEJ. Thus a total of 66 facilities have been both audited and inspected. The majority of these 66 facilities (59 out of 66, or 89 percent) were lower-risk facilities; i.e., facilities that did not appear on any of the three high-risk facility lists discussed earlier.

In FY 2007, OECA instituted a performance target for each region to inspect 5 percent of its RMP facilities per year. This target does not consider whether the facilities are high-risk facilities. Although Region 8 was on track to meet this target in FY 2008, 37 of the 39 facilities (or 95 percent) that the Region had inspected in FY 2008 were lower-risk facilities.⁶ The RMP Enforcement Coordinator told us that ECEJ had been focusing inspections on smaller, less complex facilities because of the relative inexperience of the inspectors. She also expressed concerns that ECEJ may not have sufficient resources to start conducting inspections and taking enforcement actions at larger, more complex facilities.

Accident data suggest 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 suggests the need to prioritize inspections based on risk. Without procedures in place to prioritize the inspections at these high-risk facilities, Region 8 may not be using its resources efficiently to ensure that high-risk facilities are complying with the Risk Management Program requirements. As a result, these facilities may not be taking measures to operate safely, thus putting the public, employees, and first responders at a higher risk in the case of an accident.

Compliance Status of Some Referred Facilities Remains Unresolved

The compliance status of seven RMP facilities audited by EPR and then referred to ECEJ remained unresolved after more than 2 years. In addition, the case files for some of the referred cases we reviewed were incomplete because the files did not include documentation that the cases were referred to and/or reviewed by ECEJ or that the compliance status of the facility had been resolved. Failure to resolve noncompliance at facilities could increase the risk of an accident and public exposure to airborne chemical releases.

At the beginning of our evaluation, EPR provided us a list of 20 facilities it said it referred to ECEJ for enforcement action. However, after discussing these cases with EPR and ECEJ, both offices agreed that only 9 of these 20 cases were actually referred to ECEJ. We reviewed files for these nine cases to determine what actions ECEJ and EPR took to resolve the noncompliance that was the basis for the referral. These nine cases do not necessarily represent the entire universe of referred cases. We did not attempt to identify and review the entire universe of referred cases from EPR to ECEJ.

⁶ The FY 2008 inspection data we obtained from Region 8 only covered the period October 1, 2007, through January 2008; thus, we did not have inspection data for the full fiscal year. By the end of January 2008, the Region had already inspected 4.4 percent of the Region's RMP universe that year.

These nine facilities were audited by EPR in August and September 2006 and referred to ECEJ in March 2007 for failing to submit a Certificate of Completion after the audit. The Certificate of Completion is a document that EPR developed and requires facilities to complete in order to certify that they have resolved the deficiencies identified during an audit and subsequently described in a Preliminary Determination Letter. The RMP Enforcement Coordinator told us that ECEJ was unable to take enforcement actions against facilities that failed to submit a Certificate of Completion because it is not a requirement of 40 CFR Part 68.

In reviewing the RMP case files for these nine facilities, we found that two of the facilities submitted their Certificates of Completion late, 3 to 4 months past the due date, while the remaining files did not contain a Certificate. Thus, the compliance status at seven of these nine facilities remained unresolved. Additionally, the files for these facilities did not contain documentation of the facilities' referral to ECEJ, or correspondence from ECEJ stating that ECEJ could not take an enforcement action.⁷ The RMP Enforcement Coordinator told us that she returned the files for these facilities to EPR and told EPR staff she was unable to take enforcement action at the facilities. However, there was no documentation of this decision in EPR's case files. The compliance status of these seven facilities has been unresolved for over 2 years. These facilities have not been inspected or re-audited by ECEJ or EPR, and have not received any enforcement action. Cumulatively, these seven unresolved facilities could impact over 10,000 people in a worst-case release scenario.

Although ECEJ determined that they could not take enforcement action against facilities for failure to submit Certificates of Completion, the Risk Management Program regulations provide a mechanism for enforcing noncompliance identified during an audit. The regulations state that after providing the owner of a facility with the opportunity to respond to a Preliminary Determination Letter, the implementing agency (Region 8) may prepare a final determination letter specifying necessary revisions to a facility's RMP. Failure to comply with a final determination letter is a violation of the Risk Management Program regulations. However, as of January 2009, EPR had not used the final determination letter mechanism

Region 8 Has Lowest Enforcement Rate of All Regions

A comparison of Region 8's CAA Section 112(r) enforcement actions with other EPA regions suggests a concern with regional enforcement of the Program. Region 8 has taken fewer CAA 112(r)-related enforcement actions than other regions.⁸ As of January 2008, Region 8 had taken only 12 such enforcement actions since FY 2001, which is 2.3 to 44 times fewer enforcement actions than other regions. The number of actions taken by other EPA regions ranged from 28 to 532. Further, none of the 12 enforcement actions in Region 8 were at high-risk facilities. Region 8 also had the lowest number of enforcement actions in comparison to number of RMP facilities.

⁷ EPR provided us with an e-mail documenting the referral of these nine facilities to ECEJ in March 2007. However, neither this e-mail nor other documentation of the referral to ECEJ were included in the case files for these facilities.

⁸ Our analysis of enforcement actions includes all CAA Section 112(r)-related enforcement actions, as identified in the Integrated Compliance Information System database. Section 112(r) includes both the General Duty Clause and the Risk Management Program. Thus, some of the enforcement actions included in our analysis may be actions taken for violation of the General Duty Clause.

Based on the RMP universe as of November 29, 2007, the ratio of enforcement actions per RMP facility was 0.01 (12 actions/890 facilities) in Region 8. This is less than the ratio for the other regions, which ranged from 0.02 to 0.23. In our view, the issues described in this report negatively impacted the Region's enforcement of the Program.

Conclusions

Region 8 has not established effective processes and controls to provide reasonable assurance that resources are used effectively to accomplish the Risk Management Program's goals. The two offices tasked with implementing the Risk Management Program have not consistently followed operating guidance, which has resulted in an inefficient use of resources and insufficient coverage of RMP facilities. In addition, the Region's two existing guidance documents for the Program contain contradictory language on which offices should be conducting RMP inspections. Consequently, most of the Region's high-risk facilities have not been audited or inspected, while duplicative oversight activities have been performed at many lower-risk facilities. Further, the compliance status of seven facilities identified as noncompliant has remained unresolved for over 2 years. Some case files were incomplete and lacked documentation regarding their referral for enforcement and their compliance status. Region 8 has not clarified its guidance regarding how the two offices will coordinate inspection and enforcement activities, nor assigned responsibility and accountability for the Program.

Recommendations

We recommend that the Regional Administrator, EPA Region 8:

1. Develop a strategy for administering the Risk Management Program that defines program goals, performance measures, organizational responsibilities, documentation requirements, and required coordination between offices.
2. Develop an oversight process to evaluate the Region's success in implementing the Program strategy.

Region 8 Comments and OIG Evaluation

Region 8 agreed with our findings and recommendations. Additionally, in response to our draft report, Region 8 has already completed the recommended actions. The Region developed an Implementation Strategy that addressed Program goals, performance measures, organizational responsibilities, coordination, and Program resources. In addition, it includes an oversight process to evaluate EPA's and ECEJ's success in implementing the Strategy. Thus, both recommendations are being "closed" in our tracking system upon issuance of this final report. In accordance with EPA Manual 2750, the Region is responsible for recording completion of this corrective action in the Management Audit Tracking System.

Appendix B contains the full text of Region 8's response to the draft report, including its Risk Management Program Implementation Strategy.

Status of Recommendations and Potential Monetary Benefits

RECOMMENDATIONS						POTENTIAL MONETARY BENEFITS (in \$000s)	
Rec. No.	Page No.	Subject	Status ¹	Action Official	Completion Date	Claimed Amount	Agreed To Amount
1	8	Develop a strategy for administering the Risk Management Program that defines program goals, performance measures, organizational responsibilities, documentation requirements, and required coordination between offices.	C	Regional Administrator, Region 8	3/18/2009		
2	8	Develop an oversight process to evaluate the Region's success in implementing the Program strategy.	C	Regional Administrator, Region 8	3/18/2009		

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***

For our nationwide evaluation of EPA's implementation of the Risk Management Program, we interviewed staff and managers from EPA's OEM, OECA, Office of Air and Radiation, 10 EPA regions, and 4 States with delegation of the Risk Management Program. We also obtained data from all EPA regions and the 9 States and 5 local agencies with delegation of the Risk Management Program. The EPA OIG had not conducted any prior audits or evaluations of the CAA 112(r) Risk Management Program in Region 8 before the nationwide evaluation. The results of our nationwide evaluation are included in the report, *EPA Can Improve Implementation of the Risk Management Program for Airborne Chemical Releases* (Report No. 09-P-0092, February 10, 2009).

In order to determine whether procedures were in place in Region 8 to provide reasonable assurance that all facilities subject to the Program regulations had submitted RMPs (Objective 1), we reviewed the 2006 Toxics Release Inventory to identify facilities in Colorado that reported having on-site quantities of ammonia, chlorine, or hydrogen fluoride at levels well above the Risk Management Program thresholds. We then reviewed the RMP National Database (current as of November 29, 2007) to identify facilities that had not submitted RMPs or had not re-filed an RMP within its 5-year anniversary date. We met with Region 8 staff to discuss whether these facilities may be subject to Program requirements.

To determine whether the inspection process provided reasonable assurance that covered facilities in Region 8 comply with Risk Management Program requirements (Objective 2), we obtained lists of audits and inspections completed since the inception of the Program in 1999 from both EPR and ECEJ.⁹ We used these lists to identify facilities that had never been audited/inspected. We also compared the lists of audited/inspected facilities to three lists of high-risk facilities. The three lists we used included:

- OEM's lists of high-risk facilities (Tier 1 and Tier 2 facilities),¹⁰
- facilities that could impact 100,000 people or more in a worst-case release scenario, and
- facilities with the highest 5 percent of hazard indices in their respective implementing agency.

⁹ The inspection and audit data we obtained from EPR and ECEJ went through January 2008. However, in our nationwide evaluation of the Risk Management Program, we used a cut-off date of December 31, 2007, for all audit and inspection analyses. Thus, the inspection and audit figures for Region 8 in this evaluation report may differ slightly from those in our nationwide Risk Management Program report.

¹⁰ OEM's criteria for identifying high-risk facilities included the population impacted in a worst-case release scenario, the amount of chemical held in a process above the regulatory threshold quantity, and the worst-case release scenario endpoint distance. OEM divided its list into two tiers, with Tier 1 facilities representing a higher inspection priority than the Tier 2 facilities.

The hazard index of each facility was calculated using a formula¹¹ developed by the Wharton School of the University of Pennsylvania. We used these three lists as OIG's criteria for identifying RMP facilities that are high-risk facilities. We interviewed EPR and ECEJ staff and managers and reviewed guidance, procedures, budget reports, and other materials regarding the implementation of the Program by these offices. In order to determine the number of 112(r)-related enforcement actions for Region 8 and the other regions, we searched the Integrated Compliance Information System database for all enforcement actions from FY 2001 to January 2008 that listed CAA 112(r) as the primary law and section.

We conducted our evaluation of EPA's implementation of the Risk Management Program 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. During our evaluation we identified concerns with Region 8's management of the Risk Management Program. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our objectives.

¹¹ 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."

Appendix B***Region 8 Response to Draft Report***

March 19, 2009

MEMORANDUM

SUBJECT: EPA Region 8 Response to OIG Draft Evaluation Report, "EPA Region 8 Needs to Better Manage the Risk Management Program for Airborne Chemical Releases"

FROM: Carol Rushin
Acting Regional 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 Region 8 Needs to Better Manage the Risk Management Program for Airborne Chemical Releases," Project Number OPE-FY08-0001. The report focuses on improving the implementation of the Clean Air Act Risk Management Program in Region 8, and includes recommendations.

As a whole, Region 8 agrees with the findings and recommendations as outlined in the report. Since October 2008, both offices responsible for implementing the Risk Management Program have worked closely towards resolution of issues outlined in the draft report. We are committed to effectively managing our resources, planning and coordinating compliance activities and clarifying the roles and responsibilities of both offices. We will follow-up with the appropriate action at the seven facilities identified in the draft report as being unresolved. In addition, we will increase inspection and enforcement activities at high-risk facilities as defined by OECA and OEM. Below is our specific response to each of the recommendations.

Recommendation number 1: Develop a strategy for implementing the Risk Management Program in Region 8 that defines program goals, performance measures, and organizational responsibilities.

- Region 8 concurs with this recommendation. As mentioned above, the two offices within Region 8 have worked closely the past several months to clarify the organizational responsibilities and to properly align resources that will increase inspection and enforcement activities at high-risk facilities. As a result of this effort, we have finalized a strategy (Attachment) that defines program goals,

performance measures, and organizational responsibilities. In addition, the strategy includes outreach and inspection strategies and standard operating procedures for sharing information between offices and associated recordkeeping. The inspection strategy is based on the specific risk-related factors encompassed in OSWER and OECA's jointly revised National Program Manager's guidance. These factors will be considered in deciding which facilities will be included in the annual inspection strategy.

Recommendation number 2: Develop an oversight process to evaluate the Region's success in implementing the Program strategy.

- The strategy also includes an oversight process to ensure successful implementation of the program strategy. End-of-year reviews will be conducted by management in the individual offices to assess progress over the past year and modify approaches for program implementation as needed. EPR will prepare an end-of-year report on all outreach and training activities for the CAA 112(r) program and report to management on the activities. ECEJ oversight of the program will be based on an end-of-year review of all inspection files. The review will be conducted by ECEJ management and the inspection team and will include an accounting of the high-risk facilities inspected and evaluation of the findings. Based on the findings, the enforcement team will formulate an approach for the upcoming year to ensure effective inspection targeting.
- Each office will maintain records for the information forwarded from one office to the next. An annual summary of the records will be reviewed between the offices and shared with management in both offices.

Region 8 feels confident that the above described measures concurrent with the realignment of resources and clear delineation of duties across offices will resolve the issues identified in the February 20, 2009 Draft OIG Evaluation Report.

Again, we appreciate the opportunity to review and comment on this Report. If you have any questions or comments, the person most knowledgeable about this report is Cindy Reynolds, Director of the Air and Toxics Technical Enforcement Program. She can be reached at (303) 312-6206.

Attachment

**EPA REGION 8
CAA 112(R)/RISK MANAGEMENT PROGRAM
IMPLEMENTATION STRATEGY**

March 18, 2009

I. INTRODUCTION

In November 2007, the Office of the Inspector General (OIG) began an evaluation of the EPA's national CAA 112(r) program. The objectives of the OIG review were to determine whether:

- Procedures are in place to provide reasonable assurance that all facilities subject to the program have submitted risk management plans; and
- The inspection process provides reasonable assurance that covered facilities comply with the risk management program requirements.

During the evaluation, the OIG identified concerns with Region 8's program and issued a separate report in February 2009 to address these concerns. This report ("EPA Region 8 Needs to Better Manage the Risk Management Program for Airborne Chemical Releases") identified areas of concern and recommended a strategy be developed to address program goals, performance measures, and organizational responsibilities. The report also recommended an oversight process be developed to evaluate Region 8's implementation of the strategy. This strategy addresses the OIG recommendations and replaces the *Implementation Protocol for Coordination of Efforts between the Technical Enforcement Program and the Preparedness and Prevention Team* for implementation of the CAA 112(r) program.

II. PROGRAM GOALS

EPR and ECEJ have jointly developed the following goals for the CAA 112(r) program:

- Implement the CAA 112(r) program consistent with national program guidance, meet performance measures, and reduce accident risk at chemical facilities in Region 8;
- Provide a framework that delineates responsibilities across EPR and ECEJ for jointly implementing the program;
- Provide a mechanism for forwarding incoming information to the appropriate office to ensure seamless implementation; and
- Provide a mechanism for recordkeeping to allow for individual program oversight of the program's implementation.

III. PERFORMANCE MEASURES

Performance measures for the CAA 112(r) program are defined in EPA's Annual Commit System (ACS). These two measures are:

- CH2 – Number of risk management plan audits and inspections completed; and
- CAA11 - Conduct inspections at 5% of the total number of facilities in the region required to submit RMPs. Of these inspections, 10% must be conducted at high-risk facilities. These inspections at high-risk facilities must also include an evaluation of compliance with applicable EPCRA and CERLA requirements.

IV. ORGANIZATIONAL RESPONSIBILITIES

The division of responsibility between ECEJ and EPR ensures that there is not overlap in the individual responsibilities of the two offices. EPR will interface with industry while delivering outreach in group forums such as workshops and conferences. ECEJ will interface directly with regulated industry during inspections and investigations. EPR developed a strategy for conducting outreach (Attachment 1) and ECEJ developed a strategy for inspection activities (Attachment 2).

The following provides a summary of the activities for the individual offices:

EPR

- Provide outreach for States, locals, industry on EPA software programs (e.g., Tier II submit, RMP Submit);
- Provide outreach at SERC, LEPC and TERC meetings;
- Provide outreach to industry as needed on requirements of EPCRA, CERCLA 103 and RMP;
- Conduct cleanup and maintenance of OEM's RMP database;
- Work with States to encourage RMP program assumption;
- Identify industrial sectors for outreach; and
- Identify potential non-filers through database reviews and local groups (fire departments, SERCs and LEPCs) and forward to ECEJ.

EPR will develop an outreach plan that incorporates OEM priorities and guidance and meets the Region's overall implementation of the program as outlined in Attachment 1.

ECEJ

- Conduct inspections and investigations to evaluate compliance with EPCRA, CERCLA 103, RMP and GDC;
- Develop enforcement actions as appropriate;
- Respond to State and local requests regarding specific facility compliance;
- Evaluate the NRC spill log to determine possible noncompliance with CERCLA 103, EPCRA and RMP;
- Identify RMP non-reporters during EPCRA inspections and CERCLA 103 investigations; and
- Conduct enforcement initiatives in industry sectors when noncompliant trends are found.

OECA and OEM jointly created inspection priorities in the FY2010 NPM guidance. ECEJ will create an inspection strategy which encompasses these priorities as outlined in Attachment 2.

V. PROGRAM COORDINATION

A Standard Operating Procedure has been developed (Attachment 3) that addresses how information will be forwarded between ECEJ and EPR regarding the CAA 112(r) and EPCRA programs.

POINTS OF CONTACTS: The contact in ECEJ is the Enforcement Coordinator for RMP/EPCRA/CERCLA 103 program. The contact in EPR is the RMP Coordinator.

COORDINATION MEETINGS: On a quarterly basis, EPR and ECEJ will meet to discuss any pertinent coordination issues. These meetings will provide the opportunity for offices to share information of mutual interest, review any information forwarded between the offices, and share outreach and inspection results.

VI. RESOURCES

Prior to the 1995 reorganization, the emergency preparedness program and related enforcement activities fell into the Emergency Response Branch. Funding and resources are provided by the OEM in OSWER. When Region 8 reorganized, compliance monitoring and enforcement responsibility for these programs was placed in ECEJ.

After detailed review and discussions of the division of responsibilities, Region 8 has re-aligned resources as follows:

PROGRAM & FUNDING	EPR		ECEJ	
	FTE	EXTRAMURAL	FTE	EXTRAMURAL
EPM	0.5		2.0	\$150K
SUPERFUND PREPAREDNESS	2.0	\$160K		
SEEs	3.0		2.0	

(Note: this redistribution does not currently alter the FTE ceiling of either office.)

VII. OVERSIGHT

EPR will prepare an end-of-year report on all outreach and training activities for the CAA 112(r) program and report to management on the activities.

ECEJ oversight of the program will be based on an end-of-year review of all inspection files. The review will be conducted by ECEJ management and the inspection team and will include an accounting of the high-risk facilities inspected and evaluation of the findings. Based on the findings, the team will formulate an approach for the upcoming year to ensure effective inspection targeting.

Each office will maintain records for the information forwarded from one office to the next. The mechanism for this recordkeeping is outlined in Attachment 3. An annual summary of the records will be reviewed between the offices and shared with management in both offices.

ATTACHMENTS:

- 1 - OUTREACH STRATEGY
- 2 - INSPECTION STRATEGY
- 3 - SOP FOR FORWARDING INFORMATION BETWEEN OFFICES AND ASSOCIATED RECORDKEEPING

Attachment 1

OUTREACH STRATEGY

EPR will perform outreach activities to the regulated community on the requirements of the Risk Management Program (RMP) to enhance the overall safety at facilities and the general public.

EPR will use staff, SEE personnel, and contractors to provide general outreach on the RMP to emergency planners and responders by attending and providing program information at SERC, TERC and LEPC meetings. When specific industry groups are identified or request RMP outreach activities, EPR will take appropriate actions to insure the needs of these groups are met.

EPR will develop outreach materials to address specific needs related to the RMP program and present these materials to appropriate emergency planning groups or industry sectors or facilities. An example of such a need is the current shift from paper or floppy disks to electronic submittal using RMP e*Submit software for re-submittal of RMP data. As other program changes, court decisions, or regulatory interpretations dictate, EPR will develop and present other outreach materials to assist the public in understanding the requirements of the program.

If there is an industry segment or category that is found to present safety elevated risks of the release of a covered chemical, outreach activities may be developed and made available in an effort to abate the risks and improve public safety.

Attachment 2

INSPECTION STRATEGY FOR THE RMP PROGRAM

ECEJ's annual inspection strategy will be based on a table of high risk inspection sites considering the following factors identified in OECA's and OSWER's FY2010 NPM guidance:

Facilities whose reported RMP worst-case scenario population exceeds 100,000 people;

Facilities holding any RMP-regulated substance on site in an amount more than 10,000 times the RMP threshold quantity for the substance;

Facilities whose reported RMP worst-case scenario endpoint distance equals or exceeds 25 miles;

Any RMP facility with a hazard index greater than or equal to 25;

Facilities that have had one or more significant accidental releases within the previous five years; and

Other facilities where information possessed by the Regional office indicates that the facility may be high-risk.

- On an as needed basis, modifications to the strategy will be made if chemical events occur at RMP reporting facilities and an immediate investigation/inspection is warranted.
- ECEJ will conduct a minimum of 10% of the total RMP inspections at high-risk facilities consistent with the OEM and OECA's national program guidance for the RMP program.
- Additional inspections will be based on geographic opportunity while conducting RMP inspections throughout the Region's six states. These inspections will include non-reporting facilities that may meet the RMP reporting criteria.
- ECEJ is also responsible for the NPM measure for TRI non-reporter and data quality inspections. Concurrent with these inspections, compliance with both CAA 112r's RMP and GDC will be evaluated.

Attachment 3

STANDARD OPERATING PROCEDURES FOR FORWARDING INFORMATION BETWEEN ECEJ AND EPR AND ASSOCIATED RECORDKEEPING

PURPOSE

This SOP defines the process by which information will be forwarded to the appropriate office. This will ensure that information coming into Region 8 will be promptly redirected as necessary.

PROCESS FOR TRANSMITTING INFORMATION

There are occasions in which information will come into one office that must be redirected based on the delineation of tasks.

If a call comes into voice mail, the voice mail message will be forwarded to the appropriate office. Telephone conversations will be summarized and relayed via email to the appropriate office. Hardcopy information will be hand delivered, routed by interoffice mail, or scanned and transmitted via email. When hardcopy information is sent by interoffice mail, an email will follow to confirm transmittal of the information.

In response to receipt of information transmitted by EPR, ECEJ will complete a tracking form that will describe the nature of the information and the subsequent review by ECEJ. The completed tracking form will be attached to the corresponding email with the records being maintained in a three ring notebook.

EPR will keep a log of both incoming and outgoing information.

During quarterly meetings, the teams can discuss specific topics of interest that arise from the exchange of information.

POINTS OF CONTACTS

ECEJ, Enforcement Coordinator for RMP/EPCRA/CERCLA 103 program
EPR, RMP Coordinator

Appendix C

Distribution

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Acting Regional Administrator, Region 8
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Acting Assistant Administrator for Enforcement and Compliance Assurance
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Assistant Regional Administrator, Office of Ecosystems Protection and Remediation,
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