PROGRAM EVALUATION: AN INTERNAL REVIEW OF PROCEDURES FOR COMMUNITY INVOLVEMENT IN SUPERFUND RISK ASSESSMENTS

Prepared For

United States Environmental Protection Agency

Office of Solid Waste and Emergency Response

Office of Superfund Remediation Technology Innovation

Prepared By

Industrial Economics, Inc.

2067 Massachusetts Avenue

Cambridge, MA 02140

October 13, 2004

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The goal of Superfund community involvement is to advocate and strengthen early and meaningful community participation during the Superfund process. Superfund community involvement staff will strive to:

- Keep the community well informed of ongoing and planned activities.
- Encourage and enable community members to get involved.
- Listen carefully to what the community is saying.
- Take the time needed to deal with community concerns.
- Change planned actions where community comments or concerns have merit and when changes can be made within the boundaries of the Superfund law.
- Explain to the community what EPA has done and why.

With respect to Community Involvement in Risk Assessment (CIRA), there are three key groups of Environmental Protection Agency (EPA) participants, the Remedial Project Manager (RPM), the Community Involvement Coordinator (CIC) and the Risk Assessor (RA). The CIC is a specialist in community relations and is responsible for developing the Community Involvement Plan (CIP) and for planning community outreach activities and events. The CIP outlines the activities to be conducted though out the life of the cleanup. The RPM oversees the entire Superfund process at a site, including the remedial investigation (RI), feasibility study (FS), and final decision making. Risk Assessors are responsible for developing the baseline human health risk assessment, risk-based preliminary remediation goals that are used in the screening of chemicals, and in the feasibility study to determine remedial action objectives.

EPA's Office of Superfund Remediation Technology Innovation (OSRTI) is responsible for over-seeing Community Involvement in Risk Assessment and is interested in assessing the effectiveness of that portion of the community involvement process. To oversee the evaluation, EPA established a workgroup comprising representatives from OSRTI and the Office of Planning, Analysis, and Accountability (OPAA). OPAA used competition funds to secure contractor support from Industrial Economics, Inc. (IEc) of Cambridge, Massachusetts. The evaluation relies primarily upon discussions with CICs, RPMs, and RAs.

The purpose of this evaluation is to gain a better understanding of the dynamics of CIRA and its impact on the risk assessment process. The risk assessment is part of a larger process that begins with the Remedial Investigation and continues through the Record of Decision.

Specifically, the evaluation sought to answer the following questions:

Q1. What has EPA learned about effective approaches for involving communities in risk assessment?

Q2. What factors lead EPA to decide to pursue or not pursue community's involvement in the risk assessment?

Q3. Are there common impediments to involving the public in risk assessment?

Q4. What have EPA and the community gained from involving people in the risk assessment process?

Q5. How does increasing public understanding of EPA risk assessment and community involvement opportunities affect public confidence in EPA's decisions?

Q6. What factors correlate with successful community involvement in risk assessment (e.g. demographics, media attention, chemicals present)?

KEY FINDINGS

Among the key findings from the interviews are the following:

- The best results stem from community involvement that commences early in the risk assessment process, such as during the RI phase.

- EPA respondents most frequently identified community meetings, availability sessions or open houses, as the most commonly employed means of soliciting information from the community.

- While some respondents had used materials produced by the Superfund office, the materials most frequently used to explain the risk assessment process to the public were site-specific materials designed by the site team.

- CICs, RPMs, and RAs emphasized the importance of coordinating with local health departments and ATSDR to reach out, to collect information from, and to report results to the public.

- Parental concerns were cited as one of the most powerful motivating factors for community participation.

- The involvement of technical advisors can also raise the community's level of respect for EPA and their satisfaction with the cleanup, particularly if the community group that hired the technical advisor is representative of the larger community.

- While community input did not affect the outcome of the risk assessment in all cases, interviewees noted in all cases, the comments often encouraged EPA to look at new sources of exposure and to reconsider assumptions about exposure frequency, duration, and intensity.

- The evaluation team asked nine RAs to discuss the benefits of involving the community in risk assessment, and they unanimously stated that community involvement increased public confidence in EPA.

RECOMMENDATIONS FOR EPA TO CONSIDER

The results of our interviews suggested several potential approaches to improving community involvement in the risk assessment process, as well as opportunities for additional research to better understand what makes community involvement in risk assessment successful. These include the following:

- Expand existing training for CICs, RAs, and RPMs on effective community involvement as well as risk communication.

- Provide examples of "best practices" in community involvement used at other sites.

- Develop simplified tools that would enable the Superfund team to educate the public on the risk assessment process.

- Create a national database of risk assessment materials to facilitate the sharing of customized presentations and other explanatory materials.

- Formalize the risk assessment discussion as part of the CIP.

- EPA should also consider investigating how other agencies (e.g. DOE or DOD) incorporate community involvement into their risk assessments when they act as the lead**.**

- EPA should consider conducting additional research on those sites that have made community involvement an integral part of the risk assessment process, seeking to determine what factors contributed to the high degree of community involvement. Case study analyses at those sites where involvement was high would help shed light on the important factors and identify which could be replicated at other sites.
  .

INTRODUCTION CHAPTER 1

Informing and engaging the potentially affected public in decisions related to hazardous waste is an important part of EPA's Superfund process. In fact, citizen concern over the extent of the problems associated with the nation's uncontrolled hazardous waste sites led Congress to establish the Superfund Program in 1980. The Superfund process includes a pre-remedial investigation of the site, a determination regarding whether a removal action may be necessary, listing of the site on the National Priorities List, a Remedial Investigation (RI) including the baseline risk assessment, a Feasibility Study (FS), and a proposed plan. EPA receives comments on the plan, develops a Record of Decision regarding any proposed action, and then activities to implement the plan. Community input is important throughout the process.

As noted on its website, the goal of Superfund community involvement is to advocate and strengthen early and meaningful community participation during the Superfund process. Superfund community involvement staff will strive to:

- Keep the community well informed of ongoing and planned activities.
- Encourage and enable community members to get involved.
- Listen carefully to what the community is saying.
- Take the time needed to deal with community concerns.
- Change planned actions where community comments or concerns have merit.
- Explain to the community what EPA has done and why.

EPA's Office of Superfund Remediation Technology Innovation (OSRTI) is responsible for management of the Superfund program including community involvement and is interested in assessing the effectiveness of that portion of the community involvement process that deals with risk assessment .Human health risk assessment is a key component of the Superfund decision-making process. These risk assessments incorporate science and community-based information to estimate the potential current and future health threats associated with exposures to contaminants in air, soil, water, and food (e.g., fish consumption from contaminated water bodies). Community members can provide EPA with information on the historical uses of the site. Such information will help the Agency identify sources of contamination and potential exposure pathways. These pathways might include exposure to surface water, ground water, or sediments. The risk assessment is the final step

in the RI process as EPA collects data to characterize site conditions, determine the nature and extent of the contamination, and assess the risk to human health and the environment. The FS is the mechanism for the development, screening, and detailed evaluation of alternative remedial actions. Data collected in the RI influence the development of remedial alternatives in the FS, which in turn affect the data needs and scope of treatability studies and additional field investigations. This phased approach encourages the continual scoping of the site characterization effort, which minimizes the collection of unnecessary data and maximizes data quality. While EPA also conducts ecological risk assessments and shares the results with the affected community, OSRTI is especially interested in evaluating the effectiveness of the community involvement in the human health risk assessment.

With respect to CIRA, there are three key groups of EPA participants, the Remedial Project Manager (RPM), the Community Involvement Coordinator (CIC) and the Risk Assessor (RA). In addition, there are a number of other individuals who are part of the team, but who are not included in this evaluation. The CIC is a specialist in community relations and is responsible for developing the Community Involvement Plan (CIP) and for planning community outreach activities and events. The CIP outlines the activities to be conducted though out the remediation process and may be updated based on changes in the nature of activities at the site. The RPM oversees the entire Superfund process at a site, including RI, FS, and final decision making. The RPM may become actively involved in community involvement at the risk assessment stage if the risk assessment is controversial among community members, or if the site is high-profile.

The Risk Assessor generally has a technical background that may include toxicology, epidemiology, or other public health-related fields. Working with other specialists on the site team, the risk assessor participates in the scoping of the data collection, evaluates the importance of various exposure pathways, selects toxicity values for the contaminants and combines all of this information to develop a baseline estimate of risk or to develop screening levels for the site. Risk assessors are responsible for developing the risk-based preliminary remediation goals that are used in the screening of chemicals, and in the feasibility study to determine remedial action objectives to protect human health and the environment. Some risk assessors may interact directly with the community by answering questions and giving presentations regarding the outcome of the risk assessment or the sampling results, while others may remain behind the scenes and allow the CIC or RPM to explain processes or communicate findings.

OSRTI received evaluation funding from EPA's Office of Planning, Analysis, and Accountability (OPAA) and Office of Policy, Economics, and Innovation (OPEI) through the "Program Evaluation Competition," an Agency-wide effort to competitively fund program evaluation grants. To oversee the evaluation, EPA established a workgroup comprising representatives from OSRTI and OPAA. OPAA used competition funds to secure contractor support from Industrial Economics, Inc. (IEc) of Cambridge, Massachusetts.

The evaluation relies primarily upon discussions with CICs, RPMs, and RAs from within the Agency. As a preliminary note, it is important to point out that since community involvement activities proceed throughout the Superfund process, it may be difficult to cull out those specific activities related to CIRA from ongoing community activities at the site. Further, community involvement activities are in constant development throughout the process, with the CIC adjusting the strategy to respond to community characteristics and the stage of the RI/FS. As a result, community involvement activities vary from site to site based on site specifics as well as the dynamics of the population that lives in its vicinity.

The purpose of this evaluation is to gain a better understanding of the dynamics of Community Involvement in Risk Assessment and its impact on the risk assessment process. It includes two phases. In the first phase, interviews were conducted with risk assessors, community involvement coordinators, and remedial project managers. Through this approach, EPA aims to identify the activities that most effectively increase community participation, improve the risk assessment, and increase community awareness of potential environmental hazards. In the second phase, the community's perspective on the process will be more carefully evaluated through a set of site specific case studies. Specifically, the evaluation sought to answer the following questions:

Q1. What has EPA learned about effective approaches for involving communities in risk assessment?

Q2. What factors lead EPA to decide to pursue or not pursue community's involvement in the risk assessment?

Q3. Are there common impediments to involving the public in risk assessment?

Q4. What have EPA and the community gained from involving people in the risk assessment process?

Q5. How does increasing public understanding of EPA risk assessment and community involvement opportunities affect public confidence in EPA's decisions?

Q6. What factors correlate with successful community involvement in risk assessment (e.g. demographics, media attention, chemicals present)?

In addition, this evaluation discusses what, if any, updated or revised guidance might be useful to ensure that public involvement in risk assessment is an effective component of Superfund site decision making. Through the site-specific case studies conducted in the second phase of the evaluation, EPA will also gain insights into the impact of public involvement on the level of confidence the public has in site decisions.

The information gathered from RAs, CICs, and RPMs during this first phase will help focus the second phase of this evaluation, the community-based evaluation of public perceptions of community involvement in risk assessment. Through in-depth interviews, EPA will gain insights into the impact of community involvement on public confidence in site decisions.

This report discusses the first phase of the CIRA evaluation, the internal agency review, providing a detailed description of the information gathered during interviews with CICs, RPMs, and RAs. The second phase will be completed later by EPA. The remainder of this report is structured as follows:

- Chapter 2 reviews the methodology used in the internal agency review.
- Chapter 3 examines the findings from the interviews conducted with CICs, RPMs, and RAs.
- Chapter 4 discusses the implication of the findings in terms of the key evaluation questions and includes recommendations for OSRTI to consider.

METHODOLOGY CHAPTER 2

The primary data collected for phase one of this evaluation involved a series of interviews with RAs and a subset of CICs and RPMs identified by the RAs and OSRTI. These interviews generated both quantitative and qualitative information, which is used to answer the primary evaluation questions identified earlier. Below, we describe the data collection and analysis efforts in detail.

Working in close consultation with OSRTI , IEc developed a series of interview questions which probed several aspects of community involvement in risk assessments, including:

- How public interest in participation is generated,
- Who the participants are,
- What EPA risk assessment materials do Superfund team members find most effective,
- How the risk assessment information is collected from community members,
- What type of information is collected, and
- What impact the information has on the risk assessment.

The evaluation team identified those individuals to be interviewed through a two step process. First, the questionnaire was piloted with two RAs, selected by OSRTI. These interviews provided important feedback on the content of the questionnaire, which the evaluation team used to adjust the questions. IEc then proceeded to interview eight more RAs. After reviewing the responses from these ten interviews with OSRTI, the evaluation team revised the questions to focus more directly on community involvement in the risk assessment process. In addition, based on results of the interviews, the evaluation team decided to expand the list of those interviewed to include CICs and RPMs. OSRTI identified a number of CICs and RPMs for inclusion in the interview process. Overall, the evaluation team spoke with 16 CICs, 8 RPMs, and 10 RAs. Appendix A contains a list of the CICs, RPMs, and RAs interviewed for this evaluation.

The interviews were designed not only to inform phase one of the evaluation, but also to provide insight into the second phase. Accordingly, the OSRTI contractor working on this second phase, Resource Associates, participated in five of the interviews conducted under phase one (See Appendix A). The interviews were set up and conducted in the following manner.

- OSRTI notified the selected CICs and RPMs that IEc would be contacting them to solicit their participation in the evaluation. This notification, accompanied by the interview questions, emphasized that written responses were not necessary, but that the questions were being distributed in advance of the telephone interview to streamline the process and to minimize the interview time.

- In the weeks following this notification, IEc contacted the selected CICs and RPMs to schedule interviews.

- Once scheduled, IEc notified Resource Associates of the interview timetable and the firm participated when possible.

- In IEc's introductory email and at the outset of each interview, participants were notified that all information provided would be kept confidential.

- The evaluation team assured participants that the data would be aggregated in a manner that would not allow specific responses to be attributed to individual respondents.

- At the beginning of each interview, the evaluation team asked each interviewee if (s)he understood the purpose of the evaluation, of the interview, and if (s)he had any questions prior to the interview.

- When Resource Associates was on the phone, IEc reviewed its role in the interview and evaluation. IEc provided Resource Associates with the opportunity to ask additional questions upon completion of each section of the questionnaire.

Following each interview, IEc entered the data into a Microsoft Access database. Data for simple, multiple-choice questions were entered in a manner that allows simple computation of percentages and counts. Responses to the open ended questions were summarized and entered into the database as text passages. Finally, to verify that the information provided by respondents was captured accurately, copies of the questions and individual responses were sent to survey participants for their review.

FINDINGS CHAPTER 3

This chapter presents the results of the 34 interviews with the CICs, RPMs and RAs working at Superfund sites across the country. The information collected during the telephone interviews is broken down into five distinct sections that parallel the flow of our conversation with the EPA staff member. The five topics, along with the evaluation questions they address, are shown in Table 3-1.

Table 3-1

Key Topics and Associated Evaluation Questions

Key Topics	Evaluation Questions (from Chapter One)
Planning community involvement in risk assessments	• What has EPA learned about effective approaches for involving communities in risk assessment?
Informing the community of opportunities to participate	• What has EPA learned about effective approaches for involving communities in risk assessment?
Conducting community involvement for risk assessment	• What has EPA learned about effective approaches for involving communities in risk assessment? • What factors lead EPA to decide to pursue or not pursue community's involvement in the risk assessment?
Community response and participation	• What has EPA learned about effective approaches for involving communities in risk assessment? • What factors lead EPA to decide to pursue or not pursue community's involvement in the risk assessment? • Are there common impediments to involving the public in risk assessment? • What factors correlate with successful community involvement in risk assessment? Specifically, does community knowledge of the risk assessment process affect the public's willingness to provide information to risk assessors?
Benefits and impediments associated with involving the community in the risk assessment process	• Are there common impediments to involving the public in risk assessment? • What have EPA and the community gained from involving people in the risk assessment process? • How does increasing public understanding of EPA risk assessment and community involvement opportunities affect public confidence in EPA's decisions? • What factors correlate with successful community involvement in risk assessment? Specifically, does community knowledge of the risk assessment process affect the public's willingness to provide information to risk assessors?

For each section, we note the specific questions asked and summarize the responses received. Appendix B includes complete information on the responses to all quantitative

questions from each group. We highlight the key findings for each topic and include a discussion of each finding **(noted in bold).** In the final chapter of the report, we return to the six evaluation questions, noting how the findings help answer these questions.

PLANNING COMMUNITY INVOLVEMENT IN RISK ASSESSMENTS

Key Findings

1. Although community involvement activities for the risk assessment may not be formally incorporated into the CIP, respondents indicated that they work with their counterparts to design community involvement activities for the risk assessment.

2. The best results stem from community involvement that commences early in the risk assessment process.

This section discusses the preparation and planning by CICs, RPMs, and RAs for community involvement in risk assessments. It is important to note that the scope of the community involvement will vary significantly from site to site. In some cases, it might be limited to explaining the processes and findings while in other instances, the community involvement can directly impact the results. To determine what methods were used and how they were incorporated into other community involvement activities, we asked respondents the following questions:

- Does the CIP specifically include activities to be done during or in conjunction with the Risk Assessment?

- Did you work with your Region's Risk Assessor, CIC or RPM to design or implement the CIP? If so, how? If not, why not?

- Do you typically consult and coordinate with your region's Risk Assessors and/or (CICs/RPMs) to design and implement specific public outreach and involvement activities to support the development of site specific risk assessments? If so, at what point in the risk assessment process do you and/or the Risk Assessor and CIC/RPM typically recommend that community involvement activities begin?

- When you decide to engage the public in your risk assessment activities, what team member (CIC, RPM, and/or risk assessor) takes the lead role in communicating with the public?

- Have you ever been involved in activities as they relate to collecting information from communities about the ways they may be exposed to contaminants at a site, or the knowledge they have about a site?

Findings

Community involvement activities and strategies for the risk assessment are not generally included in the CIP. Of the 34 survey participants, only five said that the CIP did include specific community involvement activities to be done during or in conjunction with the risk assessment. However, twelve respondents said they were beginning to include such

activities in the CIP, but had not done so in the past. Sixteen interviewees indicated that they do not include community involvement activities related to the risk assessment in the CIP. However, 24 interviewees did note that they work with their counterparts to develop the CIP.

Although community involvement activities for the risk assessment may not be formally incorporated into the CIP, respondents indicated that they work with their counterparts to design community involvement activities for the risk assessment. Eighteen CICs and RPMs stated that they consult with their colleagues to design and implement specific public outreach and involvement activities for the risk assessment. However, they noted that the level of contact depended on the dynamics of the site as well as whether it was a high-profile location. Some CICs responded that they would only plan and implement activities to solicit public involvement in the risk assessment if requested to do so by the site's risk assessor or RPM. Though RAs were not asked this same question, their responses to other parts of the survey suggest that while they are not responsible for planning or managing such activities, they do participate by presenting information to the community and answering technical questions.

Three CICs commented that they had limited contact with their peers. Interviewees offered several different explanations for this lack of coordination in these instances, but the common theme among them was the approach taken by the site's RPM. Site team members looked to the RPM to lead collaborative efforts. Respondents indicated that they did not work with other team members because the RPM did not initiate coordination or specifically ask for information.

Either the RPM or CIC generally took the lead when EPA engages the public. However, risk assessors often played a key role in explaining the technical aspects of the risk assessment to community participants. The interviews made it clear that the CICs and RPMs relied heavily on the technical knowledge of the risk assessors with whom they worked.

Respondents pointed out that the best results stem from community involvement that commences early in the risk assessment process. Nine respondents indicated that they usually begin community involvement during the site discovery or site investigation, while seven usually began community involvement in the risk assessment design phase. The risk assessment is the final step of the remedial investigation process and builds on data collected during the RI. Eight RAs and RPMs said that they might begin community involvement during the scoping phase of the remedial investigation. One interviewee noted that at very active sites, the risk assessor would attend community interviews, in order to help suggest types of information and community involvement activities to plan. Two interviewees noted that they would begin community involvement after the proposed remedial investigation plan is drafted, in other words after the risk assessment is complete. Involving the community after the RI workplan is complete would allow individuals to comment on the completed risk assessment and the RI. One interviewee explained that this delayed involvement was intentional, designed to avoid "scaring people by communicating with them about the risks before they are understood." CICs and RPMs noted that the most common activities in which they engaged were answering questions about the public participation process, how EPA would be using the information collected, and/or the responsibilities of participants.

Twelve CICs and eight RPMs indicated that they directly solicited input from citizens or interested parties through availability sessions, town meetings, and interviews. Sixty nine percent of CICs and 63 percent of RPMs mentioned that they had facilitated community meetings, focus groups, or other activities that occur as part of the risk

assessment. In addition, more than half of CICs and RPMs noted that they had helped make the community aware of the opportunity to participate in the risk assessment, coordinated logistical details, and planned the activities. Fewer of these respondents had helped the risk assessors develop outreach materials for their community involvement activities. Other activities noted by respondents included working through health agencies, interviewing community members, and making door to door visits to community member's homes.

Figure 3-1
Activities Related to Community Involvement Conducted by RPMs and CICs

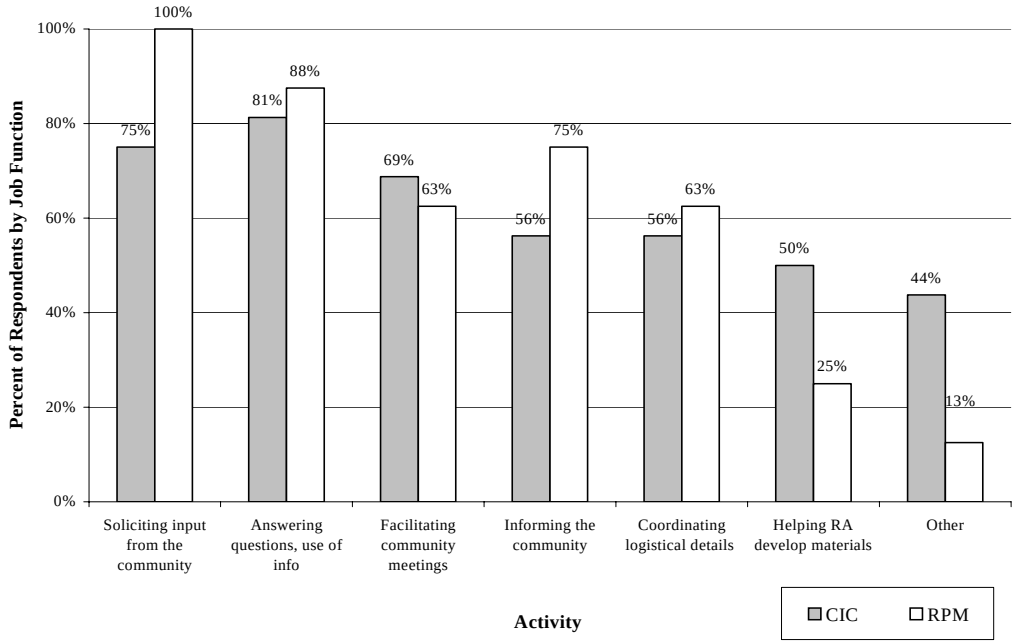


Figure 3-1 presents the percentage of CICs and RPMs who indicated they conducted various activities related to community participation.

INFORMING THE COMMUNITY OF OPPORTUNITIES TO PARTICIPATE

Key Findings

1. EPA uses a variety of mechanisms to reach community members and inform them of the opportunity to participate in the risk assessment.

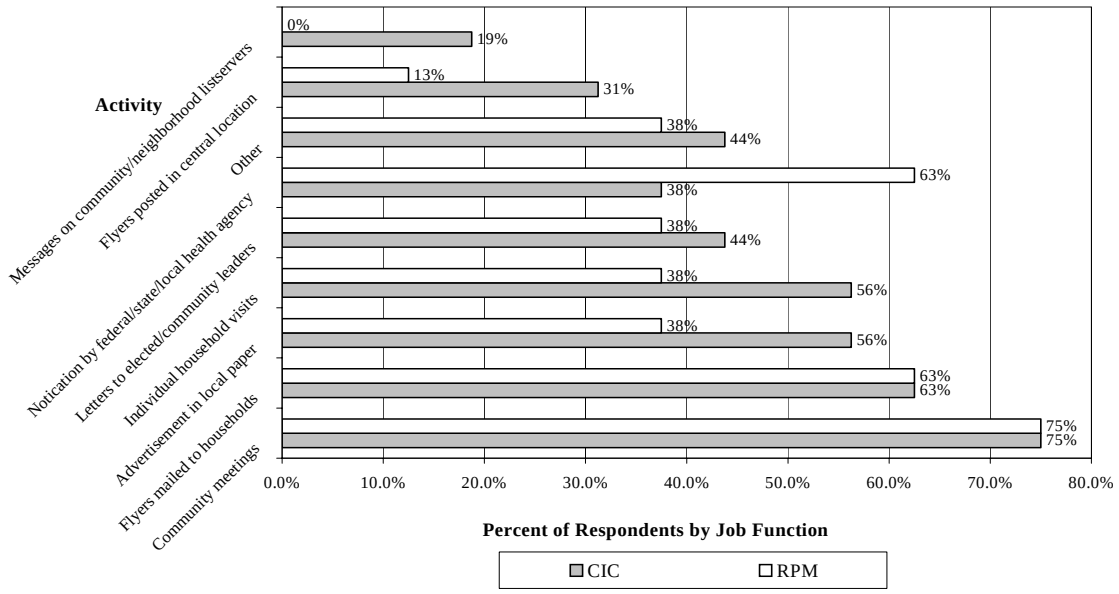
In order to determine how EPA informs the community of the opportunity to participate in the risk assessment process, respondents were asked the following questions:

- How is the public informed of the opportunity to provide input that may be relevant to the assessment of exposures at a site?
- What are the most effective means of reaching low income, minority and environmental justice communities, or undocumented workers to solicit information, disseminate information, etc.?

Findings

EPA uses a variety of mechanisms to reach community members and inform them of the opportunity to participate in the risk assessment. Figure 3-2 details the means of communication used by RPMs and CICs to alert the community of this opportunity.[1] The CICs and RPMs noted that they employ a combination of tools, but most frequently cited the use of announcements at community meetings. In fact, the majority of CICs (12) and RPMs (6) indicated they used this means of notification. Mailing flyers to individual households or distributing them to the public was also cited as a common means of reaching community members. Interviewees from the south central and southwestern portion of the United States relied more heavily on individual house visits than their counterparts elsewhere in the country.

Figure 3-2 Methods to Inform the Public of Community Involvement



In addition to the previously identified outreach techniques, respondents were asked to described the measures used to reach minority, low-income, or under-represented groups. **Respondents indicated that working with grassroots and community organizations and faith-based leaders as well as making home visits were key points of access to these communities.** These forms of outreach most effectively engendered trust between EPA and these communities. Working through a trusted intermediary or by developing a personal connection with individuals, EPA has greater success securing the participation of parties that feel vulnerable or wary of contact with the government. **A number of respondents recommended translating materials into foreign languages used in the community to**

[1] Note that Risk Assessors were not asked this question.

facilitate the dissemination of information. Furthermore, grassroots organizations and churches working in the community tend to be more familiar with the needs and preferences of the local population and can share these insights with EPA. Several respondents also noted they worked through schools, hosted open houses, or worked with area health departments to reach minority populations. Most notable about the responses to this question was the emphasis placed on a multi-pronged approach.

CONDUCTING COMMUNITY INVOLVEMENT FOR RISK ASSESSMENT

Key Findings

1. EPA respondents most frequently identified community meetings, availability sessions or open houses, as the most commonly employed means of soliciting information from the community.
2. While some respondents had used materials produced by the Superfund office, the materials most frequently used to explain the risk assessment process to the public were site-specific materials designed by the site team.
3. CICs, RPMs, and RAs emphasized the importance of coordinating with local health departments and ATSDR to reach out, to collect information from, and to report results to the public.
4. CICs and RPMs almost unanimously indicated that they follow up on community input whenever possible.

In order to assess the methods used to educate the community about the risk assessment and the methods used to solicit information from the public participating in the risk assessment, respondents were asked the following questions:

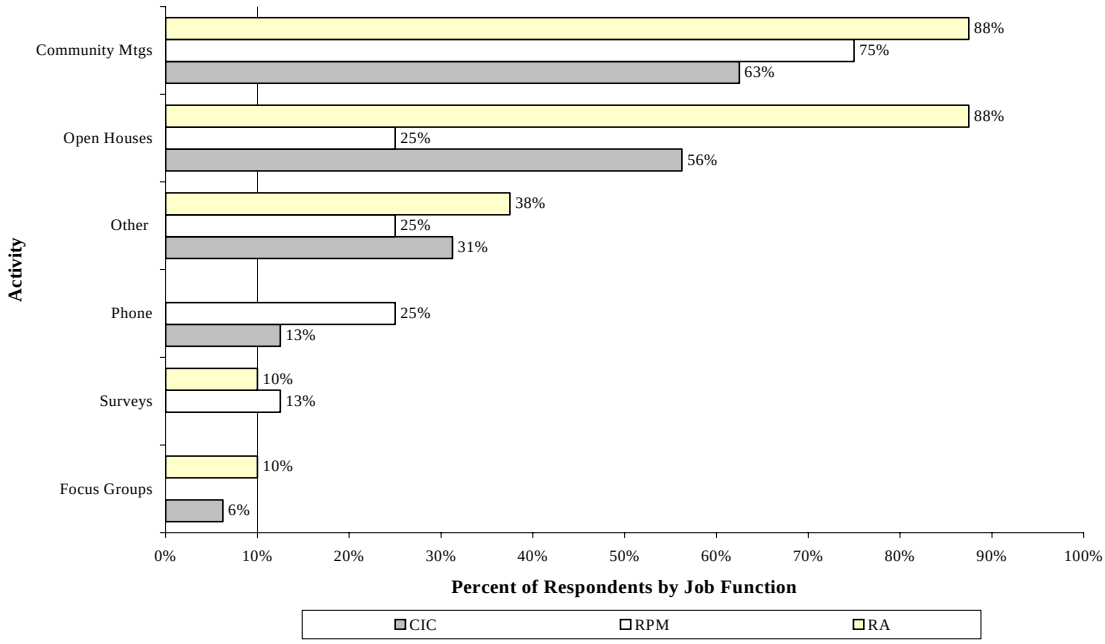
- What are the specific events or activities where you solicit information from residents that might contribute to risk assessment activities?
- What materials do you use to explain the risk assessment process to the public, and to describe their role in it?
- What are the specific events or activities where you solicit information from local health agencies or other qualified parties that might contribute to the risk assessment?
- Do you coordinate your communication activities with the state or local health department and/or ATSDR prior to communicating with residents?
- Once you have risk assessment findings, do you specifically identify the information that had been provided by members of the public?

Findings

EPA Information Collection Methods

EPA respondents most frequently identified community meetings, availability sessions or open houses, as the most commonly employed means of soliciting information from the community. These venues allow EPA to interact with a large number of community members and to respond directly to questions. Some interviewees considered availability sessions particularly helpful because they gave members of the community, too shy to speak at community meetings, the opportunity to have one-on-one conversations with EPA representatives. Figure 3-3 presents the responses from CICs, RPMs, and RAs to the options provided in the questionnaire. The percentages reflect the percent of CICs, RPMs, and RAs who indicated they engaged the community using a given activity.

Figure 3-3
Means of Gathering Information From the Public



Respondents also identified methods that were not listed on the survey form. These included communicating with the community's technical advisor, going door to door, and conducting one-on-one interviews. Several interviewees also cited the community interviews that are conducted during the development of the CIP as a major source of community information that is pertinent to the risk assessment. For example, residents might mention exposure activities or pathways as a side concern during the CIP interview. One CIC interviewed noted that he would then pass this information along to the site's risk assessor.

According to the respondents, focus groups and surveys were less commonly used to solicit information from the community. While some felt that surveys were a useful tool for gathering information that could counter the anecdotal nature of other community comments, others noted the expense and complication of conducting a proper survey as a reason for their infrequent use. Interviewees also noted that the infrequent use of telephone communication was perhaps because availability sessions offer similar access to communities.

Tools, documents, and methods used to explain risk assessment

While some respondents had used materials produced by the Superfund office, the materials most frequently used to explain the risk assessment process to the public were site-specific materials designed by the site team. Respondents from seven of the ten regions said they develop site-specific materials, including fact sheets and PowerPoint presentations, to ensure a better understanding of the risk assessment process as it relates to the specific community. For example, respondents from Regions 8 and 10 had adapted materials developed by OSRTI into region-specific documents. One interviewee noted that they often combine information from several OSRTI fact sheets with information particularly relevant to a local situation, such as safety of vegetables in the garden, or common contaminants, such as lead.

Respondents from Region 2 translated a posting into four different languages, and interviewees from Regions 4, 5 and 9 noted that they incorporated local pictures, maps, images, or graphics into their fact sheets. One respondent noted that images had been critical to EPA's work with Native American communities in particular because elderly members of the community, who were most knowledgeable about the site, were unable to communicate in English. For this site, the materials included maps with pictures to communicate with the Navajo nation and to help individuals identify drinking water sources. Some regions worked with other groups to develop their documents. In Region 7, for example, a respondent noted combining resources with Agency for Toxic Substances and Disease Registry (ATSDR) and working with a state university to develop a presentation for one site, while Region 1 worked with the military to design a site-specific fact sheet.

Respondents cited several reasons for developing site-specific materials rather than relying on OSRTI's already developed set of documents. Chief among these was the need to highlight information relevant to the site and the type of contamination, both to provide information not available in the more general outreach documents and to eliminate information that is not pertinent to a particular community. Several respondents also noted that the general outreach documents were sometimes too technical, and that they strove to produce their own outreach materials at an 8th-grade reading level. In particular, they cited the need to reduce the use of jargon. Respondents' comments on how OSRTI could improve their outreach documents were of a similar nature. They cited a need for more bilingual information, including languages beyond Spanish. They also called for more fact sheets and easy-to-read brochures to assist them in informing the community. One respondent mentioned a recently published video explaining dredging as a model for other productions that explain risk to communities.

Still, respondents identified a number of EPA-prepared materials they had used. The most commonly used were *Understanding Superfund Risk Assessment-Fact Sheet* and the book of fact sheets, *Common Contaminants Found at Superfund Sites*. However, the clear emphasis was on site specific and other customized materials. In particular, the RAs interviews noted that they explained the risk assessment process through customized PowerPoint presentations, rather than handouts. One CIC noted that OSRTI's general

documents were provided as a supplement if a particular community member wanted more information, but would not actively disseminate the materials.

EPA's Partners in Community Involvement in Risk Assessment

CICs, RPMs, and RAs emphasized the importance of coordinating with local health departments and ATSDR to reach out, to collect information from, and to report results to the public. Eighty-eight percent of CICs and RPMs said they did coordinate communication activities with the state or local health department and/or ATSDR prior to communicating with residents. Several interviewees noted that the local health department might collect information from the community during health surveys and other outreach efforts early in the site process. The health agency would then pass this information along to EPA's risk assessors.

EPA's Response to Community Input in the Risk Assessment

Most respondents (26 of 34) noted that they acknowledge information provided by the public when the risk assessment is released, either in the document itself, during public meetings or in responsiveness summaries. However, several respondents said that they are sensitive to confidentiality issues and do not identify information in a manner that could compromise the privacy of citizens.

CICs and RPMs almost unanimously indicated that they follow up on community input whenever possible.[2] One respondent noted that "[they] go out of [their] way to investigate people's concerns. Often it is more about assuaging their fears than actually getting better information-- its about gaining their trust." Another interviewee described such follow-up as a "cardinal rule." Only two respondents reported not following up on citizen input. One of these noted that the comments received were too general, such as general expressions of anxiety about the contamination. Another commented that at times comments were out of their area of expertise and were passed on to more appropriate authorities. There is a lot of coordination among agencies in responding to issues raised. One interviewee noted that EPA might do the follow-up directly if the site is close to the regional office, or may request that the state help out with investigating a tip.

[2] RAs were not asked this question.

COMMUNITY RESPONSE AND PARTICIPATION

Key Findings	
1.	Parental concerns were cited as one of the most powerful motivating factors for community participation.
2.	Media coverage and the presence of activist groups tended to attract participation because they raise awareness.
3.	The involvement of Technical Advisors can also raise the community's level of respect for EPA and their satisfaction with the cleanup, particularly if the community group that hired the technical advisor is representative of the larger community.

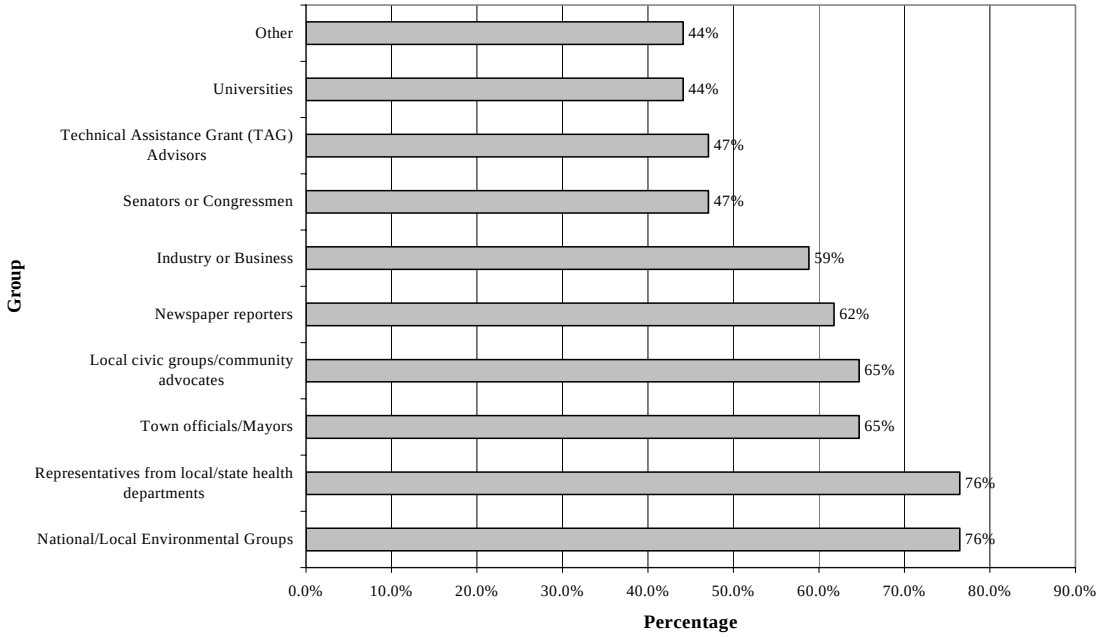
To develop a sketch of the individuals who participate and their motives for coming forward, we asked respondents to respond to the following questions:

- In addition to individual citizens, what community groups or representatives play an active role in the risk assessment process (e.g., attending meetings, providing relevant data, etc.)?
- Under what circumstances do individual citizens tend to emerge as key sources of information that can contribute to a meaningful risk assessment?
- Please identify the individual characteristics, personal concerns, and community characteristics that motivate the involvement of community members in the risk assessment, and
- Have you worked with technical advisors hired by the communities (either through a Technical Assistance Grant (TAG) or local funds) specifically on risk assessment issues? If yes, please describe how the involvement of a technical advisor affected your interaction with community members.

Findings

Respondents were asked to identify from a pre-defined list all groups that participated in the CIRA process. National and local environmental groups as well as state and local health departments were identified as being frequent participants in CIRA outreach. In addition, local civic groups play an active role in the risk assessment. Several respondents commented that reporters were not only likely to participate, but were also frequent sources of site-specific information. In conducting research for their articles, these individuals often came across important information related to the site. Respondents noted that the participation of universities depended on the location of the site—only those sites in close proximity to a university may have received input from professors or students at the university. Senators and congressmen were unlikely to participate unless it was a high-profile site. At most sites, local officials, such as mayors or councilmen, participated as representatives of government. Figure 3-4 presents the percent of total respondents that identified each group as playing an active role in community involvement activities.

Figure 3-4 Most Frequent Participants



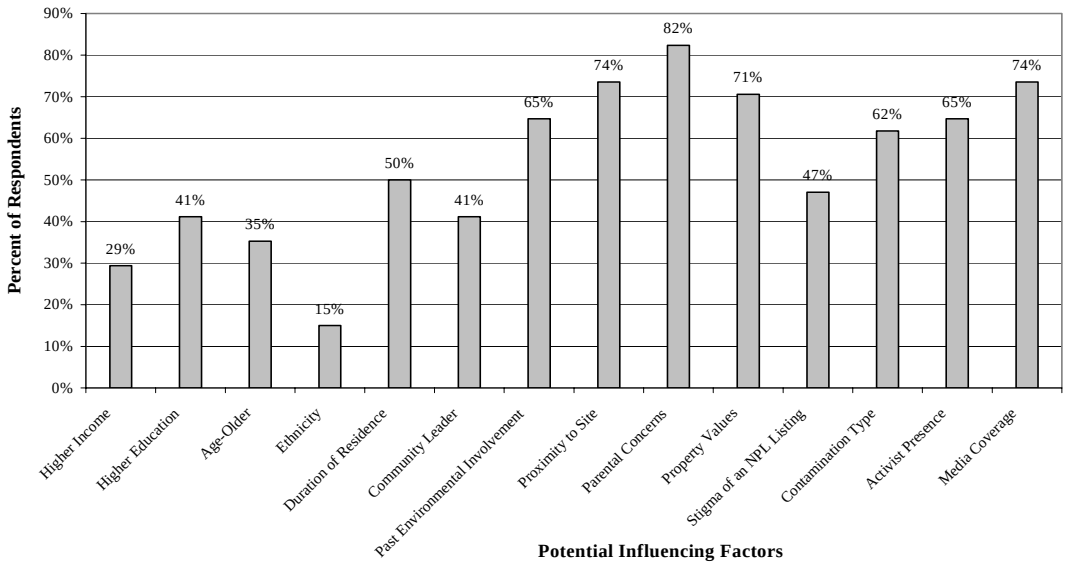
Motivations for Participating in the Risk Assessment

Survey participants were asked to identify those factors that motivated people to participate in the process. **They cited parental concerns as one of the most powerful motivating factors**, with 28 of 34 respondents noting that parents tended to get involved with the risk assessment. Property values were another important motivating factor, cited by 24 of the interviewees. While most interviewees associated concerns about property values falling with contamination, one mentioned a relationship between the presence of contaminants and already low property values; homes located close to dumps or industrial property. In these cases, low property values were correlated with cause for concern, and motivated the affected individuals to become involved. Proximity to the site and involvement with other environmental issues also affected participation. Specific contaminants, such as arsenic, asbestos, mercury, and radioactive materials, were also cited as leading to concerns or increased participation. Finally, **media coverage and the presence of activist groups tended to attract participation because they raise awareness.** Figure 3-5 indicates the percent of respondents that indicated a specific factor influences community members to participate.

Respondents were less certain as to how demographic characteristics influenced participation. Moreover, the impact of these characteristics varied from site to site. Nevertheless, respondents were asked to comment on the characteristics they believed influenced participation, such as income, education, age, ethnicity, status as a community leader. One third of the respondents noted that higher income and longer duration of residence increased participation. Higher income levels may correlate to higher property values, higher education levels and understanding of risk, or simply more leisure time. Respondents suggested that the longer an individual had lived in the community, the more likely they were to be concerned about their exposure levels. Conversely, a few interviewees

noted that longtime residents might be more apathetic about contamination because it is familiar to them, or they have not experienced any direct consequences from it and therefore see no threat.

Figure 3-5
Factors Influencing Community Participation



Higher education levels and leadership status increased participation according to 41 percent of respondents. Respondents also noted that retirees and heads of household were more likely to get involved than young people were because they have more free time. Ethnicity was rarely mentioned as a factor influencing involvement, though two respondents had insights on potential effects of ethnicity. One noted that these groups may already be organized around community issues and therefore able to motivate their membership more effectively around a new issue. Alternatively, their cultural background may lead them to have a greater sense of responsibility to the community, and therefore be more likely to become involved. Another respondent noted that some minorities, particularly those who have recently immigrated to this country, may be reluctant to contact the government, or may have a general distrust of government involvement in the community.

Asked about additional reasons for coming forth, respondents noted that citizens who think they have information important to the risk assessment might approach EPA, and merely by being made aware of the ongoing risk assessment some community members realize they have information important to the risk assessment. Some residents may also approach their local health departments, though this was less common, according to the interviewees.

Impact of Technical Advisors

Technical Assistance Grants (TAG) are available to eligible community groups that wish to contract with an independent technical advisor. This individual helps the community understand technical information about their site. A group may apply for a TAG if its members' health, economic well being, or enjoyment of the environment is, or may be, hurt by a Superfund site. EPA awards only one TAG per Superfund site and requires applicants to submit a grant request which includes a budget and explains the groups' reasons for applying and how they plan to use the funds.

The involvement of technical advisors can help establish a beneficial rapport between community members and EPA. Sixty five percent of respondents said that they had worked with a technical advisor hired by the communities and most believed that overall it was a positive experience. According to one interviewee, technical advisors are often great communicators about technical matters and have credibility with the community. **Their involvement can also raise the community's level of respect for EPA and their satisfaction with the cleanup, particularly if the community group that hired the technical advisor is representative of the larger community.** Technical advisors can also help reassure communities intimidated by the potentially responsible party (PRP). One respondent from Region 10 mentioned working with one technical advisor who was a former risk assessor and was very helpful. Several respondents said that technical advisors often served as a conduit for information between the CIC and the public. However, another respondent pointed out that EPA can't rely on the technical advisor to be the primary communicator with the community, because the technical advisor works for the community group, not for EPA.

BENEFITS AND IMPEDIMENTS TO INVOLVING THE PUBLIC IN RISK ASSESSMENT

Key Findings

1. While community input did not affect the outcome of the risk assessment in all cases, all EPA sources noted, the comments often encouraged EPA to look at new sources of exposure and to reconsider assumptions about exposure intensity.
2. The evaluation team asked nine RAs to discuss the benefits of involving the community in risk assessment, and they unanimously stated that community involvement increased public confidence in EPA.

In order to understand how citizens contribute to the risk assessment as well as the challenges presented by involving them, we asked CICs, RAs, and RPMs to answer the following questions:

- Please indicate the types of information that community members have actually provided, and, when possible, provide an example of the information offered or collected as a result of EPA's interactions with the public or as a result of people coming forward with information and/or concerns.

- How could EPA guidance and tools be improved to help you increase public participation?

- What have you learned about community involvement in risk assessments that could be shared with other regions?

We also asked the CICs and RPMs how satisfied they were with their interaction with the public and the quality of the input received from the public. In addition, these interviewees were asked to indicate what they might do differently in future.

Findings

Providing Valuable Information and Insight

EPA interviewees discussed a number of ways in which community involvement has affected risk assessments on which they have worked. **While community input did not affect the outcome of the risk assessment in all cases, all EPA sources noted, the comments often encouraged EPA to look at new sources of exposure and to reconsider assumptions about exposure intensity.** These considerations may be important in reducing and/or understanding uncertainty.

Interviewees noted that the community input might inform EPA about trespassers who use the site for recreation or certain populations more reliant on the site for recreation or subsistence hunting and fishing. Subpopulations that might require special outreach measures (e.g., foreign language documents and interpreters) were also mentioned. Two interviewees also noted that community members pointed out potential cancer clusters as groups that might have suffered disproportionately from contamination at the site.

Eleven interviewees, primarily CICs, said that the community provided information about fishing in contaminated areas. Community members revealed to EPA that fishing was happening in spite of fishing bans and catch-and-release policies. They noted sport fishing as well as subsistence fishing. By engaging the community, EPA learned that many ethnic subpopulations have different ways of preparing and cooking fish. For example, at one site, EPA realized that a Laotian community ate the whole fish instead of just the filet. As a result, EPA took whole body samples instead of filet samples, which are likely to show higher concentrations of toxins that accumulate in fatty tissues, including dioxins and PCBs. In addition, interviewees noted that they had learned about the type of tackle used and whether fishing is done from the shore or from wading, which could increase exposure. At one site, EPA had assumed that a community would be fishing from a contaminated fishery in the bay. However, after talking to community members, they found that many people went inland to a stocked reservoir instead, thereby reducing the proportion of contaminated fish they were eating. Often times, however, interviewees noted that they get conflicting information from the community about how much fishing occurs. Therefore, it is important to collect information from a diverse group.

In addition to fishing, interviewees also mentioned recreational use of site as an activity that could result in additional exposure. Four interviewees mentioned that the use of all-terrain vehicles (ATVs) was a source of exposure. At one Utah site, they heard that children as young as four years old were riding ATVs over waste piles and stirring up dust. A school project in which children wore individual air monitors found that they were exposed to enormous levels of contaminants through these activities, at the same time that the ambient air monitors were not registering high concentrations. At another site with naturally occurring geothermal hot springs, residents were concerned about dermal

exposures from community hot tubs, and asked that this water be tested. At another site, EPA learned that many members of the community had their own gardens, so EPA decided to include a homegrown vegetables pathway for the residential scenario used in the risk assessment.

Interviewees also noted that community feedback about the intensity of exposure (e.g., frequency and duration of activities) was essential for the risk assessment, because EPA has no established default values for these important factors, such as the duration of a trespassing event, or the frequency of certain kinds of residential use of a site. In these instances, EPA uses best professional judgment to develop exposure assumptions. More than half of the CICs and RPMs indicated that the community provides valuable information about exposure intensity.

A large portion of interviewees (29 out of 34) said that communities had provided information about the history of the site or about areas of the site that may pose a high risk. One interviewee noted that "this is an area where the institutional memory of the community is crucial." For example, community members talk about where they hike, where people with outdoor occupations spend time, and especially where fishing occurs. At one site, the community provided valuable information about what areas of the river they used for fishing and swimming. This risk assessment was done in two phases. In the second phase, the risk assessment utilized different assumptions about the predominant source of exposure (river vs. homes) based on community input.

In addition to exposure-related site information, communities also provided information on the history of the contamination to help EPA locate "hot-spots" or areas with high concentrations of contaminants. Older residents in particular often know about places where dumping occurred. Former employees can often provide information about where dumping has occurred. Sometimes they provide new information, and sometimes they simply corroborate hot spots that EPA has already found.

In one community, EPA learned that vermiculite had been used for a running track, and that the responsible facility had provided free vermiculite for insulation as well. This information affected several areas of the risk assessment– it revealed unexpected exposure pathways and suggested that residents' exposure to contaminants may be much higher than if the contaminant was contained at the site. In this instance, community input about the site history was critical to the accuracy of the risk assessment. Similarly, another community informed EPA that some of the local roads were paved with mine tailings, spreading the contamination further away from the official site.

Improved Relationship between EPA and the Community

The evaluation team asked nine RAs to discuss the benefits of involving the community in risk assessment, and they unanimously stated that community involvement increased public confidence in EPA. Residents often provide information on where they think contamination may be present or in especially high concentrations. Several EPA representatives noted that even if these "leads" are discovered to be "dead ends", the community member is satisfied that their concerns were addressed. According to another interviewee, even when people say they "want government off their back", they are reassured when they meet a federal official who is working to solve a problem in their community. Especially when the situation appears hostile, it is important to continue working to get the community involved. This interviewee noted that from his experience, the community will help once they realize that you are committed to the site. Most

importantly, he noted the importance of keeping people engaged, since they'll be more satisfied if they had the opportunity to contribute.

Difficulties Involving the Public in Risk Assessment

Interviewees frequently brought up the difficulties of involving the public in risk assessment, even though it was not a formal survey question. Several interviewees mentioned that the biggest challenge was the public's lack of a scientific understanding of risk, and an understanding of relative risk. As a result, EPA often has to translate risk concepts and other very technical information for residents, which can be very challenging, especially for EPA employees without training in risk communication..

Other interviewees mentioned that community apathy is a difficult problem. According to one RA, EPA has to 'beat the bushes' to get the community involved at 90 percent of sites, and has to continue working to get the community to stay interested and involved. In particular, residents of mining towns tended to be unconcerned about contaminants at the site because they had grown up around or worked at the mines and had experienced no direct negative health effects. Also, in towns where the party responsible for the contamination was still an active employer, some of these employees are hostile to EPA's work, or are afraid of becoming involved for fear of repercussions at work.

Interviewees also noted that sometimes the information provided by the community was not helpful to the risk assessment, either because it was too anecdotal or not relevant (e.g., information about potential health effects that may not be associated with the site that were experienced by the community).

Several interviewees noted that EPA could be doing a better job educating the community about risk assessment. According to one respondent, they used to do workshops on risk assessment issues, but these have stopped due to budget shortfalls and high staff turnover. The interviewee noted that providing one or two-day courses on risk assessment to particularly committed community members, based on an adapted curriculum from in-house EPA training, had resulted in better feedback from community participants.

This chapter discusses what we learned concerning each key evaluation question. In addition, it incorporates several anecdotes not previously discussed, which are particularly relevant to the evaluation questions. The final section, Next Steps and Recommendations, will present a set of recommendations based on these findings.

Q1. What has EPA learned about effective approaches for involving communities in risk assessment?

- Interviewees noted the importance of engaging the community early in the risk assessment process and maintaining contact with them throughout the remedial investigation and feasibility study. Respondents made it clear that the community should be involved early in the remedial investigation to ensure that EPA secures their input and support for the risk assessment.

- Since risk assessment is a technical process, it is important to explain key topics such as excess lifetime cancer risk, reference dose and other difficult terminology, before the risk assessment results are available. Without a basic understanding of the risk assessment, it is less likely that community members will be able to provide relevant information. Due to the complexity of risk assessment, it is important to host small sessions at which community members can feel free to ask questions and offer information in one on one conversations with members of the site team.

- The particular outreach tools used need to be appropriate for different situations. It is thus critical to use a variety of methods to notify the community of the opportunity to participate to ensure that a representative group provides input into the process. While flyers, announcements at community meetings, and other standard tools are appropriate for the population at large, more specific outreach needs to be conducted to secure the participation of minority or marginalized groups. The appropriate technique is likely to differ from site to site and group to group. Identifying and enlisting the help of a leader and trusted member of such communities will often help secure participation.

Q2. What factors lead EPA to decide to pursue or not pursue community's involvement in the risk assessment?

- While it is standard practice at all Superfund sites to develop a CIC plan, this does not necessarily involve community input during the risk assessment stage. Several interviewees noted that they have never worked on a site that solicited community involvement during the risk assessment, and even expressed some surprise that such involvement might be considered advantageous. Some CICs noted that the decision about whether to involve the community might be based on preliminary interviews conducted during a preliminary investigation at a site. These interviews allow EPA to gauge the level of community interest, determine the community's principal concerns. Other interviewees reported that EPA would engage the community at sites that were high-profile or "hot". One CIC reported that he is frequently brought in to deal with sites that are already controversial.

- Several of the CICs said that they would only engage the community in the risk assessment stage if the RPM or risk assessor needed specific information to complete the risk assessment. One CIC noted that RPMs do not want to create controversy at a site, and therefore may not be enthusiastic about proactive community engagement. Other interviewees noted that the extent of community involvement depends heavily on the budget available. At one high-profile site, ample resources were available for a contracted technical advisor, which resulted in a great deal of community involvement. At this site, community involvement was integrated into every step of the risk assessment and the site team worked well together to engage the community.

- Another interviewee related that EPA could be doing a better job educating the community about risk assessment. According to this interviewee, they used to do workshops on risk assessment issues, but these have stopped due to budget shortfalls and high staff turnover. This region has found ways to adjust to these limitations and has increased the frequency of public meetings during the scoping phase over the past few years.

Q3. What factors correlate with community participation in risk assessment?

- Respondents identified the most important factors as proximity to the sites, impact of contamination on property values, parental concerns, and media attention to the site. Demographic factors, such as income or education levels, seem to be a less effective predictor of likely participation.

Q4. Are there common impediments to involving the public in risk assessment?

- The lack of adequate staff and budget resources limits EPA's ability to engage the public during the risk assessment. This problem is particularly pronounced at large sites where the environmental effects reach a broader constituency. In these settings, greater demographic diversity may require a more intensive and costly campaign to generate community involvement and adequate representation from all groups.

- Interviewees also noted that EPA is not always the lead agency at the site and therefore they would not have control over the community involvement process.

- Respondents also noted difficulty in maintaining the interest level of community members, who were initially quite interested in participating in EPA meetings. As the process continued, they became less motivated to attend meetings and offer input.

- Meetings came to be dominated by the same group of individuals, who in certain instances may have a specific agenda they wish to pursue with EPA. In addition, these community participants can certainly discourage other interested parties from participating or communicating their insights to EPA.

- The technical nature of the risk assessment process is difficult for individuals to grasp. Furthermore, risk assessors often have limited training in explaining technical issues to the public.

Q5. What have EPA and the community gained from involving people in the risk assessment process?

- Community participation has provided valuable information used to improve the quality of the risk assessment. Respondents identified instances in which community members provided information about the site history, land use, and exposure pathways of which only residents could be aware. For example, community members reported that fishing continued despite bans and catch-and-release policies implemented at one site. By engaging the community, EPA also learned that many ethnic subpopulations have different ways of preparing and cooking fish, some of which increase human exposure to contaminants. This discovery underscores the importance of involving a diverse group in community involvement activities, as not all population make use of resources in the same way.

- It is not only EPA that benefits from this information flow, so too does the community, particularly in cases where individuals have pointed out exposure pathways that might not have been considered otherwise, or where community experience indicates that there should be a change in exposure estimates. With information of this nature, the risk assessment and ultimately the site clean up are more comprehensive.

- Responsiveness and communication with the community, however, also increases public confidence in EPA and its decisions with respect to the site. Whether or not residents provide vital information to EPA, community involvement activities make EPA accessible to the public and provide it with a venue to express themselves. EPA, in turn, has the opportunity to address community concerns. By creating a forum for such dialog, EPA helps satisfy the community's need for the Agency to acknowledge and legitimize their concerns. Satisfied that EPA is listening and understanding them, communities have confidence in EPA's decisions and actions with respect to the site.

Q6. How does increasing public understanding of EPA risk assessment and community involvement opportunities affect public confidence in EPA's decisions?

- Although EPA respondents felt that addressing community concerns and questions about the risk assessment increased public confidence in EPA's decisions, this issue is better addressed from the community perspective. The second phase of this evaluation will provide key insights into the public's sentiments about EPA.

NEXT STEPS AND RECOMMENDATIONS

These interviews suggested several potential approaches to improving community involvement in the risk assessment process, as well as opportunities for additional research to better understand what makes community involvement in risk assessment successful.

Improving Community Involvement in Risk Assessment

- **Provide training for CICs, RAs, and RPMs on effective community involvement as well as risk communication.** Interviewees wanted to participate in training that would help them to engage the community, including components that would address how to deal with the media and hostile groups

of people. Training courses do exist but may need to be revised to address specific needs related to CIRA. Other interviewees suggested additional funding for training to improve communicating risk assessment methodologies and results of these analyses to the public. EPA could offer CICs training on the risk assessment and how the community can inform it, with particular emphasis on exposure scenarios. For the RAs, EPA could offer training on community involvement and its importance to the risk assessment. Such cross-functional training would help ensure that community involvement becomes an integral component of the risk assessments.

- **Provide examples of "best practices" in community involvement used at other sites.** Regional conferences at which CICs, RAs, and RPMs were given the opportunity to share lessons or discuss common problems with community involvement could be a useful means of sharing information. These conferences would present opportunities for EPA representatives to brainstorm creative ways to reach minority communities.

- **Develop simplified tools that would enable the Superfund team to educate the public on the risk assessment process.** While it is likely that site teams will continue to design site-specific materials, an improved set of generic brochures and booklets might facilitate public understanding of risk assessment and relieve site teams of some of the work of generating outreach materials that are less technical.

- **Create a national database of risk assessment materials to facilitate the sharing of customized presentations and other explanatory materials.** Since regional representatives commonly create their own materials, it would be useful to make these documents available in electronic format so that other regions can leverage this work and to make them available in languages other than English.

- **Formalize community involvement in the risk assessment process.** Respondents noted that the absence of a formal process for including community involvement in the risk assessment hampered their ability to successfully engage the public. Community involvement was naturally associated with Superfund sites in general, but not necessary with the risk assessment phase. EPA should institutionalize or formalize community involvement activities in the risk assessment process. The community interviews that accompany a site's preliminary investigation were cited as a source of information about whether a site needed proactive community involvement. Such interviews might be included as an initial step in the risk assessment to ensure that community involvement is incorporated early in the Superfund process.

Further Research

- **EPA should consider conducting additional research on the sites that** have made community involvement an integral component of the risk assessment process. EPA could identify site or community characteristics that are most important to enhancing community involvement such as the size of the site, the media involved, the type of contamination or the demographics of the adjacent community. The second phase of this evaluation will address this issue in part.

- **EPA should also consider investigating how it works with other agencies (e.g. DOE or DOD) to incorporate community involvement into risk assessments at sites involving those other agencies.** This information will both inform the process used by EPA and serve to further EPA's understanding of the complications that arise when other agencies serve as the lead.

Appendix A
List of Respondents

Region	Interviewee	Job Function
1	McDonough, Margaret	RA
2	Olsen, Marian	RA
3	Ioven, Dawn	RA
4	Koporec, Kevin	RA
5	Mangino, Mario	RA
6	Rauscher, Jon	RA
7	Beringer, Michael	RA
8	Griffin, Susan	RA
9	Stralka, Dan	RA
10	Stifelman, Marc	RA
1	Bonarrigo, Angela*	CIC
2	Kluesner, Dave*	CIC
3	Deitzel, Carrie*	CIC
3	Evans, Vance	CIC
4	Brown, Stephanie Y.	CIC
4	Barrett, Diane*	CIC
5	Bill, Briana	CIC
6	Negri, Beverly	CIC
6	Walters, Donn*	CIC
7	Thomas, Hattie	CIC
7	Kring, Debbie	CIC
8	Linnert, Ted	CIC
8	Pennock, Sonya	CIC
9	Wilson, Wenona	CIC
9	Herrera, Angeles	CIC
10	Smith, Judy	CIC
1	Lim, Bob	RPM
2	Hess, Alison	RPM
3	MacMillan, Fred	RPM
4	Tanner, Terry	RPM
5	Novak, Dion	RPM
6	Baumgarten, Gary	RPM
8	Knight, Joshua	RPM
9	Setian, Kathy	RPM

*Marion Cox participated in the interviewing of these individuals. Ms. Cox's participation ensured that she obtained the information she required to begin selecting case study sites and developing the evaluation methodology for her report on community involvement from the public's perspective.

Appendix B
Community Involvement in Risk Assessment Survey Responses (Quantifiable Questions Only)

Q1. Does the Community Involvement Plan (CIP) specifically include activities to be done during or in conjunction with the Risk Assessment								
	Yes		No		Some		Unknown	
	Responses	Percentage*	Responses	Percentage	Responses	Percentage	Responses	Percentage
Community Involvement Coordinator	3	19%	8	50%	5	31%	0	0%
Regional Project Manager	2	25%	5	63%	0	0%	1	12%
Risk Assessor	0	0%	3	30%	7	70%	0	0%
Total	5	15%	16	47%	12	35%	1	3%

* Reflects percent of total CICs, RPMs, or RAs interviewed, unless otherwise noted.

Q2. Did you work with your region's Risk Assessor, CIC or RPM to design or implement the CIP?				
	Yes		No	
	Responses	Percentage	Responses	Percentage
Community Involvement Coordinator	12	75%	4	25%
Regional Project Manager	6	75%	2	25%
Risk Assessor	6	60%	4	40%
Total	24	71%	10	29%

Q3. Do you typically consult and coordinate with your region's Risk Assessor and/or CICs/RPMs to design and implement specific public outreach and involvement activities to support the development of site specific risk assessments?						
	Yes		No		Some	
	Responses	Percentage	Responses	Percentage	Responses	Percentage
Community Involvement Coordinator	11	69%	3	19%	2	12%
Risk Assessor	7	88%	0	0%	1	12%
Total	18	75%	3	13%	3	12%

IF SO, AT WHAT POINT IN THE RISK ASSESSMENT PROCESS DO YOU AND/OR THE RISK ASSESSOR AND CIC/RPM TYPICALLY RECOMMEND THAT COMMUNITY INVOLVEMENT ACTIVITIES BEGIN?						
	Community Involvement Coordinator		Regional Project Manager		Risk Assessor	
	Responses	Percentage*	Responses	Percentage*	Responses	Percentage
Site Discovery/Site Investigation	9	56%	0	0%	0	0%
When designing the risk assessment	2	13%	4	50%	1	10%
Scoping remedial investigation	0	0%	2	25%	6	60%
Site characterization	0	0%	0	0%	0	0%
When the remedial investigation proposed plan is drafted	1	6%	0	0%	1	10%
Other	2	13%	1	13%	1	10%
Unknown	2	13%	1	13%	1	10%
Total	16	100%	8	100%	10	100%

*Due to rounding, totals add up to more than 100%.

Q4 HAVE YOU EVER BEEN INVOLVED IN THE FOLLOWING ACTIVITIES AS THEY RELATE TO COLLECTING INFORMATION FROM COMMUNITIES ABOUT THE WAYS THEY MAY BE EXPOSED TO CONTAMINANTS AT A SITE, OR THE KNOWLEDGE THEY HAVE ABOUT A SITE?*						
	Community Involvement Coordinator		Regional Project Manager		Total	
	Responses	Percentage**	Responses	Percentage**	Responses	Percentage**
Coordinating logistical details and planning the activities	9	56%	5	63%	14	58%
Making the community aware of the opportunity to be involved in the risk assessment.	9	56%	6	75%	15	63%
Answering questions about public participation, the use of the information, and/or the responsibilities of participants.	13	81%	7	88%	20	83%
Helping the RAs develop outreach materials for their community involvement activities	8	50%	2	25%	10	42%
Facilitating community meetings, focus groups, or other activities that occur as part of the risk assessment.	11	69%	5	63%	16	67%
Soliciting input directly from citizens or interested parties (other residents, local health agencies, press)	12	75%	8	100%	20	83%
Other	7	44%	1	13%	8	33%
None	1	6%	0	0%	1	4%

* Respondents were asked to select all responses that applied. ** Calculated as a percent of respondents in each group. Total reflects all CICs and RPMs who responded.

Q5 HOW IS THE PUBLIC INFORMED OF THE OPPORTUNITY TO PROVIDE INPUT THAT MAY BE RELEVANT TO THE ASSESSMENT OF EXPOSURES AT A SITE?*						
	Community Involvement Coordinator		Regional Project Manager		Total	
	Responses	Percentage**	Responses	Percentage**	Responses	Percentage**
Advertisement in local paper	9	56%	3	38%	11	46%
Message on community/neighborhood list-servs	3	19%	0	0%	3	13%
Flyers posted in central locations (shops, restaurants, etc.)	5	31%	1	13%	6	25%
Flyers distributed or mailed to individual households	10	13%	5	63%	15	63%
Individual household visits	9	56%	3	38%	11	46%
Letters to elected officials and community leaders	7	44%	3	38%	10	42%
Discussions at community meeting	12	75%	6	75%	18	75%
Notification by federal, state, or local health agencies	6	38%	5	63%	11	46%
Other	7	44%	3	38%	10	42%
No response	1	6%	1	13%	2	8%

* Respondents were asked to select all responses that applied. ** Calculated as a percent of respondents in each group. Total reflects all CICs and RPMs who responded.

Q7. WHEN YOU DECIDE TO ENGAGE THE PUBLIC IN YOUR RISK ASSESSMENT ACTIVITIES, WHAT TEAM MEMBER (CIC, RPM, AND OR RISK ASSESSOR) TAKES THE LEAD ROLE IN COMMUNICATING WITH THE PUBLIC?				
	Community Involvement Coordinator		Regional Project Manager	
	Responses	Percentage	Responses	Percentage
Community Involvement Coordinator	6	37%	1	12%
Regional Project Manager	2	13%	5	63%
Regional Assessor	2	13%	2	25%
Combination of above mentioned	5	31%	0	0%
None	1	6%	0	0%
Total	16	100%	8	100%

Q8 WHAT MATERIALS DO YOU USE TO EXPLAIN THE RISK ASSESSMENT PROCESS TO THE PUBLIC, AND TO DESCRIBE THEIR ROLE IN IT?								
	Community Involvement Coordinator		Regional Project Manager		Risk Assessor		Total	
	Responses	Percentage**	Responses	Percentage**	Responses	Percentage**	Responses	Percentage**
Understanding Superfund Risk Assessment-Fact Sheet	6	38%	4	50%	3	30%	13	38%
Superfund Risk Assessment--What it's all about and how you can help (11 minute video)	3	19%	1	13%	3	30%	7	21%
Superfund Risk Assessment--What it's all about and how you can help (2 page handout)	4	25%	1	13%	2	20%	7	21%
Superfund Today: Focus on Risk Assessment: Involving the Community	3	19%	0	0%	3	30%	6	18%
Common Contaminants Found at Superfund Site	11	69%	2	25%	0	0%	13	38%
I use my experience and knowledge of the process to communicate with the public	10	63%	5	63%	0	0%	15	44%
I typically don't use written materials to explain the process	0	0%	0	0%	1	10%	1	3%
I use materials that the region has developed	3	19%	3	38%	0	0%	6	18%
Other (Internally developed)	5	31%	5	63%	6	60%	16	47%
Don't Know	1	6%	1	13%	1	10%	3	9

* Respondents were asked to select all responses that applied. ** Calculated as a percent of respondents in each group. Total reflects all CICs, RPMs, and RAs who responded.

Q9 UNDER WHAT CIRCUMSTANCES DO INDIVIDUAL CITIZENS TEND TO EMERGE AS KEY SOURCES OF INFORMATION THAT CAN CONTRIBUTE TO A MEANINGFUL RISK ASSESSMENT?				
	Community Involvement Coordinator		Regional Project Manager	
	Responses	Percentage	Responses	Percentage
Individual residents emerge to share information they think is important with EPA	10	63%	5	63%
Individual residents show up at public meetings and learn that they may be information that is important for EPA to know regarding risk assessment	12	75%	4	50%
The local health department receives inquires from residents and gives these names to EPA for follow-up	6	38%	0	0%
EPA initiates contact with specific property owners or communities where the agency thinks residents may have important information to share in risk assessment or other activities	12	75%	3	38%
Other	4	25%	3	38%

* Respondents were asked to select all responses that applied.

Q10 WHEN INDIVIDUAL RESIDENTS, ORGANIZED INTEREST GROUPS, OR OTHERS COME FORWARD TO PRESENT INFORMATION TO EPA OR TO REQUEST THAT EPA INVESTIGATE CERTAIN INFORMATION, DO YOU ROUTINELY FOLLOW-UP ON THESE REQUESTS?						
	Yes		No		Unknown	
	Responses	Percentage	Responses	Percentage	Responses	Percentage
Community Involvement Coordinator	15	94%	1	6%	0	0%
Regional Project Manager	7	88%	0	0%	1	12%
Total	22	92%	1	4%	1	4%

Q11 In addition to individual citizens, what community groups or representatives play an active role in the risk assessment process (e.g. attending meeting, providing relevant data, etc.)?*								
	Community Involvement Coordinator		Regional Project Manager		Risk Assessor		Total	
	Responses	Percentage**	Responses	Percentage**	Response	Percentage**	Response	Percentage**
National/Local environmental groups	14	88%	4	50%	8	80%	26	76%
Representatives from the local and/or state health departments	12	75%	6	75%	8	80%	26	76%
Town officials/Mayors	10	63%	4	50%	8	80%	22	65%
Senators or Congressmen	8	50%	4	50%	4	40%	16	47%
Universities	8	50%	3	38%	4	40%	15	44%
Newspaper reporters	10	63%	5	63%	6	60%	21	62%
Local civic groups/community advocates	13	81%	3	37%	6	60%	22	65%
Industry or business	8	50%	4	50%	8	80%	20	59%
Technical Assistance Grant (TAG) Advisors	12	75%	4	50%	0	0%	16	47%
Other	10	63%	2	25%	3	30%	15	44%

* Respondents were asked to select all responses that applied. ** Calculated as a percent of respondents in each group. Total reflects all CICs, RPMs, and RAs who responded.

Q12 PLEASE IDENTIFY THE INDIVIDUAL CHARACTERISTICS, PERSONAL CONCERNS, AND COMMUNITY CHARACTERISTICS THAT MOTIVATE THE INVOLVEMENT OF COMMUNITY MEMBERS IN THE RISK ASSESSMENT BY PLACING A Y FOR YES IN THE COLUMN BELOW. WHERE APPROPRIATE, PLEASE EXPLAIN ANY Y RESPONSES, INDICTING HOW THESE FACTORS AFFECT THE LIKELIHOOD OF PARTICIPATION (E.G. INCOME, Y, HIGHER INCOME INCREASES MOTIVATION).

	Community Involvement Coordinator						**Regional Project Manager**						**Risk Assessor**					
Demographic Factors	Yes		No		DK		Yes		No		DK		Yes		No		DK	
Income	6	38%	8	50%	2	12%	2	25%	3	37.5%	3	37.5%	2	20%	1	10%	7	70%
Education	8	50%	5	31%	3	19%	4	50%	3	38%	1	12%	2	20%	3	30%	5	50%
Age	5	31%	8	50%	3	19%	4	50%	3	38%	1	12%	3	30%	0	0%	7	70%
Ethnicity	5	31%	7	44%	4	25%	0	0%	7	88%	1	12%	0	0%	2	6%	8	80%
Duration of residence in affected community	9	56%	6	38%	1	6%	4	50%	3	38%	1	12%	4	40%	0	0%	6	60%
Status as community leader	9	56%	4	25%	3	19%	3	37%	5	63%	0	0%	2	20%	1	10%	7	70%
Involvement in other environmental issues	10	63%	2	12%	4	25%	6	75%	2	25%	0	0%	6	60%	0	0%	4	40%
Other demographic factors																		
Personal Concerns																		
Proximity to site	14	88%	1	6%	1	6%	5	63%	3	37%	0	0%	6	60%	0	0%	4	40%
Parental concerns	14	88%	1	6%	1	6%	6	75%	2	25%	0	0%	8	80%	0	0%	2	20%
Property value	13	81%	2	13%	1	6%	5	63%	3	37%	0	0%	6	60%	0	0%	4	40%
Stigma of NPL listing	10	63%	2	12%	4	25%	4	50%	3	38%	1	12%	2	20%	1	10%	7	70%
Type of contamination	11	69%	1	6%	4	25%	4	50%	2	25%	2	25%	6	60%	0	0%	4	40%
Other personal concerns																		
Community Characteristics																		
Presence of activist groups	15	94%	0	0%	1	6%	4	50%	3	38%	1	12%	3	30%	0	0%	7	70%
Media coverage	13	81%	2	13%	1	6%	6	75%	2	25%	0	0%	6	60%	0	0%	4	40%
Other community characteristics																		

DK = Don't Know

Q13. HAVE YOU WORKED WITH TECHNICAL ADVISORS HIRED BY THE COMMUNITIES (EITHER THROUGH A TAG OR LOCAL FUNDS) SPECIFICALLY ON RISK ASSESSMENT ISSUES?

	Community Involvement Coordinator		Regional Project Manager		Risk Assessor		Total	
	Responses	Percentage*	Responses	Percentage*	Responses	Percentage*	Responses	Percentage*
Yes	11	69%	4	50%	7	70%	22	65%
No	5	31%	4	50%	3	30%	12	35%

* Calculated as a percent of respondents in each group. Total reflects all CICs, RPMs, and RAs who responded.

Q16 HOW DO COMMUNITY RESIDENTS TYPICALLY PROVIDE INPUT INTO THE RISK ASSESSMENT? PLEASE CHECK THE TWO MOST FREQUENTLY USED MEANS OF GATHERING INFORMATION FROM THE COMMUNITY.

	Community Involvement Coordinator		Regional Project Manager		Risk Assessor		Total	
	Responses	Percentage*	Responses	Percentage*	Responses	Percentage*	Responses	Percentage*
Telephone interviews	2	13%	2	25%	0	0%	4	12%
Community meetings	10	63%	6	75%	7	70%	24	71%
Focus groups	1	6%	0	0%	1	10%	2	6%
Surveys	0	0%	1	13%	1	10%	2	6%
Availability session or open houses	9	56%	2	25%	7	70%	18	53%
Other	8	31%	3	38%	4	40%	15	44%

* Calculated as a percent of respondents in each group. Total reflects all CICs, RPMs, and RAs who responded.

Q17 ONCE YOU HAVE RISK ASSESSMENT FINDINGS, DO YOU SPECIFICALLY IDENTIFY THE INFORMATION THAT HAD BEEN PROVIDED BY MEMBERS OF THE PUBLIC?								
	Yes		No		Some		Don't Know	
	Responses	Percentage*	Responses	Percentage*	Responses	Percentage	Responses	Percentage*
Community Involvement Coordinator	5	31%	5	31%	5	31%	1	6%
Regional Project Manager	4	50%	2	25%	2	25%	0	0%
Risk Assessor	9	90%	0	0%	1	10%	0	0%
Total	18	53%	7	21%	8	24%	1	3%

* May not sum to 100% due to rounding.

Q18 DO YOU COORDINATE YOUR COMMUNICATION ACTIVITIES WITH THE STATE OR LOCAL HEALTH DEPARTMENT AND/OR ATSDR PRIOR TO COMMUNICATING WITH RESIDENTS?				
	Yes		No	
	Responses	Percentage	Responses	Percentage
Community Involvement Coordinator	15	94%	1	6%
Regional Project Manager	6	75%	2	25%
Total	21	88%	3	12%

Q19 PLEASE INDICATE THE TYPES OF INFORMATION THAT COMMUNITY MEMBERS HAVE ACTUALLY PROVIDED, AND WHEN POSSIBLE, PROVIDE AN EXAMPLE OF THE INFORMATION OFFERED OR COLLECTED AS A RESULT OF EPA'S INTERACTIONS WITH THE PUBLIC OR AS A RESULT OF PEOPLE COMING FORWARD WITH INFORMATION AND/OR CONCERNS.																		
	Community Involvement Coordinator						**Regional Project Manager**						**Risk Assessor**					
	Responses/ Percentage*						Responses/Percentage*						Responses/Percentage					
	Y	%	N	%	U	%	Y	%	N	%	U	%	Y	%	N	%	U	%
Groups at risk of exposure	13	81	1	6	2	13	5	63	2	25	1	12	5	50	0	0	5	50
Activities that may create or increase exposure	16	100	0	0	0	0	6	75	2	25	0	0	4	40	0	0	6	60
Areas of the site that should be targeted or avoided for sampling	15	94	0	0	1	6	6	75	1	13	1	13	3	30	1	10	6	60
Current and future land use	10	63	3	19	3	19	4	50	3	38	1	12	6	60	0	0	4	40
Intensity of exposure	8	50	4	25	4	25	3	38	4	50	1	12	5	50	0	0	5	50
Site history (e.g. sources of contamination)	15	94	0	0	1	6	6	75	1	13	1	13	8	80	0	0	2	20

* May not sum to 100% due to rounding.

Y = Yes, N = No, U = Unanswered, % = Percentage

Q21 How could EPA guidance and tools be improved to help you increase public participation?								
	Community Involvement Coordinator		Regional Project Manager		Risk Assessor		Total	
	Responses	Percentage*	Responses	Percentage*	Responses	Percentage*	Responses	Percentages*
Examples of "best practices" used at other sites to involve the community	9	56%	3	38%	3	30%	15	44%
Additional outreach materials (e.g., flyers, videos, booklets, etc.)	4	25%	1	13%	1	10%	6	18%
Additional training on how to engage the community	9	56%	5	63%	3	30%	17	50%
Training for EPA employees (CICs, RPMs, OSCs) in the risk assessment process	8	50%	1	13%	1	10%	10	29%
Other	8	50%	4	50%	6	60%	18	53%

** Calculated as a percent of respondents in each group. Total reflects all CICs, RPMs, and RAs who responded.

Appendix C
CIRA Survey for Risk Assessors

Program Evaluation: An Internal Review of Procedures for Public Involvement in Superfund Risk Assessments

Administered to EPA Risk Assessors

INITIATING COMMUNITY INVOLVEMENT IN RISK ASSESSMENT (CIRA)

1. What is your role in developing a community involvement plan (CIP) for the risk assessment?

2. At what point in the risk assessment process do you begin community involvement activities?

   _____ Scoping remedial investigation
   _____ Site characterization
   _____ When the remedial investigation proposed plan is drafted
   _____ Other _____

3. What materials do you use to explain the risk assessment process to the public, and to describe their role in it?

   _____ *Understanding Superfund Risk Assessment– Fact Sheet* (eight-page fact sheet that covers the four steps of Superfund Risk Assessment)

   _____ *Superfund Risk Assessment– What It's All About and How You Can Help* (set of two videos: 11-minute and 40-minute)

   _____ *Superfund Risk Assessment– What It's All About and How You Can Help* (two-page handout)

   _____ *Superfund Today: Focus on Risk Assessment: Involving the Community* (six-page fact sheet; identifies the key questions risk assessors ask the public, ATSDR's role in risk assessment, etc...)

   _____ *Common Contaminants Found at Superfund Sites* (booklet with approximately 50 two-page fact sheets on common contaminants, produced by ATSDR)

   _____ Other (e.g., site-specific materials)_____

4. Did you work with your Region's CIC to identify and involve community members?

_____ Yes _____ No

If so, how? If not, why not?

THE NATURE OF COMMUNITY INVOLVEMENT

5. In addition to individual citizens, what community groups or representatives play an active role in the risk assessment process (e.g., attending meetings, providing relevant data, etc.)?

_____ National/Local environmental groups
_____ Representatives from the local and/or state health departments
_____ Town officials/Mayors
_____ Senators or Congressmen
_____ Universities
_____ Newspaper reporters
_____ Local Civic Groups/Community Advocates
_____ Industry or Business
_____ Other _____

6. Please identify the individual characteristics, personal concerns, and community characteristics that motivate the involvement of community members in the risk assessment.

Consider factors such as:

Demographics - income, education, age, ethnicity, duration of residence in affected community, status as community leader, involvement in other environmental issues

Personal concerns - proximity to site, parental concerns, property value, stigma of NPL listing

Community/site characteristics - type of contamination, presence of activist groups, and media coverage.

7. Have you worked with Technical Advisors hired by the communities (either through a TAG, Technical Outreach Services for Communities (TOSC), or local funds)?

_____ Yes _____ No

RESULTS OF COMMUNITY INVOLVEMENT

8. Please check the *two* most frequently used means of gathering information from the community.

_____ Telephone interviews
_____ Community meetings
_____ Availability session or open houses
_____ Focus groups
_____ Surveys
_____ Communication with Technical Advisors or other community advocates
_____ Other _____

9. Please provide some examples of the exposure, activity, or site history information you gathered from the community, such as groups at risk of exposure, intensity of exposure, land use, or activities which increase risk of exposure.

Please indicate *how* this information impacted the risk assessment. If it did not impact the risk assessment, please indicate why the information was not useful.

10. Do you follow up with the community after the risk assessment is complete to explain the results?

_____ In All Cases
_____ In Most Cases
_____ Rarely
_____ Never

GENERAL QUESTIONS

11. What are the benefits of community involvement to risk assessments?

_____ Increases public confidence in EPA
_____ Improves the quality of risk assessments
_____ Increases public awareness of environmental hazards
_____ Improves decision making
_____ Other _____
_____ None

12. How could EPA guidance and tools be improved to help improve the public participation process?

_____ Examples of “best practices” used by other risk assessors to involve the community
_____ Additional outreach materials (e.g., flyers, videos, booklets, etc...)
_____ Additional training on how to engage the community
_____ Other _____

13. What have you learned about community involvement in risk assessments that could be shared with other regions?

14. Please identify some Superfund sites that would be important to include in a pilot study of the role of community participation in the risk assessment process.

15. Are there any other Superfund employees in your region, such as RPMs or CICs, who you think would be able to provide some insight on this issue?

Appendix D
CIRA Survey for Community Involvement Coordinators and Remedial Project Managers

Program Evaluation: An Internal Review of Procedures for Community Involvement in Superfund Risk Assessments

INITIATING COMMUNITY INVOLVEMENT IN RISK ASSESSMENT (CIRA)

1. Does the Community Involvement Plan (CIP) specifically include activities to be done during or in conjunction with the Risk Assessment?

2. Did you work with your Region's Risk Assessor, CIC or RPM to design or implement the CIP?

   _____ Yes _____ No

   If so, how? If not, why not?

3. Do you typically consult and coordinate with your region's Risk Assessors and/or (CICs/RPMs) to design and implement specific public outreach and involvement activities to support the development of site specific risk assessments?

   If so, at what point in the risk assessment process do you and/or the Risk Assessor and CIC/RPM typically recommend that community involvement activities begin?

   Site Discovery/Site Investigation

   When designing the risk assessment

   _____ Scoping remedial investigation

   _____ Site characterization

   _____ When the remedial investigation proposed plan is drafted

   _____ Other _____

4. Have you ever been involved in the following activities as they relate to collecting information from communities about the ways they may be exposed to contaminants at a site, or the knowledge they have about a site? **Check all that apply.**

_____ Coordinating logistical details and planning the activities.

_____ Making the community aware of the opportunity to be involved in the risk assessment.

_____ Answering questions about public participation, the use of the information, and/or the responsibilities of participants.

_____ Helping the RAs develop outreach materials for their community involvement activities.

_____ Facilitating community meetings, focus groups, or other activities that occur as part of the risk assessment.

_____ Soliciting input directly from citizens or interested parties(other residents, local health agencies, press)

_____ Other _____

_____ None

5. How is the public informed of the opportunity to provide input that may be relevant to the assessment of exposures at a site? Check all that apply.

_____ Advertisement in local paper

_____ Message on community/neighborhood list-servs

_____ Flyers posted in central locations (shops, restaurants, etc.)

_____ Flyers distributed or mailed to individual households

_____ Individual household visits

_____ Letters to Elected Officials and Community Leaders

_____ Discussions at Community Meeting

_____ Notification by federal, state or local health agencies

_____ Other _____

6. What are the most effective means of reaching low income, minority and environmental justice communities, or undocumented workers to solicit information, disseminate information etc...?

7. When you decide to engage the public in your risk assessment activities, what team member (CIC, RPM, and/or risk assessor) takes the lead role in communicating with the public?

8. What materials do you use to explain the risk assessment process to the public, and to describe their role in it? **Check all that apply.**

_____ *Understanding Superfund Risk Assessment– Fact Sheet* (eight-page fact sheet that covers the four steps of Superfund Risk Assessment) [OSWER 9285.7-08-FS, July 1992)

_____ *Superfund Risk Assessment– What It's All About and How You Can Help* [11-minute in English EPA 540-V-99-003; 11-minute in Spanish EPA 540-V-00-001S, July 2000; 40-minute version EPA 540–V-99-002]

_____ *Superfund Risk Assessment– What It's All About and How You Can Help* (two-page handout) [English 540-K-99-003; Spanish 540-K-00-001, both December 1999]

_____ *Superfund Today: Focus on Risk Assessment: Involving the Community* (six-page fact sheet; identifies the key questions risk assessors ask the public, ATSDR's role in risk assessment, etc...) [English 540-K-98-004, April 1999; Spanish 540-K-99-005, January 2000]

_____ *Common Contaminants Found at Superfund Sites* (booklet with approximately 50 two-page fact sheets on common contaminants, produced by ATSDR) [540-R-98-008, October 1999]

_____ I use my experience and knowledge of the process to communicate with the public

_____ I typically don't use written materials to explain the process

_____ I use materials that the region has developed

_____ Other (e.g., site-specific materials)_____

THE NATURE OF COMMUNITY INVOLVEMENT

9. Under what circumstances do individual citizens tend to emerge as key sources of information that can contribute to a meaningful risk assessment?

_____ Individual residents emerge to share information they think is important with EPA

_____ Individual residents show up at public meetings and learn that they may have information that is important for EPA to know regarding risk assessment.

_____ The local health department receives inquires from residents and gives these names to EPA for follow-up.

_____ EPA initiates contact with specific property owners or communities where the agency thinks residents may have important information to share in risk assessment or other activities.

10. When individual residents, organized interest groups, or others come forward to present information to EPA or to request that EPA investigate certain information, do you routinely follow-up on these requests?

If not, when might you not follow up on such suggestions?

11. In addition to individual citizens, what community groups or representatives play an active role in the risk assessment process (e.g., attending meetings, providing relevant data, etc.)? **Check all that apply.**

_____ National/Local environmental groups

_____ Representatives from the local and/or state health departments

_____ Town officials/Mayors

_____ Senators or Congressmen

_____ Universities

_____ Newspaper reporters

_____ Local Civic Groups/Community Advocates

_____ Industry or Business

Technical Assistance Grant (TAG) Advisors

_____ Other _____

12. Please identify the individual characteristics, personal concerns, and community characteristics that motivate the involvement of community members in the risk assessment by placing a Y for Yes in the column below. Where appropriate, please explain any Y responses, indicating how these factors affect the likelihood of participation (e.g., income, Y, higher income increases motivation).

Demographic Factors	**Yes/No**	**Explanation**
Income		
Education		
Age		
Ethnicity		
Duration of residence in affected community		
Status as community leader		
Involvement in other environmental issues		
Other _____		
Personal Concerns	**Yes/No**	**Explanation**
Proximity to site		
Parental concerns		
Property value		
Stigma of NPL listing		
Type of contamination		
Other _____		
Community Characteristics	**Yes/No**	**Explanation**
Presence of activist groups		
Media coverage		
Other _____		

13. Have you worked with Technical Advisors hired by the communities (either through a TAG or local funds) specifically on risk assessment issues?

_____ Yes _____ No

If yes, please describe how the involvement of a technical advisor affected your interaction with community members.

RESULTS OF COMMUNITY INVOLVEMENT

14. What are the specific events or activities where you solicit information from residents that might contribute to risk assessment activities?

15. What are the specific events or activities where you solicit information from local health agencies, or other qualified parties that might contribute to risk assessment?

16. How do community residents typically provide input into the risk assessment? Please check the *two* most frequently used means of gathering information from the community.

_____ Telephone interviews

_____ Community meetings

_____ Focus groups

_____ Surveys

_____ Availability session or open houses

_____ Other _____

17. Once you have risk assessment findings, do you specifically identify the information that had been provided by members of the public?

18. Do you to coordinate your communication activities with the state or local health department and/or ATSDR prior to communicating with residents?

_____ Yes _____ No

If yes, is this related specifically to information gathered from communities for the purpose of the risk assessment?

19. Please indicate the types of information that community members have actually provided, and, when possible, provide an example of the information offered or collected as a result of EPA's interactions with the public or as a result of people coming forward with information and/or concerns.

Information Type	**Provided by Community**	**Example**
Groups at risk of exposure		
Activities that may create or increase exposure		
Areas of the site that should be targeted or avoided for sampling		
Current and future land use		
Intensity of exposure		
Site History (e.g., sources of contamination)		
Other _____		

20. How satisfied were you with the interaction with the public and the quality of the input received from the public? In retrospect, what might you do differently?

21. How could EPA guidance and tools be improved to help you increase public participation?

_____ Examples of "best practices" used at other sites to involve the community

_____ Additional outreach materials (e.g., flyers, videos, booklets, etc...)

_____ Additional training on how to engage the community

_____ Training for EPA employees (CICs, RPMs, OSCs) in the risk assessment process

_____ Other _____

22. What have you learned about community involvement in risk assessments that could be shared with other regions?

23. Please provide any additional information and/or comments on community involvement in risk assessment.