



U.S. ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF INSPECTOR GENERAL

*Catalyst for Improving the Environment*

## Evaluation Report

# EPA Actively Evaluating Effectiveness of Its BP and Enbridge Oil Spill Response Communications

Report No. 11-P-0273

June 23, 2011



## Report Contributors:

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## Abbreviations

EPA	U.S. Environmental Protection Agency
ERT	Environmental Response Team
NCP	National Contingency Plan
NRT	National Response Team
OIG	Office of Inspector General
OSC	On-Scene Coordinator
RRT	Regional Response Team
USCG	U.S. Coast Guard

**Cover photos:** *from left:* Water warning near Battle Creek, Michigan (EPA OIG photo);  
air sampling station near Port Fourchon, Louisiana (EPA photo).

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# At a Glance

*Catalyst for Improving the Environment*

## Why We Did This Review

The purpose of this review was to determine what actions the U.S. Environmental Protection Agency (EPA) took to communicate oil spill risk to affected communities near the Gulf of Mexico and Michigan's Kalamazoo River.

## Background

When a major oil spill occurs in the United States, coordinated teams of local, state, and national personnel are called upon to help contain the spill, clean it up, and ensure that damage to human health and the environment is minimized. EPA's emergency response played an integral role in two recent oil spills. On April 20, 2010, the Deepwater Horizon mobile offshore drilling unit exploded, resulting in an oil spill in the Gulf of Mexico, known as the BP oil spill. On July 26, 2010, the Enbridge oil spill occurred, releasing oil into Michigan's Kalamazoo River.

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

The full report is at:  
[www.epa.gov/oig/reports/2011/20110623-11-P-0273.pdf](http://www.epa.gov/oig/reports/2011/20110623-11-P-0273.pdf)

## ***EPA Actively Evaluating Effectiveness of Its BP and Enbridge Oil Spill Response Communications***

### **What We Found**

We concluded that EPA is actively evaluating the effectiveness of its spill response communications activities. Because we found that the Agency has several ongoing efforts focused on lessons-learned activities, we did not continue into a field work phase of this assignment to evaluate the effectiveness of the Agency's communication efforts. We are closing this assignment upon issuing this report.

The results and the interpretation of all data collected by EPA at the BP and Enbridge oil spills were shared with state and local decisionmakers, as well as the impacted communities, in a number of ways. EPA developed Quality Assurance Sampling Plans to collect further data on the chemical contamination in air, water, and sediments. EPA communicated with the general public via press conferences, fact sheets, community meetings, and the Internet and social networking media. Data results and interpretations were posted on the Internet. The results were also communicated to local and state decisionmakers to inform their decisions on actions such as voluntary evacuations and drinking water advisories to protect public health. In addition, EPA issued a request for proposals for grants totaling up to \$300,000 to further communication efforts in the environmental-justice-designated communities impacted by the BP oil spill. EPA's response communications assisted states and other federal agencies in understanding the immediate and long-term impacts of oil contamination.

EPA is completing lessons-learned exercises to evaluate the effectiveness of its response to both oil spill incidents. These retrospective reviews address, in part, the effectiveness of EPA's communication strategy and activities. The lessons-learned activities will allow the Agency to identify areas of success, as well as areas that could be improved upon in responding to future emergency situations.

We make no recommendations in this report, and the Agency did not formally respond to a draft version of this report. A representative of EPA's Office of Emergency Response did state that the report was a good summary of spill response, coordination, and followup actions.



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

THE INSPECTOR GENERAL

June 23, 2011

**MEMORANDUM**

**SUBJECT:** EPA Actively Evaluating Effectiveness of Its BP and Enbridge Oil Spill  
Response Communications  
Report No. 11-P-0273

**FROM:** Arthur A. Elkins, Jr.  
Inspector General

A handwritten signature in black ink that reads "Mark Giallone for".

**TO:** See Below

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 describes what the OIG found. 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 direct labor and travel costs for this report are \$229,777.

**Action Required**

Because this report contains no recommendations, you are not required to respond to this report. However, if you submit a response, it will be posted on the OIG's public website, along with our memorandum commenting on your response. Your response should be provided as an Adobe PDF file that complies with the accessibility requirements of Section 508 of the Rehabilitation Act of 1973, as amended. The final response should not contain data that you do not want to be released to the public; if your response contains such data, you should identify the data for redaction or removal. We have no objections to the further release of this report to the public. We will post this report to our website at <http://www.epa.gov/oig>.

If you or your staff have any questions regarding this report, please contact Wade Najjum at (202) 566-0832 or [najjum.wade@epa.gov](mailto:najjum.wade@epa.gov), or Jeffrey Harris at (202) 566-0831 or [harris.jeffrey@epa.gov](mailto:harris.jeffrey@epa.gov).

Addressees:

Mathy Stanislaus, Assistant Administrator for Solid Waste and Emergency Response  
Gwendolyn Keyes Fleming, Regional Administrator, Region 4  
Susan Hedman, Regional Administrator, Region 5  
Al Armendariz, Regional Administrator, Region 6

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## Purpose

The purpose of this review was to determine what actions the U.S. Environmental Protection Agency (EPA) took to communicate oil spill risk to communities near the Gulf of Mexico and Michigan's Kalamazoo River.

## Background

### ***Federal Emergency Response to Major Oil Spills***

When a major oil spill occurs in the United States, coordinated teams of local, state, and national personnel are called upon to help contain the spill, clean it up, and ensure that damage to human health and the environment is minimized. In the United States, the system for organizing responses to major oil spills is called the National Response System. There are three components of the National Response System: (1) on-scene coordinators (OSCs), (2) the national response team (NRT), and (3) regional response teams (RRTs).

**On-Scene Coordinator:** The OSC is the federal official responsible for monitoring or directing responses to all oil spills and hazardous substance releases reported to the federal government. The OSC coordinates all federal efforts with, and provides support and information to, local, state, and regional response communities. In general, the OSC's key responsibilities during and after a response to a hazardous substance release or an oil spill are (1) assessment, (2) monitoring, (3) response assistance, and (4) evaluation.

**National Response Team:** The NRT is an interagency group that provides guidance prior to an incident and, when requested, technical and financial assistance during an incident. EPA chairs the NRT, and the U.S. Coast Guard (USCG) serves as the vice chair.

**Regional Response Teams:** RRTs are interagency groups that consist of representatives from federal, state, and local governments. They conduct preresponse planning and preparedness activities, as well as coordinate and provide advice during response actions. The two principal components of the RRT are 13 standing teams, which provide regionwide support on communications, planning, coordination, training, evaluation, and preparedness; and incident-specific teams for which participation depends on the technical nature and location of the incident.

The purpose of the National Oil and Hazardous Substances Pollution Contingency Plan, also known as the National Contingency Plan (NCP), is to provide the organizational structure and procedures for preparing for and responding to discharges of oil and releases of hazardous substances, pollutants, and contaminants. It was developed to ensure that the resources and expertise of the

federal government would be immediately available for major incidents that require federal or regional response. The NCP provides the federal government with a framework for notification, communication, and responsibility for oil spill response. It creates and implements a Unified Command, which coordinates the responsible party with federal and state officials in the spill response. The NCP also established additional technical and support response teams: (1) the Coast Guard National Strike Force, (2) the Coast Guard Public Information Assist Team, (3) the National Oceanic and Atmospheric Administration's Scientific Support Coordinators, (4) National Resource Trustees, and (5) the EPA Environmental Response Team (ERT).

The ERT is a group of EPA technical experts who provide around-the-clock assistance at the scene of hazardous substance releases, offering expertise in such areas as treatment, biology, chemistry, hydrology, geology, and engineering. The ERT provides support to the full range of emergency response actions. The ERT can provide support for site assessments, health and safety issues, action plan development, and contamination monitoring.

### ***Risk Communication During an Oil Spill***

During oil spill recovery, the NCP states that it is imperative to give the public prompt, accurate information on the nature of the incident and the actions underway to mitigate the damage. According to the Centers for Disease Control and Prevention, crisis and emergency risk communication combines the urgency of disaster communication with the need to communicate risks, benefits, and needed action to stakeholders and the general public. Typically, communications during an emergency response focus on quickly disseminating information to warn of the potential threats and explain the protective measures being taken. This communication allows for the communities to be aware of any dangers or potential health effects possible due to the toxicity of the oil spill.

### ***Recent Oil Spill Incidents***

#### **Gulf of Mexico**

On April 20, 2010, the Deepwater Horizon mobile offshore drilling unit exploded, resulting in a severe fire. Two days later, the unit sank and began releasing several thousand barrels of crude oil per day into the Gulf of Mexico. The Secretary of the U.S. Department of Homeland Security classified this oil discharge as a "Spill of National Significance"<sup>1</sup> and designated the USCG Commandant as the

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<sup>1</sup> A "Spill of National Significance" is a spill that, due to its severity, size, location, actual or potential impact on the public health and welfare or the environment, or the necessary response effort, is so complex that it requires extraordinary coordination of federal, state, local, and responsible party resources to contain and clean up the discharge.

National Incident Commander.<sup>2</sup> The USCG led the federal environmental response actions in the coastal zone and oversaw all response operations, including those of BP. EPA assigned some of its staff to the Unified Command and some to the local incident command posts. EPA also developed monitoring and assessment plans for surface and subsurface dispersant application, and provided technical assistance, air monitoring, and water quality sampling at several locations in Louisiana, Mississippi, and Alabama to assist in the oil spill response. EPA's Crisis Communication Plan establishes the process for communicating environmental information to the public and coordinating public information among EPA field operations, regional offices, and headquarters during a response to a national significant incident. The plan identifies the roles and responsibilities of EPA communication personnel.

### Kalamazoo River

Enbridge Energy Partners reported a 30-inch pipeline rupture on July 26, 2010, near Marshall, Michigan. The release, estimated to be 819,000 gallons, entered Talmadge Creek and flowed into the Kalamazoo River, a Lake Michigan tributary. On July 27, 2010, EPA issued a legal order under the authority of the Clean Water Act directing Enbridge to conduct removal actions. As the federal OSC, EPA Region 5 was in charge of the response to the Enbridge oil spill. EPA assumed a leadership role in the Unified Command and mobilized an Incident Management Team made up of federal, state, and local agencies. EPA provided air monitoring, sediment sampling, and water quality sampling.

## Scope and Methodology

We conducted this evaluation in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the evaluation to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our objectives. We believe that the evidence obtained provides a reasonable basis for the results reported based upon our objectives. Because we found that the Agency has several ongoing efforts focused on lessons-learned activities, we did not continue into a field work phase of this assignment to evaluate the effectiveness of the Agency's communication efforts. We performed our evaluation from September 2010 through June 2011.

Our evaluation included two recent oil spills in which EPA's emergency response played an integral role. The two oil spills covered in our review were in the Gulf of Mexico, known as the BP oil spill, and in Michigan's Kalamazoo River, known as the Enbridge oil spill. To determine what actions EPA took to communicate oil spill risk to communities near the Gulf of Mexico and the Kalamazoo River, we met with staff from EPA Regions 4, 5, and 6, in Atlanta, Georgia; Chicago,

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<sup>2</sup> According to the NCP, the National Incident Commander was to "assume the role of the [federal OSC] in communicating with affected parties and the public, and coordinating federal, state, local, and international resources at the national level."



Illinois; and Dallas, Texas, respectively. We also met with headquarters staff from the Office of Water; Office of Air; Office of Solid Waste and Emergency Response, including the Office of Emergency Management; Office of Compliance and Enforcement Assurance, including the Office of Environmental Justice; and Office of External Affairs and Environmental Education. Additionally, we attended a community update meeting in Battle Creek, Michigan, which was conducted primarily by EPA officials.

We also analyzed EPA planning and implementation documents. We reviewed applicable laws and regulations. Specifically, we reviewed the Crisis Communication Plan, the Clean Water Act, the Clean Air Act, the National Contingency Plan for Oil Spills, and the Oil Pollution Act of 1990. We also reviewed guidance documents related to communicating risk as well as the following past audit reports in this area:

- National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, *Report to the President: National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling*, January 2011.
- EPA Office of Inspector General, *EPA Should Continue to Improve Its National Emergency Response Planning*, Report No. 08-P-0055, January 9, 2008
- EPA Office of Inspector General, *Lessons Learned: EPA's Response to Hurricane Katrina*, Report No. 2006-P-00033, September 14, 2006
- EPA Office of Inspector General, *EPA's Response to the World Trade Center Collapse: Challenges, Successes, and Areas for Improvement*, Report No. 03-P-00012, August 21, 2003

## Results of Review

We concluded that EPA is actively evaluating the effectiveness of its spill response communications activities. We are closing this subject assignment upon issuing this report. The results and the interpretation of all data collected by EPA at the BP and Enbridge oil spills were shared with state and local decisionmakers, as well as the impacted communities, in a number of ways. EPA developed Quality Assurance Sampling Plans to collect data on the chemical contamination in air, water, and sediments and provided technical assistance, air monitoring, and water quality sampling in response to both oil spills. EPA communicated with the general public via press conferences, fact sheets, community meetings, and the Internet and social networking media. Data results and interpretations were posted on the Internet. The results were also communicated to local and state decisionmakers to inform their decisions on actions such as voluntary evacuations and drinking water advisories to protect public health. In addition, EPA took steps to issue grants to assist in communication efforts in the environmental-justice-designated communities impacted by the BP oil spill. EPA's response communications assisted states and other federal agencies in understanding the immediate and long-term impacts of oil contamination.

### ***EPA Communicated With State and Local Decisionmakers***

During the recent oil spill incidents, EPA conducted sampling and monitoring of air, water, and sediment, and these results were communicated to local and state decisionmakers who in turn made the decisions regarding actions to protect public health (e.g., voluntary evacuations, drinking water advisories, and beach closures).

Specifically for the BP oil spill, EPA's monitoring and sampling activities provided the USCG, states, and local governments with information about the potential impacts of the oil spill. EPA collected samples along the shoreline and beyond to test for chemicals related to oil and dispersants in the air, water, and sediment; supported and advised USCG efforts to clean the oil and waste from the shoreline; and closely monitored the effects of dispersants in the subsurface environment. Each state sets water quality baselines for closure of fishing areas by fish/shellfish category, and EPA's water quality data contributed to the State of Louisiana's decision to close certain fishing areas.

During the Enbridge oil spill, EPA provided the results of its monitoring and sampling to local agencies. Local officials then made decisions regarding the health and safety of the affected communities. EPA's air monitoring after the Enbridge oil spill showed one chemical, benzene, at a level of potential health concern. Based on these concerns, the local health department issued a voluntary evacuation notice for people living in the most highly impacted areas. In addition, EPA's surface water samples provided information on oil-related chemicals found in Talmadge Creek and the Kalamazoo River. Based on results of water sampling, state and local agencies issued a ban on surface water activities, including swimming, wading, fishing, boating, canoeing, and kayaking.

### ***EPA Communicated With Impacted Communities***

EPA made environmental data available to the public. EPA utilized various media to disseminate the information. EPA used such tools as Google Earth, Facebook, and Twitter to communicate with the public. The results and the interpretation of all data collected by EPA were posted on its website to ensure that residents in affected areas had access to information about the quality of their water. EPA regularly updated its website with sampling results and information regarding health questions and ecological concerns.

The Agency also conducted or participated in numerous press conferences. Fact sheets were prepared and disseminated to the public covering topics such as air, water and sediment quality, and the cleanup process. Additionally, EPA issued request for proposals totaling \$300,000 in grants to further communication efforts in the environmental-justice-designated communities impacted by the BP oil spill.

### ***Lessons-Learned Activities Conducted by EPA***

EPA conducted various lessons-learned exercises to help evaluate the effectiveness of its response to both oil spill incidents. These reviews looked at a number of components such as communication, staffing/logistics, and the crisis communication plan. Lessons-learned activities included the following:

- Region 4 sent a blind survey to all EPA employees who worked on the BP spill, regardless of their regional location. This survey focused on several topic areas such as deployment, operations, communication, and data management.
- Region 5 led a hot wash, or performance review, of its Enbridge response and plans to conduct another one to obtain feedback from nonfederal responders.
- Headquarters also completed a hot wash and developed a public information officer summary of lessons learned from the BP spill.

These lessons-learned activities should allow the Agency to identify areas of success, as well as areas that could be improved upon in responding to future emergency situations.

### **Agency Comments and Office of Inspector General Evaluation**

We make no recommendations in this report, and the Agency did not formally respond to the draft version of this report. A representative of the Office of Emergency Response did provide technical comments and described the report as a good summary of spill response, coordination, and followup actions. The technical comments were addressed in the final report as appropriate.

# **Status of Recommendations and Potential Monetary Benefits**

RECOMMENDATIONS						POTENTIAL MONETARY BENEFITS (in \$000s)	
Rec. No.	Page No.	Subject	Status <sup>1</sup>	Action Official	Planned Completion Date	Claimed Amount	Agreed-To Amount
No recommendations							

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

## ***Distribution***

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