

## APPENDIX D

### Comments about the Panel Sessions, Paper Discussions, and Information Sessions

This section of the report summarizes information collected from the evaluation forms that were distributed to participants during each panel session, paper discussion, and information session they attended. The bar graph illustrates the responses of participants to a series of questions about the appropriateness and relevance of course material to their job responsibilities, as well as the effectiveness of the instructional materials.

Participants were asked to respond to a series of questions by selecting from the following choices:

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

In addition, participants were asked to submit written comments about various elements of the session, including content, relevance and appropriateness of case studies, and instructional methods. The following pages present the information collected from the evaluation forms submitted for each session.

This attachment also provides pie charts that illustrate the percentages of participants for each course by job title. U.S. Environmental Protection Agency (EPA) Remedial Project Managers (RPM) and other EPA regional remedial support staff represented over 50 percent of the participants for almost every session.

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## Asbestos Panel Session

Moderator: Sandra Bourgeois, EPA Region 8

Panelists: Brian Brass, EPA ERT  
Mary Goldade, EPA Region 8  
Charles Nace, EPA Region 2

The panel session provided a follow-up to the Promoting Consistency in Sampling and Cleanup of Asbestos Sites panel held at the 2004 NARPM Annual Training Conference. This session was an interactive forum to explore the advances made by the Agency to investigate and evaluate asbestos as well as the accompanying policy implications. The methods associated with investigating and evaluating sites potentially contaminated with asbestos have evolved over the past several years. The Agency has recently formed a new technical workgroup to ensure that technical advances are incorporated into agency guidance and policy. The purpose of this panel was to:

- Provide an update on current and proposed policy changes.
- Provide technical information to RPMs on advances in sampling and analysis associated with asbestos investigations through presentations and case study examples.
- Solicit questions and concerns from RPMs regarding asbestos issues.

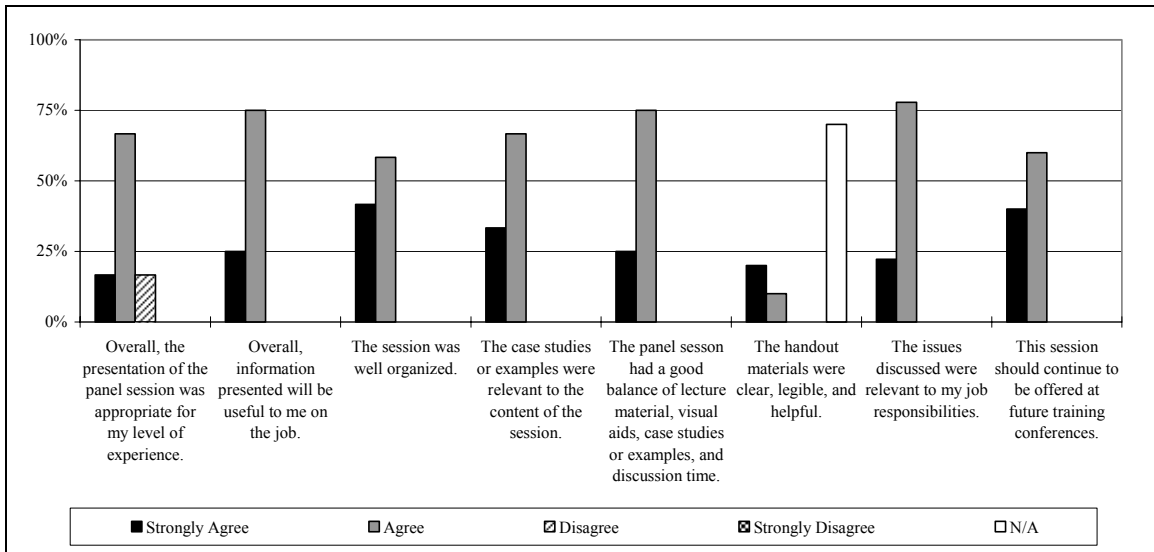
Presentations related to the technical advances in asbestos investigation and evaluation focused on activity-based sampling in a field-setting, a surrogate laboratory-based method, as well as a discussion of new analytical guidance for asbestos analysis. The presentations were supplemented with case studies to illustrate how the new methodologies have been employed.

### Participation and Average Grade

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
25	20	12	B*

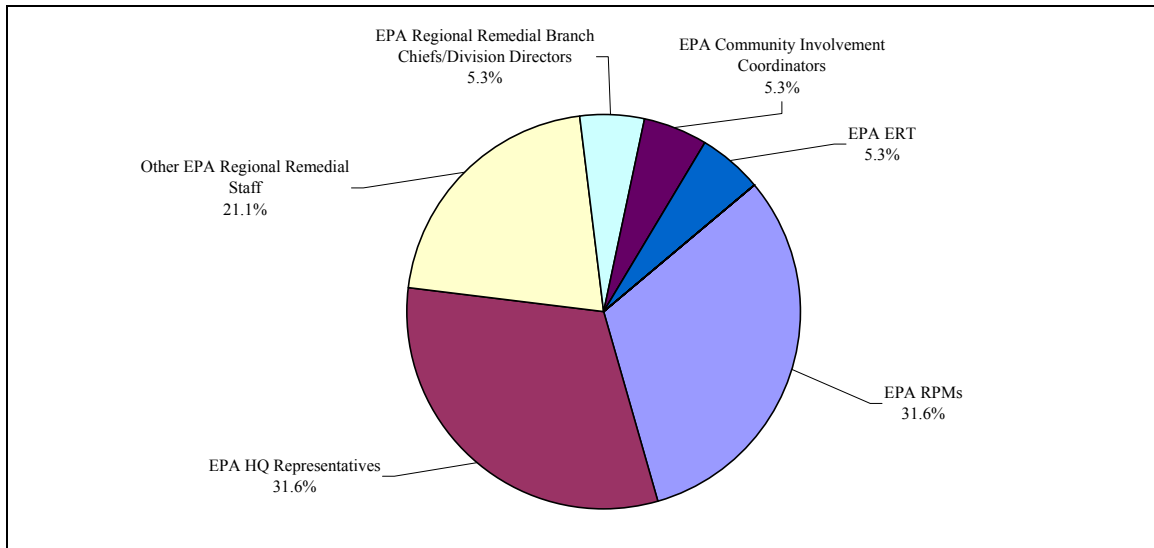
\* The grade displayed is the average of the grades selected on the evaluation forms based on a 4-point scale where A = 4 points, B = 3 points, C = 2 points, D = 1 point, and F = 0 points. The average letter grade is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4, which results in an average grade of "A").

### Summary of Evaluation Results for the Asbestos Panel Session



The pie chart below illustrates the percentages of students for the panel session by job title. EPA RPMs and other EPA regional Remedial support staff represented over 50 percent of the students. One TSP member attended this session.

### Participants by Job Title for the Asbestos Panel Session



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

#### Comments on appropriateness for the level of experience

- I found it very informative in an area I have no experience in!

#### Comments on relevance to job responsibilities

- It will be helpful to understand these analytical techniques.

- My site does not quite fit the scenarios presented (leftover ACM from refinery piping) but the talks were interesting.

**Comments on relevance of case studies or examples to the content of the session**

- Really liked the short video clip; it was beneficial.
- Not sure the value of the glove box apart from interesting. May have been useful to give an asbestos background.

**Comments on balance of lecture material, visual aids, case studies or examples, and discussion time**

- Presentations were technical and handouts would have been helpful.
- Needed a little more discussion time.

**Comments on recommending the session to colleagues**

- If it was a technical person or an RPM working on asbestos site.

**Comments on expectations for the session**

- I am new to the topic of the Integrated Risk Information System (IRIS) and needed more background information.

**Comments on topics or concepts that should be lengthened**

- Discussion of different standards including EPA, State, and site specific. Discussion of how community may react to some of the complicated asbestos issues.

**Comments on the instructor or presenter**

- Instructors were interesting and knowledgeable and the pace was good.
- The session started late due to technical difficulties. Instructors should try to stick to schedule.

**Additional comments**

- Sandra Bourgeois did a nice job facilitating the session.

## Attorney and RPM Panel Session

Moderator: Damian Duda, EPA Region 2

Panelists: Ben Bahk, EPA OSRE  
Damian Duda, EPA Region 2  
Tom Krueger, EPA Region 5  
Dion Novak, EPA Region 5  
Marla Wieder, EPA Region 2

The panel session provided an interactive forum for discussing ways to establish better working relationships between RPMs and attorneys. This was the only forum currently available as a national attorney and RPM exchange. The panel session included regional attorneys who will provide an in-depth perspective of the program. Topics covered during the panel session included:

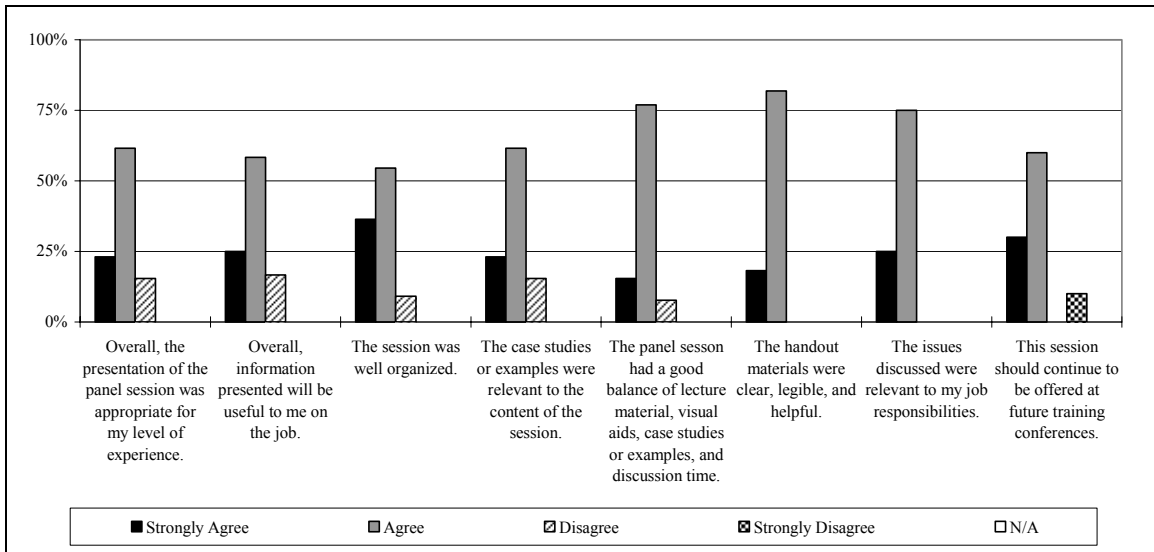
- Discussion and or role-playing on conflict resolution. At the 2004 NARPM Annual Training Conference, there were discussions about some of the major areas of conflict in the RPM and attorney working relationship. Building on that discussion and the feedback that was received, the panel has endeavored to craft an interactive conflict resolution component.
- Discussion of specific case studies of RPMs and attorneys working together to accomplish site cleanup, including an analysis of lessons learned and recommendations for improving RPMs' relationships with their attorneys.
- Possibly perform and discuss personality profile compatibility, as related to the RPMs and attorneys working together in a constructive manner. At the 2004 NARPM Annual Training Conference, the course entitled "Leveraging your Knowledge, Skills and Abilities" explored personality traits and discussed them in terms of setting and working towards one's career goals. The Attorney and RPM panel envisions refocusing this type of exercise toward analyzing the intra-office relationships.

### Participation and Average Grade

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
27	29	13	B*

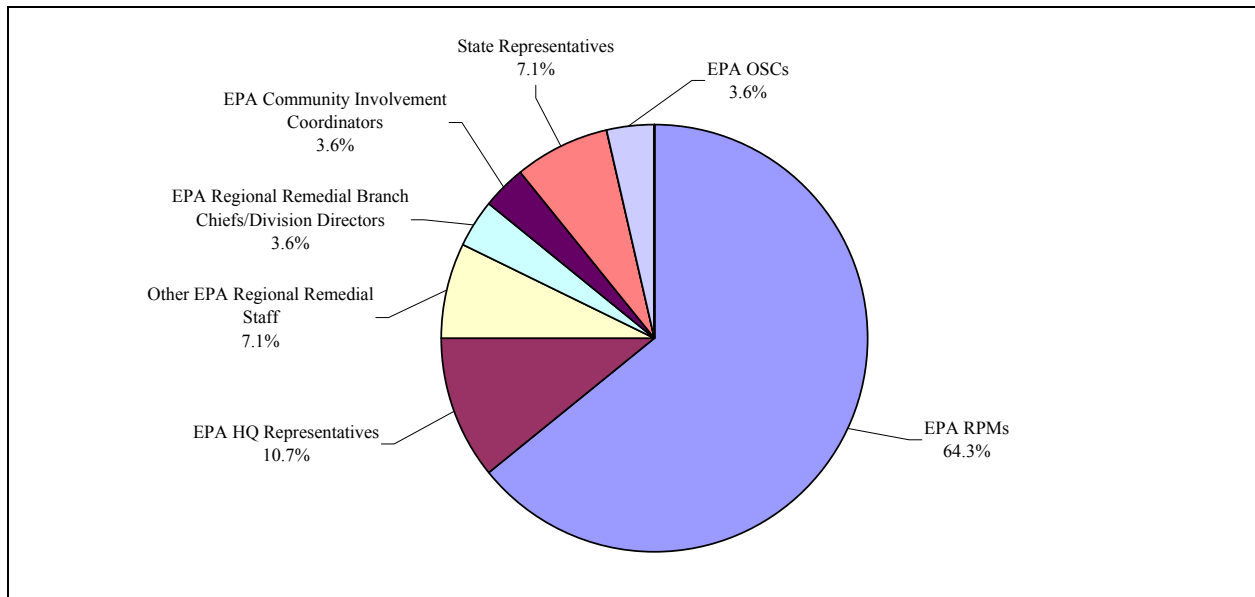
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**Summary of Evaluation Results for the Attorney and RPM Panel Session**



The pie chart below illustrates the percentages of students for the panel session by job title. EPA RPMs and other EPA regional Remedial support staff represented over 70 percent of the students.

**Participants by Job Title for the Attorney and RPM Panel Session**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

**Comments on appropriateness for the level of experience**

- You should not change the course topics after people have already signed up for the course. I was looking for what was in the brochure and it wasn't there.

**Comments on relevance to job responsibilities**

- Felt it was largely a gripe session against state and local government.

**Comments on relevance of case studies or examples to the content of the session**

- Some were relevant and some weren't.
- Want conflict resolution recommendations for improving RPM-attorney relationship.

**Comments on handout materials**

- The slides should be printed two slides per page and too much text is written on some on the slides; the print is too small on the slide handouts.

**Comments on offering of the session at future training conferences**

- Please try to follow the course description.

**Comments on expectations for the session**

- I expected something different, but this was interesting.
- Abstract did not match session material. (*Two responses*)

**Comments on topics or concepts that should be added**

- Improving RPM-attorney relationship.
- Conflict resolution.

**Comments on the instructor or presenter**

- Tom Krueger gave too much detail. Dion Novak provided a good example of creative uses of "Approval with Modifications" and other things EPA is going or may do. Marla Wieder was very good. She had a good story, was informative, and the information was applicable to all of us. Damian Duda was a bit general and unspecific. Ben Bahk was moderately interesting. The moderator, Pam, was an excellent facilitator.
- Good session. Not sure how the Region 5 case studies related to the record and database discussion.
- Brilliant presenters!

**Additional comments**

- Room was too cold. I had to leave early because of it.
- Thanks guys.
- Whole session should be had on privileges.
- Add a topic: "RPM/Attorney relationships." Is the lawyer the tool of the RPM or vice versa?

## Dense Non-Aqueous Phase Liquid (DNAPL) Remediation Panel Session

Moderator: Kathy Davies, EPA Region 3

Panelists: Linda Abriola, Tufts University  
 Eva Davis, EPA ORD  
 Scott Huling, EPA Robert S. Kerr Env. Research Center  
 James Jawitz, University of Florida

The panel session provided further discussion of the topics addressed during the DNAPL Remediation paper discussion. These topics included:

- Uncertainty in estimating the extent of DNAPL source zone.
- Realistic remedial expectations for DNAPL source zones.
- Management of source zones and research priorities.

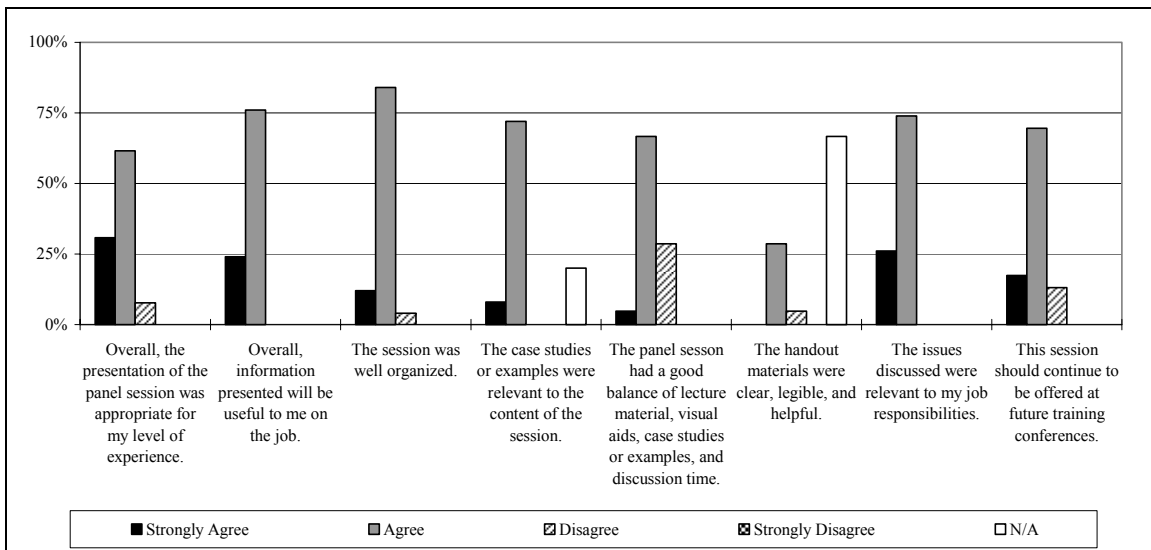
Restoration of ground water quality to its maximum beneficial use has been, and continues to be, a core concept of the Superfund remedial program. The complete accomplishment of this cleanup objective has been found to be costly to implement, protracted in effort, and uncertain in outcome. Problematic sites are usually ones with ground water plumes that have DNAPL sources zones. While technical progress has been made regarding the characterization and remediation of DNAPL sources, the conduct of both of these activities continues to be debated.

### Participation and Average Grade

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
71	56	27	B*

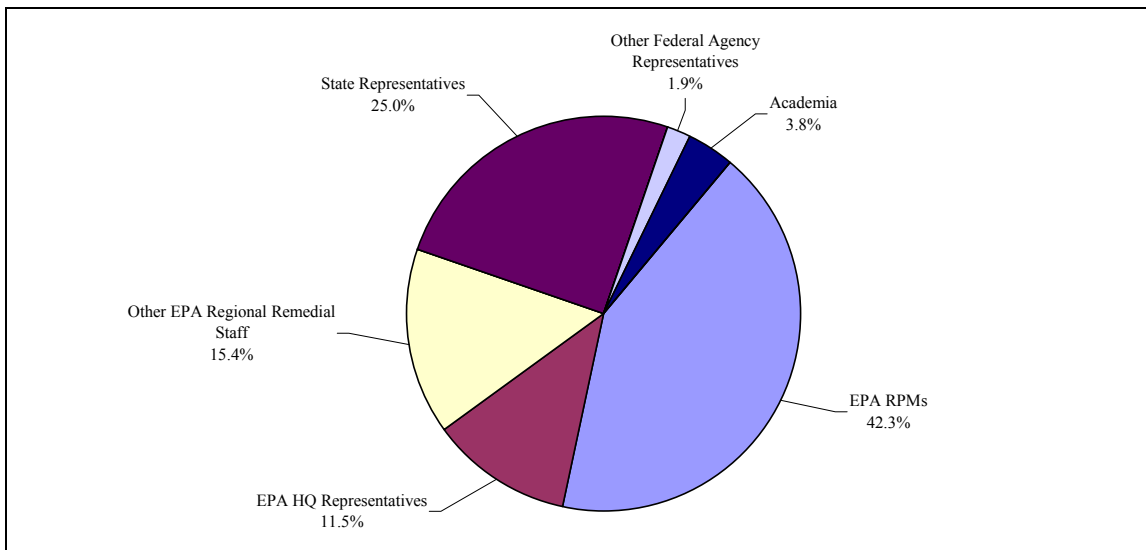
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### Summary of Evaluation Results for the Dense Non-Aqueous Phase Liquid (DNAPL) Remediation Panel Session



The pie chart below illustrates the percentages of students for the panel session by job title. EPA RPMs and other EPA regional Remedial support staff represented over 50 percent of the students. A total of 7 TSP members attended this session.

#### Participants by Job Title for the Dense Non-Aqueous Phase Liquid (DNAPL) Remediation Panel Session



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

#### Comments on appropriateness for the level of experience

- I didn't know much about the topic. The panel assumed individuals were knowledgeable in subject.

#### Comments on organization of the session

- I need a presentation of the topic first before going into questions and answers.
- A little free form; question and answer session can't be too structured.

#### Comments on relevance of case studies or examples to the content of the session

- Case studies didn't help me since I wasn't knowledgeable in this topic.

#### Comments on balance of lecture material, visual aids, case studies or examples, and discussion time

- Panel discussions.
- Good interaction between audience and panel.
- Verbal questions and answers only. (*Four responses*)
- Read the questions twice (moderator); sometimes difficult to hear panelist. (*Two responses*)
- There wasn't a balance of the materials, aids, studies/examples. There were no supporting visual aids/presentations to discuss topic.

#### Comments on relevance of the issues discussed to job responsibilities

- Needed handouts and visual aids to understand question and answer session.

**Comments on offering of the session at future training conferences**

- Need a break from the NAPLs.
- Shouldn't be offered separate from the discussion portion.

**Comments on recommending the session to colleagues**

- Only if you have a high-end DNAPL site.
- I didn't understand what was being discussed; I would have signed up for both the paper discussion and the panel session had I known.
- Not as useful as prepared tanks for the time spent. This was partly due to the types of questions asked.

**Comments on expectations for the session**

- Wanted a presentation of topic followed by a question and answer session.
- Good questions and good interaction between panel and audience.
- There were discussions on the questions and examples cited.
- Would have liked the summary to be more specific; KMnO<sub>4</sub> injection was discussed at length; would recommend this be mentioned in summary.
- Discusses DNAPL issues which is what I was looking for.

**Comments on topics or concepts that should be added**

- Perhaps start with some topic for discussion by moderator(s).
- Expand and add more soil and ground water compliance monitoring results.

**Comments on the instructor or presenter**

- Panel members were knowledgeable of the topic. It would have been nice to get a technical presentation of the topic, problems, lessons learned, or remediation tools.
- The question and answer session was very informative and the format was beneficial.

**Additional comments**

- Needed multiple microphones because the tie lapel model was awkward and time consuming to pass around. (*Two responses*)
- On the good side of things, it did seem to engage some of the attendees.
- The panel and paper discussion should go together when registering rather than being separate.
- It was excellent.

## Design and Construction Issues Panel Session

Moderator: John Smith, OSRTI

Panelists: Damian Duda, EPA Region 2  
Carole Petersen, EPA Region 2

The panel session discussed the issues addressed at a two-day Design and Construction Issues at Hazardous Waste Sites Conference held in Philadelphia, Pennsylvania in April 2006. As the EPA Superfund program continues to mature, many sites are in or are entering the remedial design and remedial action (RD/RA) phase. In recognition of this fact, EPA is focusing more resources on educating staff about the project management issues surrounding design and construction as well as the various technologies used during RD/RA. A panel of EPA staff, including Branch Chiefs in Regions 1, 2, 3, 6, and 7, provided a summary of the following conference topics:

- The use of Value Engineering and ground water technologies when implementing permeable reactive barriers.
- The use of in-situ bioremediation for hexavalent chromium and treatment trains for advanced ground water treatment systems.
- The use of the Department of Defense Ground Water Modeling System and FEMWATER Numerical Model for ground water remediation optimization.
- The process of Vapor Extraction.
- The uses of Photo-Covers.
- An update of Department of Transportation regulations and U.S. Army Corps of Engineers procedures for off-site transport of remediation wastes.

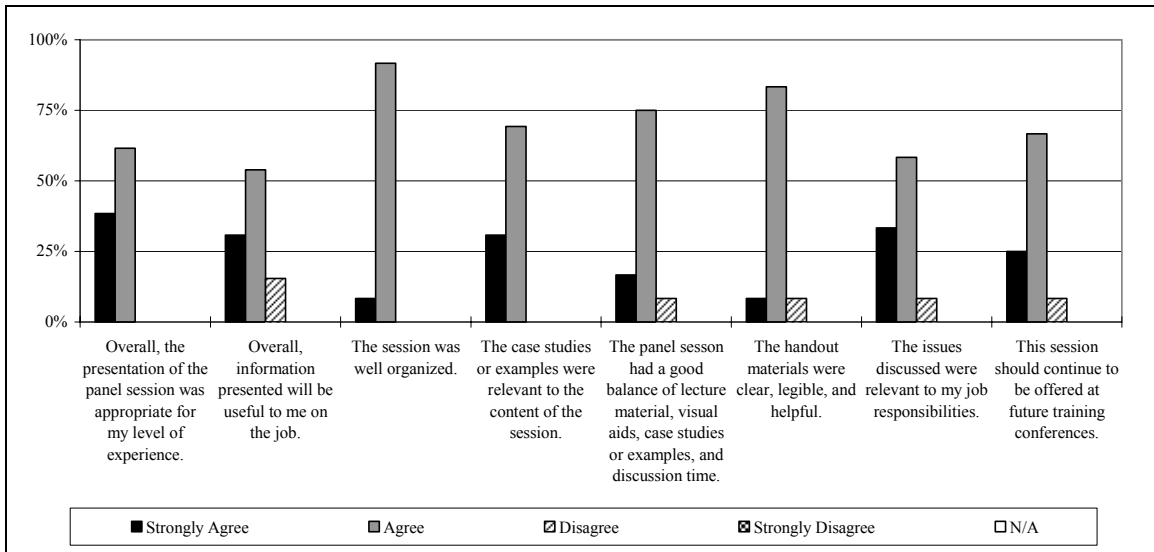
The panel also provided an overview of advanced project management and the appropriate application of Appropriate and Cost-Effective Application of Occupational Safety and Health Administration's Hazardous Waste Operations Standard to hazardous waste site construction and operation and maintenance activities.

### Participation and Average Grade

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
40	33	14	B*

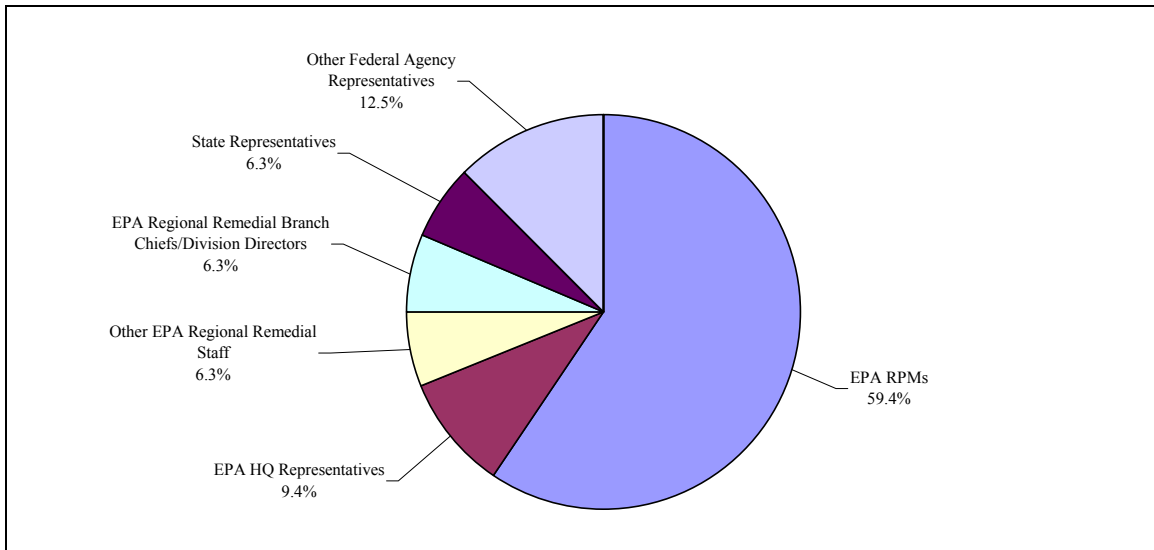
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**Summary of Evaluation Results for the Design and Construction Issues Panel Session**



The pie chart below illustrates the percentages of students for the panel session by job title. EPA RPMs and other EPA regional Remedial support staff represented over 60 percent of the students. One TSP member attended this session.

**Participants by Job Title for the Design and Construction Issues Panel Session**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

**Comments on appropriateness for the level of experience**

- The Moderator was better than the panel which was good.
- Should have been an information session.

**Comments on relevance to job responsibilities**

- Expected to go away with good summary of success stories; not slides from some other presentations.

**Comments on organization of the session**

- Too much to cover.
- Should be longer!

**Comments on relevance of case studies or examples to the content of the session**

- Didn't have time to try to figure out slides from other presentations.
- Too many to cover fully.

**Comments on balance of lecture material, visual aids, case studies or examples, and discussion time**

- Need more visual aids on the projector screen. It was really difficult to following the presentations
- John made a good presentation. He talked quite a bit without PowerPoint slides.

**Comments on handout materials**

- Slides were too small to read the details.
- Some text was too small.
- Copies of presentation slides are hard to follow.

**Comments on relevance of the issues discussed to job responsibilities**

- Please remember that not all computers have sound cards so on-line training does not always work.

**Comments on offering of the session at future training conferences**

- With modifications; more speakers and RPMs should be involved.
- Given more time.
- Please give complete the examples of one or two sites that were optimized.

**Comments on recommending the session to colleagues**

- Would like to request "Guidebooks" in the bullet form to assist in "precipitating" a constructive dialogue during design and remedial action. I would like to have something to share with PRPs during RD/RA and to discuss during planning meetings. The objective would be to not only change our thinking ('traditional' problem solving) but also the conventional thinking from other consultants, PRPs, state agencies, etc.
- Instructor was very knowledgeable.

**Comments on expectations for the session**

- Could have been called value engineering.
- Yes and No. Highlighted key points of optimization and briefly referenced site examples and how to find more information on the sites.

**Comments on topics or concepts that should be shortened**

- History.

**Comments on topics or concepts that should be lengthened**

- Where to we go from here.

- Overall presentation.
- GE Housatonic River.
- Not enough time to fully cover presentation materials.
- Failure of PRBs.
- Stringfellow Wastewater Treatment.

**Comments on the instructor or presenter**

- Excellent presenter.
- Mr. Smith who was the moderator and did the whole presentation.
- Great summary of past conferences!!

**Additional comments**

- Could have been a full day course.
- Focus lessons learned from these conferences – present to RPMs so we don't have to re-invent the wheel – presumptive remedy approaches for site types would be a good start –what works, what doesn't work, etc. Would like to participate in such an exercise.
- I would like to attend the Value Engineering training.

## Institutional Controls Update Panel Session

Moderators: Sheri Bianchin, EPA Region 5  
Dante Rodriguez, EPA Region 9

Panelists: Michael Bellot, OSRTI  
Sheri Bianchin, EPA Region 5  
Jan Carlson, EPA Region 5  
Marisa Guarinello, OSRTI  
Sheryl Lauth, EPA Region 9  
Derek Matory, EPA Region 4  
Dante Rodriguez, EPA Region 9  
Gregory Sullivan, EPA ORT

The panel session led participants in an in-depth and interactive discussion on issues, problems, and lessons learned regarding critical institutional controls (IC). To help facilitate a full discussion, participants were asked to come prepared with specific examples of issues they have faced. Participants were encouraged to prepare a brief written summary of specific IC-related issues prior to the course. Ideas, solutions, or best practices that are generated during the sessions will be captured as follow-up after the conference. The presentation covered the following topics:

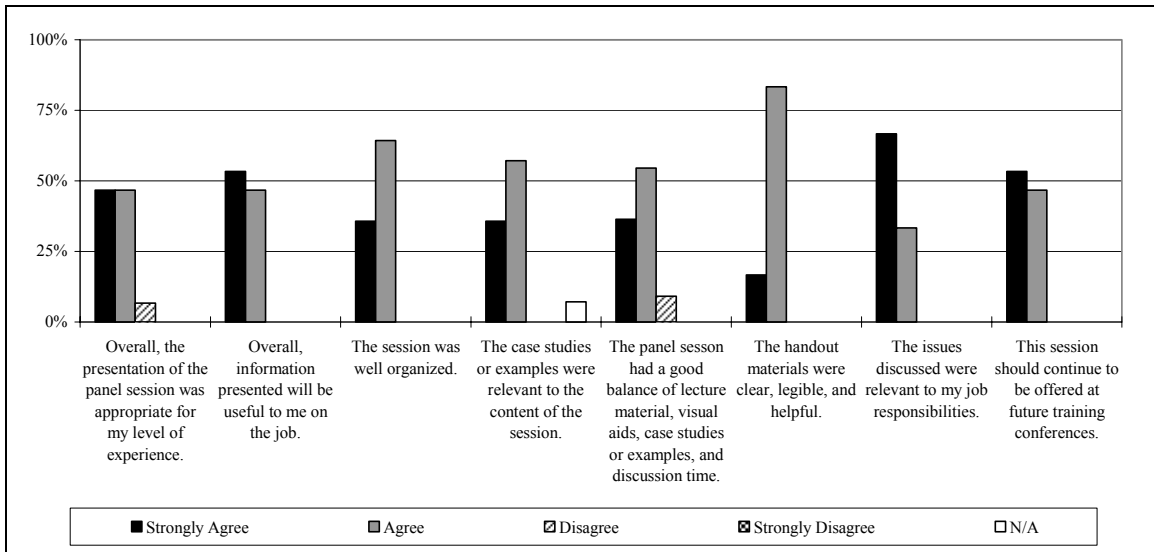
- Regional perspective implementing the IC strategy.
- IC Tools - update on policy and guidance developments.
- Governmental controls - state and local authorities.
- Real property law and procedure for RPMs.

### Participation and Average Grade

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
56	48	15	A*

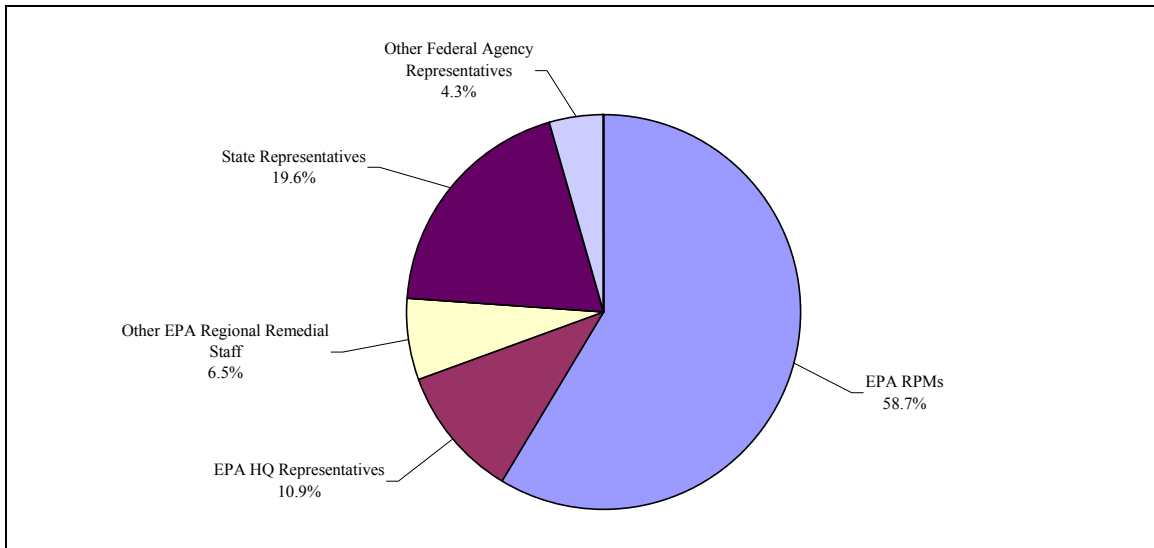
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**Summary of Evaluation Results for the Institutional Controls Update Panel Session**



The pie chart below illustrates the percentages of students for the panel session by job title. EPA RPMs and other EPA regional Remedial support staff represented over 60 percent of the students. A total of 2 TSP members attended this session.

**Participants by Job Title for the Institutional Controls Update Panel Session**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

**Comments on appropriateness for the level of experience**

- Panel session could be covered in half of the allotted time.

**Comments on organization of the session**

- Think that the panel has an idea of what was going to be covered, but that wasn't made clear at the start.

- Shotgun free-wheeling after the session began.

**Comments on relevance of case studies or examples to the content of the session**

- The “Bundle of Sticks” example should be for either a Federal site or an Enforcement site.

**Comments on balance of lecture material, visual aids, case studies or examples, and discussion time**

- Instructors were well informed and did a great job without visual aids and case studies.

**Comments on handout materials**

- Could have used more handout materials.
- One handout was useful.
- May want to present any changes in a PowerPoint and or overhead slide.

**Comments on offering of the session at future training conferences**

- This is an evolving issue and always will be on the menu.

**Comments on recommending the session to colleagues**

- I would recommend a more formal course.

**Comments on expectations for the session**

- Big issue that will always provide some information.
- It was positive because I wanted to know about ICs - Federal Facilities. However, it was really a more general session on ICs.
- I still wanted a list of ICs and their application.
- Good updates on ICs.

**Comments on topics or concepts that should be shortened**

- Federal Facilities.

**Comments on topics or concepts that should be lengthened**

- Everything but Federal Facilities.

**Comments on topics or concepts that should be added**

- Strengths and weaknesses of each IC.

**Comments on the instructor or presenter**

- Very good moderators.
- Dante Rodriguez’s facilitation was outstanding. He started with the overall picture then went into details.

**Additional comments**

- I liked the Jeopardy game.
- Room lighting was not good – half of the panel was in shadows. Handouts with references would help.
- It was fun too!

## Partial Deletions Panel Session

Moderator: Melissa Friedland, OSRTI

Panelists: Melissa Friedland, OSRTI  
Tracy Hopkins, EPA OSRTI  
Jon Peterson, EPA Region 5  
Kat West, EPA Region 4

The panel session provided a discussion regarding the partial deletion of land parcels from National Priorities List (NPL) sites and ways to improve the reuse potential of the property. EPA has become aware that uncontaminated parcels of land are often included within Superfund site definitions, which can create barriers that delay the reuse of these parcels. Removing a parcel of land from an NPL site has several implications for the reuse potential of the property, including reducing lender concerns and making the property eligible for Brownfields funding. Currently, there are four approaches EPA regions are using to remove parcels from NPL sites, including partial deletions, Record of Decision amendments, Explanation of Significant Differences, and memoranda to the Administrative Record. This panel discussed the following topics:

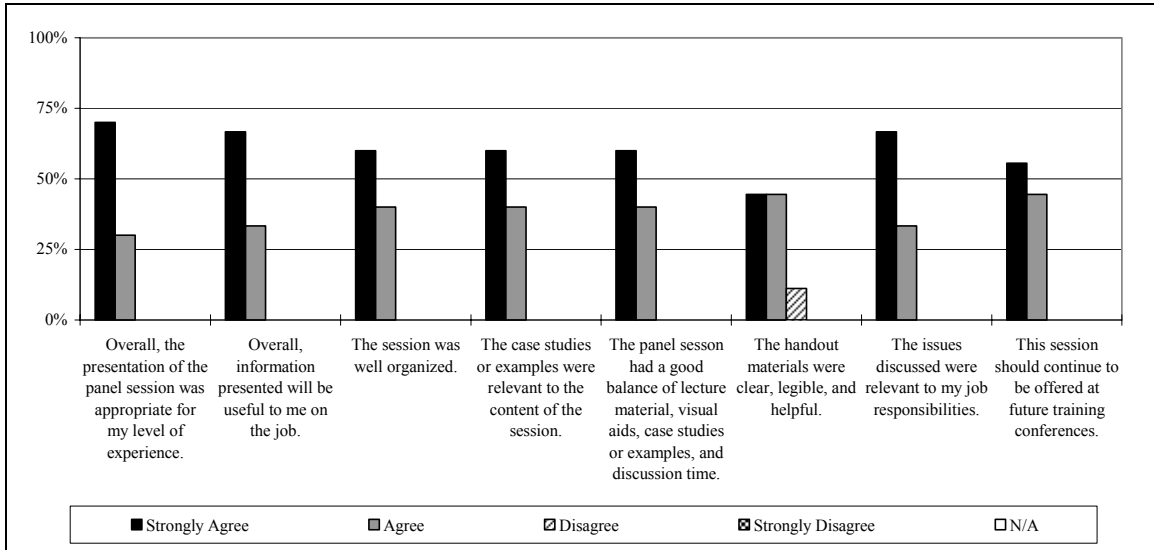
- The approaches available to RPMs for delisting a parcel of an NPL site.
- The regional perspective and experiences in using different approaches.
- An overview of potential benefits and issues of different approaches (e.g., administrative efficiency, NPL stigma).
- Discussion of future needs including the development of tools or guidance.

### Participation and Average Grade

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
30	23	10	A*

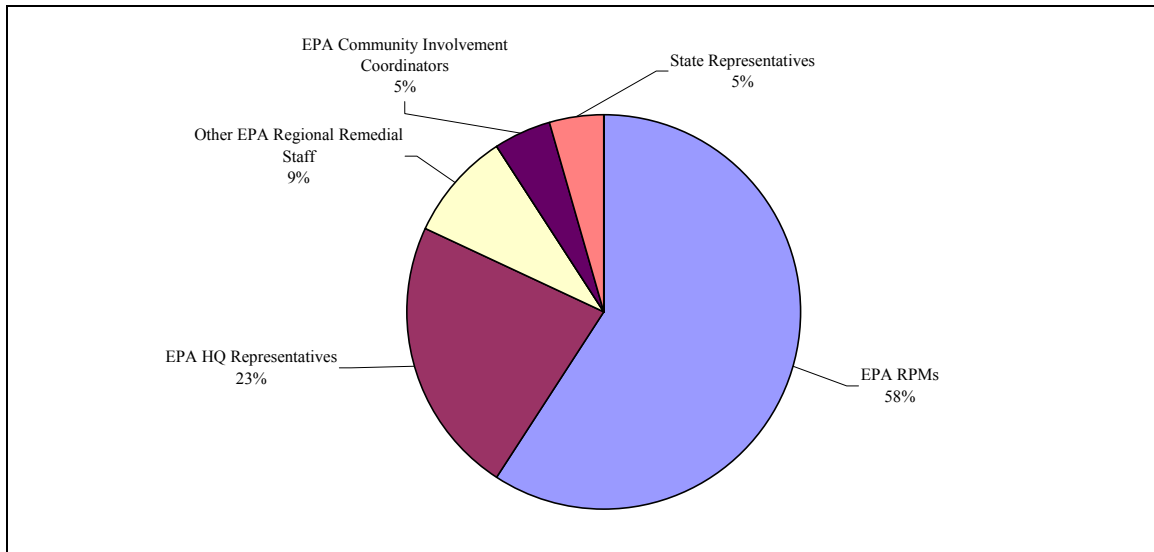
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**Summary of Evaluation Results for the Partial Deletions Panel Session**



The pie chart below illustrates the percentages of students for the panel session by job title. EPA RPMs and other EPA regional Remedial support staff represented over 60 percent of the students.

**Participants by Job Title for the Partial Deletions Panel Session**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

**Comments on balance of lecture material, visual aids, case studies or examples, and discussion time**

- Could have used more case studies.
- Lots of discussion.

**Comments on handout materials**

- Suggest attaching the sheet with “I want to buy that deleted parcel” to the partial deletion handout. Please make the “Current Approaches .... Adjusting Site Boundaries.”

**Comments on offering of the session at future training conferences**

- At least part of a session should be offered. The session ended early and could have been shorter but it was of real interest.

**Comments on expectations for the session**

- I expected the definition of site boundaries to be explained more clearly.
- I appreciated how patient the panel was in entertaining the group questions. Clearly lots of issues that need discussion.

**Comments on topics or concepts that should be shortened**

- I want to buy that deleted parcel.

**Comments on topics or concepts that should be lengthened**

- CERCLA definition of a contaminated site and boundaries.

**Comments on the instructor or presenter**

- Good discussions. Thank you for bringing this important issue and acknowledging need for flexibility.
- The instructors did a good job of trying to answer the audience’s questions. However, it sometimes slowed down the pace of the class. Instructors should try to get clarification on IC and “contaminated parcel” definitions.

**Additional comments**

- Request that presenters limit audience questions to three, until the end of all presentations (or hold questions until the end).

## Perchlorate Panel Session

Moderator: Kevin Mayer, EPA Region 9

Panelists: Harry Craig, EPA Region 10  
 Lynne Jennings, EPA Region 1  
 Kevin Mayer, EPA Region 9  
 Wayne Praskins, EPA Region 9  
 Jim Woolford, FFRRO

The panel session provided participants an opportunity to share their experiences regarding perchlorate-related issues at their sites. Superfund sites cannot always wait for a definitive rulemaking on a chemical contaminant before an action is taken. Over the last 9 years, there have been a series of advisories and toxicological estimates regarding perchlorate from various Federal, state, and stakeholder authorities. There has been a strong reluctance to look for perchlorate at a site, including a restrictive government sampling policy. The uncertainties befogging perchlorate issues often pose enormous challenges to communicate intelligibly with communities, states, and potential responsible parties.

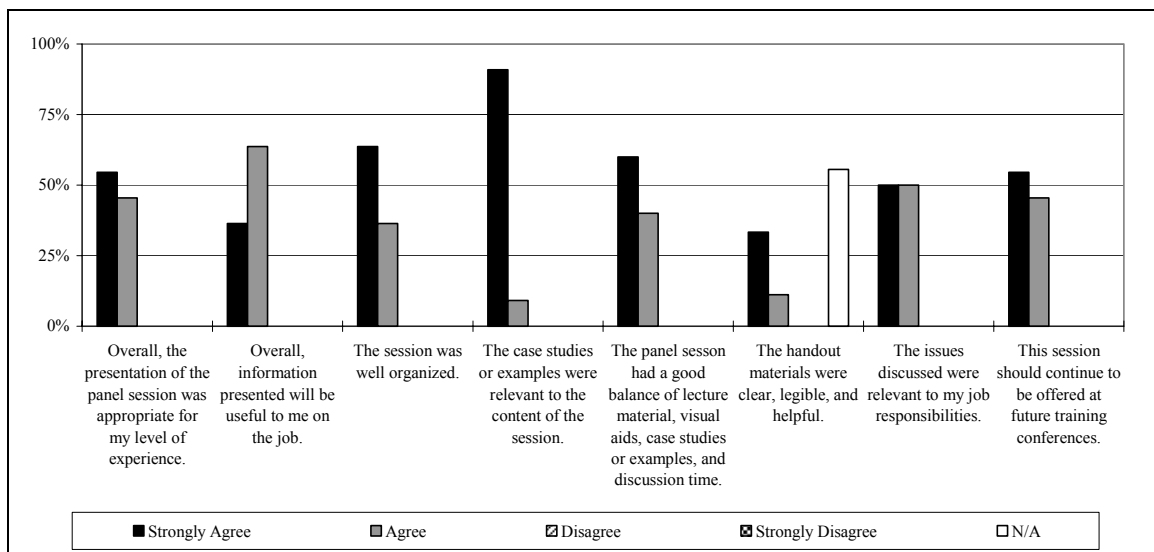
Experienced RPMs, OSCs, and managers from all regions who have encountered perchlorate at their sites were encouraged to discuss how the contamination was discovered; how the presence of perchlorate complicated planned and ongoing remediation projects; the cleanup decisions and the considerations that were factored into the decision; lessons learned; and overall treatment costs and effectiveness.

### Participation and Average Grade

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
48	37	11	B*

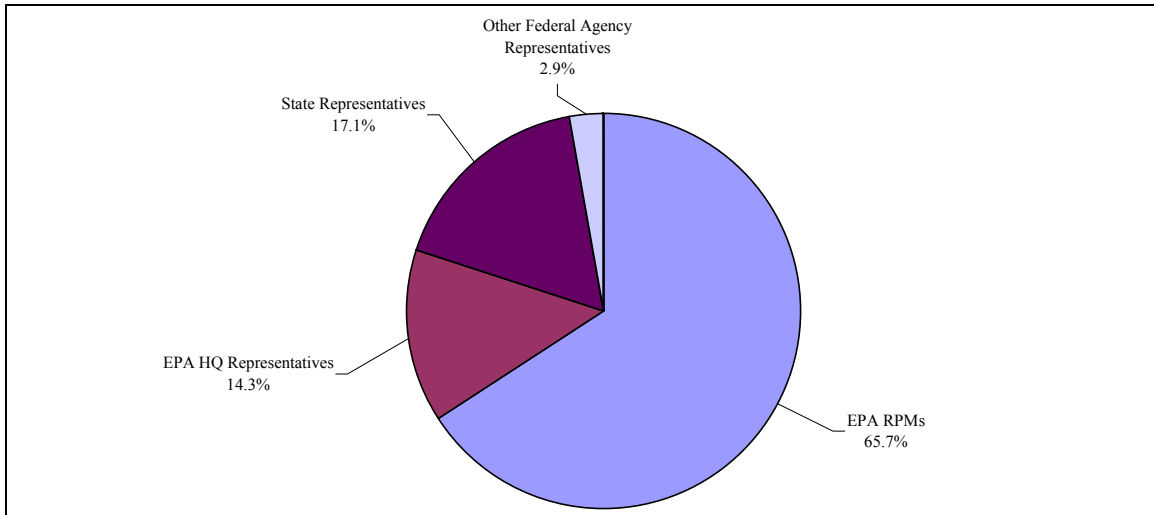
\* The grade displayed is the average of the grades selected on the evaluation forms based on a 4-point scale where A = 4 points, B = 3 points, C = 2 points, D = 1 point, and F = 0 points. The average letter grade is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4, which results in an average grade of "A").

### Summary of Evaluation Results for the Perchlorate Panel Session



The pie chart below illustrates the percentages of students for the panel session by job title. EPA RPMs represented over 65 percent of the students. A total of 3 TSP members attended this session.

**Participants by Job Title for the Perchlorate Panel Session**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

**Comments on relevance to job responsibilities**

- Information not needed currently but I may find perchlorate in the future.

**Comments on relevance of the issues discussed to job responsibilities**

- RODs versus EPA issues are relevant.

**Comments on offering of the session at future training conferences**

- As long as perchlorate remains relevant.
- Perchlorate is still an issue with state versus EPA cleanup levels and we (RPMs) need to hear more case studies.

**Comments on recommending the session to colleagues**

- Perchlorate is at many federal facilities even if it hasn't been found yet.

**Comments on expectations for the session**

- I knew the participants.

**Comments on topics or concepts that should be shortened**

- All good.

**Comments on topics or concepts that should be lengthened**

- Whole panel could be lengthened to discuss some issues in greater depth.
- All good.
- Remedial technologies for perchlorate.

**Additional comments**

- Good panel.

## Dense Non-Aqueous Phase Liquid (DNAPL) Remediation Paper Discussion

Moderator: Marcia Knadle, EPA Region 10

Presenters: Linda Abriola, Tufts University  
 Eva Davis, EPA ORD  
 Scott Huling, EPA Robert S. Kerr Env. Research Center  
 James Jawitz, University of Florida  
 Marcia Knadle, EPA Region 10  
 Dick Willey, EPA Region 1

The paper discussion explored such topics as:

- Uncertainty in estimating the extent of DNAPL source zone.
- Realistic remedial expectations for DNAPL source zones.
- Management of source zones and research priorities.

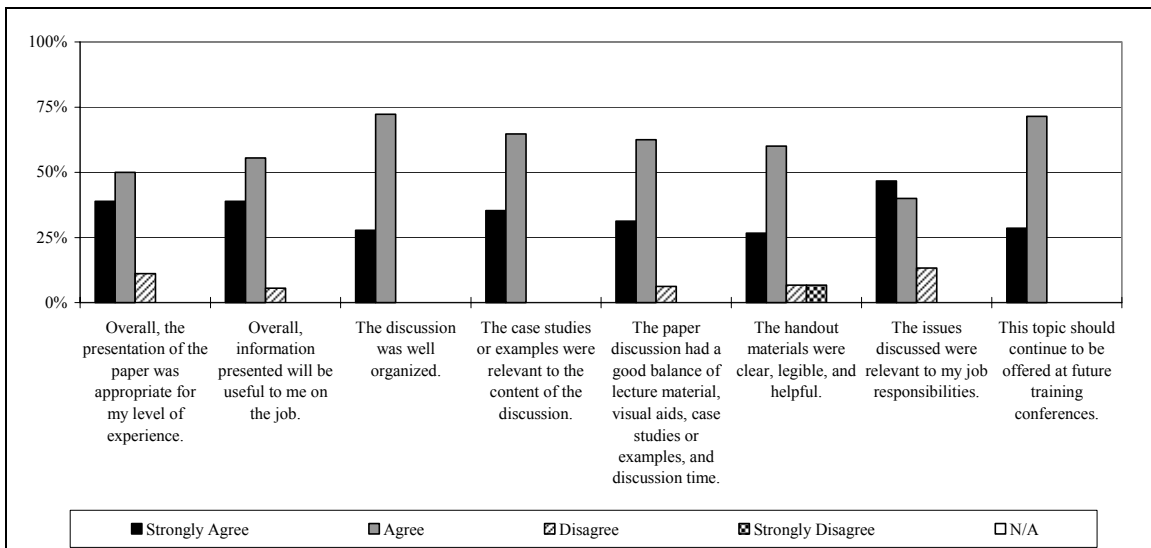
Restoration of ground water quality to its maximum beneficial use has been, and continues to be, a core concept of the Superfund remedial program. The complete accomplishment of this cleanup objective has been found to be costly to implement, protracted in effort, and uncertain in outcome. Problematic sites are usually ones with ground water plumes that have DNAPL sources zones. While technical progress has been made regarding the characterization and remediation of DNAPL source, the conduct of both of these activities continues to be debated.

### Participation and Average Grade

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
64	59	18	B*

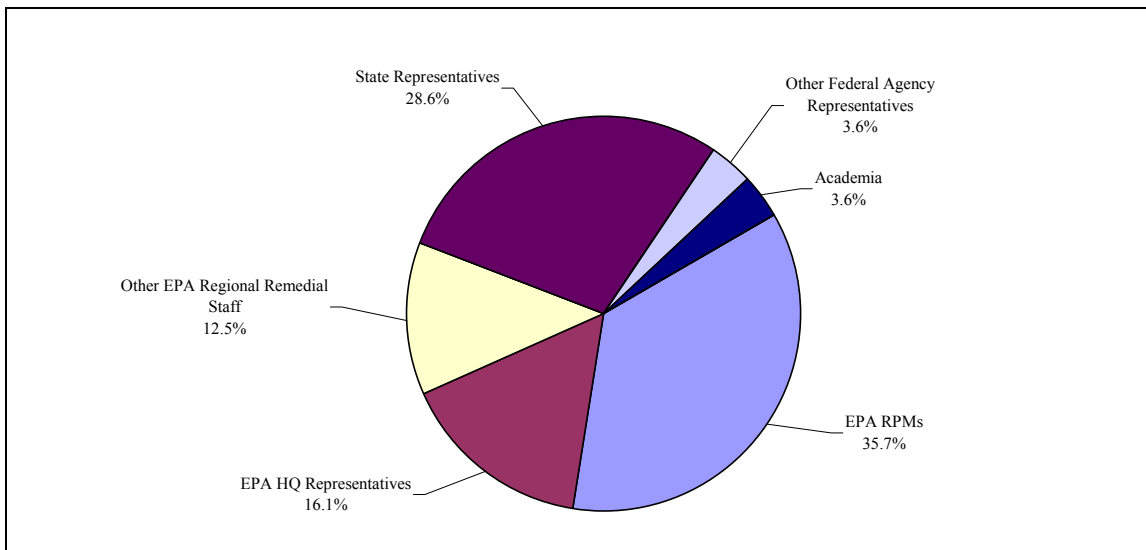
\* The grade displayed is the average of the grades selected on the evaluation forms based on a 4-point scale where A = 4 points, B = 3 points, C = 2 points, D = 1 point, and F = 0 points. The average letter grade is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4, which results in an average grade of "A").

### Summary of Evaluation Results for the Dense Non-Aqueous Phase Liquid (DNAPL) Remediation Paper Discussion



The pie chart below illustrates the percentages of students for the paper discussion by job title. EPA RPMs and other EPA regional Remedial support staff represented nearly 50 percent of the students. A total of 3 TSP members attended this session.

#### Participants by Job Title for the Dense Non-Aqueous Phase Liquid (DNAPL) Remediation Paper Discussion



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

#### Comments on appropriateness for the level of experience

- Too advanced for those not orientated with DNAPLs.
- I don't have many sites with DNAPLs.
- The research detail could have been summarized more to shorten the presentation.

#### Comments on relevance to job responsibilities

- Way too much material attempted. For RPMs, fewer big picture points would have been better (Scott Huling was the exception).
- It might be relevant in the future.
- I can pass on the information to others.

#### Comments on organization of the discussion

- Too much information for the time allotted.

#### Comments on balance of lecture material, visual aids, case studies or examples, and discussion time

- No time for questions.
- Instructors had very good presentation slides.

#### Comments on handout materials

- Please remember color doesn't transfer well to black-white copies, and six slides per page are too small to read (i.e., James Jawitz's presentation). (*Four responses*)

**Comments on relevance of the issues discussed to job responsibilities**

- I was attending to get info for others.
- The fourth speaker was definitely relevant in a general sense.

**Comments on recommending the discussion to colleagues**

- First three presenters tried to stuff for too much in 30 minutes so they rushed through a lot of information instead of explaining some info well. The fourth speaker had perfect speed.
- Some of papers were better than others.

**Comments on expectations for the discussion**

- Two papers should have allowed more time. Each presenter could have used more time.

**Comments on topics or concepts that should be shortened**

- Research data.

**Comments on topics or concepts that should be lengthened**

- ISCO, Thermal, all concepts.
- Field data and or results.
- Discussions of detail around flux determination.

**Comments on topics or concepts that should be added**

- Superfund site case studies presented by RPMs.

**Comments on the instructor or presenter**

- Please remind them to not stand in front of the projector or to use small print on slides.
- Speakers need to time talks before presentation. All ran over by a lot, and that was without questions.
- Linda Abriola's talk could be lengthened into a short course. She had a very clear presentation.
- The text on James Jawitz's handout was too small. The number of slides per page should be reduced.
- Most all were good considering constraints on their time (*Two responses*). Eva Davis needs to work on her "ums and uhhs."
- All very good.

**Additional comments**

- Too much information for the time available.
- All of the discussions were very good; however, the time planned was too short.
- Really enjoyed Mr. Jawitz's introduction regarding perceptions of DNAPL remediation. The format of Scott Huling's presentation should be followed by other presenters.

## Ground Water Paper Discussion

Moderator: Gwen Massenburg, EPA Region 5

Presenters: Judy Canova, SCDHEC  
Bob Lim, EPA Region 1  
Gwen Massenburg, EPA Region 5  
Mary Tierney, EPA Region 5

The paper discussion consisted of four presentations:

- The Ground Water Pump & Treat System Optimization Experiences at the Massachusetts Military Reservation Superfund Site presentation presented best practices that have been developed in more than 10 years of ground water pump and treat experiences at the Massachusetts Military Reservation/Otis Air Force Base Superfund Site on Cape Cod, Massachusetts. At this site, more than 12 millions gallons a day of contaminated ground water is treated at several treatment systems that are remediating 14 plumes. Practices to be presented included monitoring, ground water modeling, system optimization, and reporting.
- The Sulfate Reduction PRB Technology Cost Effective Ground Water Remedy Stoller Site, Charleston, South Carolina presentation discussed the permeable reactive barrier (PRB) technology in greater detail. The following elements were discussed: cleanup efforts, techniques, and cost-saving approaches including sulfate reduction technologies, permeable reactive barriers, and environmental monitoring. Ground water at the Stoller Chemical site in Charleston County, South Carolina is similar to acid mine drainage sites with an acidic pH, high sulfate, aluminum, zinc, and cadmium. Pump and treat was initiated in the heart of the plume to contain the source. The operations and maintenance costs of the system are approximately \$400,000 a year. With the help of the EPA Technology Support Project, an in-situ technology consisting of a permeable sulfate reduction reactive barrier was identified as potentially viable for the site. Longevity estimates for the system indicate it will likely meet performance goals for 15 to 20 years. A feasibility study is being performed to determine the total cost savings of the PRB, but initial estimates indicate a cost savings of at least 4 million dollars over the life of the treatment system.
- The Treatment Cell Supplement to a Permeable Reactive Barrier: Performance Assessment Monitoring presentation discussed the effectiveness of a permeable reactive barrier (PRB) containing 300 tons of zero valent iron (ZVI) filings installed at a former uranium milling site near Monticello, Utah. The PRB has 3 zones consisting of (from up gradient): 2 ft of gravel/ZVI mixture, 4 ft of ZVI, and 2 ft of gravel. Ground water samples and water level data have been collected at regular intervals from more than 50 wells in the PRB. Satisfactory performance of the PRB requires that contaminant concentrations are lowered to regulated levels, a high proportion of the ambient ground water flow is treated, and that there are no adverse effects to land use. Contaminant concentrations remain low in most wells in the ZVI zone to satisfy the first criterion. Attainment of the second and third criteria is less certain, however, due to a continuously rising ground water mound behind the PRB. This occurrence is likely coupled to an order of magnitude loss of permeability as determined by serial gas-injection slug tests, presumably due to observed mineral precipitation in the ZVI zone. As a result, a very shallow water table now threatens crop production and the proportion of treated ground water may have decreased significantly from an initial mass-balance estimate of 4 to 5 gallons per minute. Flux estimates based on Darcian principles are limited by high spatial and temporal variability. The costs of construction and operation of the treatment cell are very favorable and the long-term maintenance costs for the treatment cell are relatively minor. The amount of data required to confirm the performance of the treatment cell is much less than the amount required confirming the performance of the existing PRB at a similar level of confidence.

- The Use of Hydrogen Releasing Compounds to Treat Chlorinated Solvents in Ground Water Aircraft Components, Inc. Site in Benton Harbor, Michigan presentation discussed considerations taken into account when choosing the remedy, how to interpret the sample results for site contaminants and bioremediation parameters, how the projected costs compare to traditional pump-and-treat remedies, and the success of the remedy thus far. The effect on the river adjacent to the site and the parameters being monitored in surface water was described.

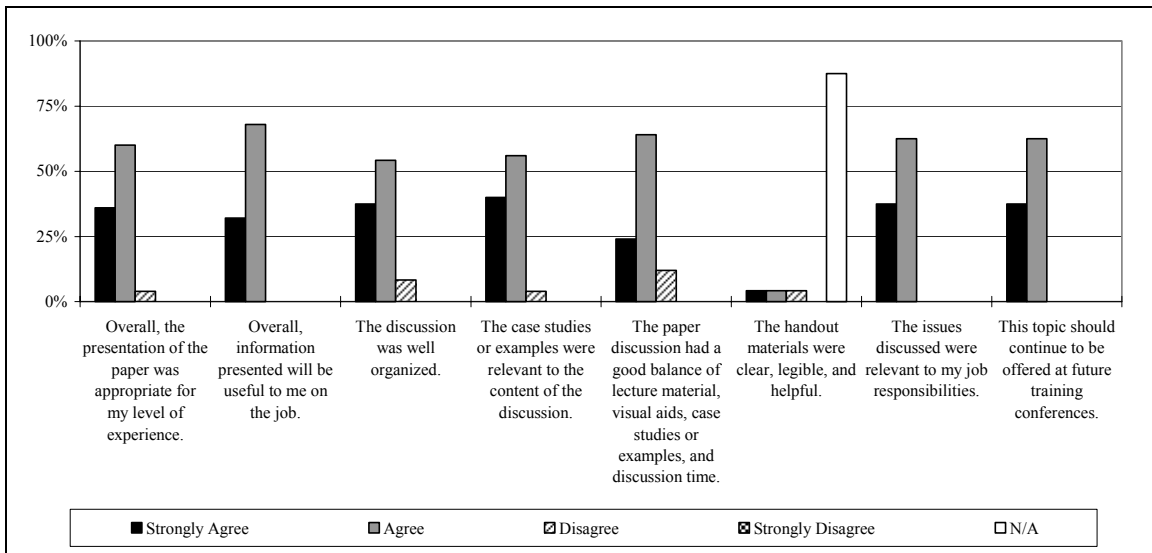
When EPA first assessed the Aircraft Components site, five dilapidated structures housing hundreds of radium-painted airplane gauges were found. The gauges were among the many parts from World War II aircrafts that the former owner was in the business of buying and selling. After removing the radioactive waste and decontaminating the site, the attention was focused on the chlorinated solvent plume in ground water beneath the site. The selected remedial approach uses two types of hydrogen-releasing compounds to stimulate degradation of chlorinated solvents via reductive de-chlorination. A total of 423 injection points were used to introduce the compounds into the aquifer. In addition to site contaminants, bioremediation parameters in ground water and surface water are being monitored and interpreted to assess the effectiveness of the remedy. The results received to date have been very encouraging.

**Participation and Average Grade**

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
55	43	26	B*

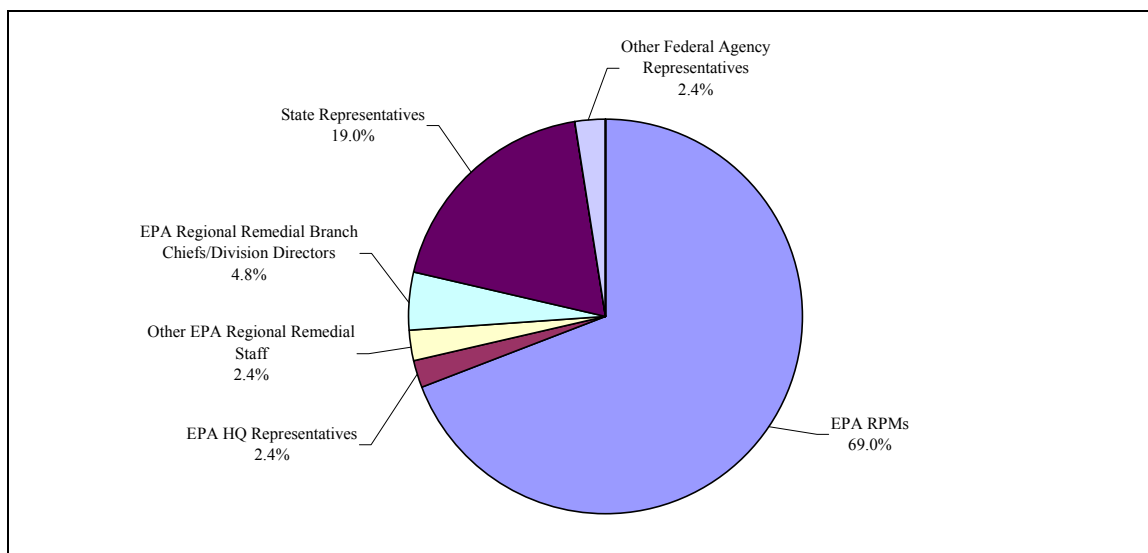
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**Summary of Evaluation Results for the Ground Water Paper Discussion**



The pie chart below illustrates the percentages of students for the paper discussion by job title. EPA RPMs and other EPA regional Remedial support staff represented over 70 percent of the students.

### Participants by Job Title for the Ground Water Paper Discussion



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

#### Comments on appropriateness for the level of experience

- Any map that can be projected with an overhead can typically be placed in PowerPoint.

#### Comments on organization of the discussion

- The first speaker, Mary Tierney, did not come across as “confident.” The second speaker, Judy Canova, was a very good speaker and was very knowledgeable of her presentation.
- Bob Lim was late, poorly presented, and had no good synopsis of problem.

#### Comments on relevance of case studies or examples to the content of the discussion

- Two of them were okay – ERD and PRC.

#### Comments on balance of lecture material, visual aids, case studies or examples, and discussion time

- Mary Tierney went too fast through her presentation.

#### Comments on handout materials

- No handouts!
- Handouts of presentation would have been nice or available on their Web site.
- It would be nice to give out a handout.

#### Comments on offering of the topic at future training conferences

- Better list of failures and cautions for applying.
- The second speaker, Judy Canova, was very interesting alternative method for treatment.

#### Comments on expectations for the discussion

- The discussion met my expectations. The presenter, although well informed in the subject, didn’t grab my attention enough.

**Comments on topics or concepts that should be omitted**

- Key definitions (ex. substrate).

**Comments on topics or concepts that should be added**

- Ask the presenters to debate success versus non-success studies of techniques presented.

**Comments on the instructor or presenter**

- Speaking volume could have been louder for Mary Tierney, other than that they were all good.
- Mary Tierney - A; Judy Canova - A; Bob Lim - C.
- The advocacy of the commercial product (HRC) was not well-supported. In answer to a question the presenter said she wasn't involved in initial decision to use product and it was a responsible party site so costs weren't a consideration!
- Mary Tierney was a bit too rushed compared to Judy Canova. Bob Lim should not consistently block his presentation from being seen on the screen.
- The first two presenters were good. The third presenter should be told that overhead projectors are obsolete and should put everything on computer.
- Bob Lim was great.
- She should pep up the discussion a little; her voice was monotone.
- Speakers number one (Mary Tierney) and number two (Bob Lim) need to work on their presentation.
- Very well presented.

**Additional comments**

- The quality of presentations differed greatly.
- The results or conclusions should have been better summarized.
- Judy Canova's presentation was excellent. It was very practical oriented with good graphics. Bob Lim has a good speaking voice but could benefit from the EPA "presentation skills" training which will give him good tips on being highly effective.

## Institutional Controls/Redevelopment Paper Discussion

Moderator: Monica Baussan, EPA Region 2

Presenters: Rosemary Monahan, EPA Region 1  
Ravi Sanga, EPA Region 10

The paper discussion consisted of two presentations.

- The Radon Performance Standard Institutional Controls that Run with the Land at the Teledyne Wah Chang (TWC) Superfund Site presentation discussed performance standard institutional controls for a piece of property contaminated with Radium 226 and Radium 228. The property is owned by the City of Millersburg, Oregon and part of the Teledyne Wah Chang Superfund Site. The institutional controls will address preventing radon inhalation by inhabitants of potential structures erected at the property.

The TWC Superfund site is located in Millersburg, Oregon, adjacent to the city of Albany and is one of two facilities in the country that manufacture zirconium metal. Operations at TWC began in 1956. In 1989-90, Teledyne Wah Chang transferred the Soil Amendment Area to the City of Millersburg (City) in exchange for a piece of property contiguous to their Farm Ponds area. The facility covers approximately 225 acres near the Willamette River. The TWC facility is divided into a 110-acre main plant area and a 115-acre Farm Ponds area that was used for the past storage of sludges, wastewater, and manufacturing residues. The zirconium manufacturing operation consists of numerous production facilities used for the extraction and refining of zirconium and hafnium metals from zircon sands, with a small amount of tantalum, columbium, titanium, and vanadium metals also being produced. The processing of the zircon sands generates sludge, waste water, residues and gases as by-products. Contaminants of concern at the site include radionuclides, metals, polychlorinated biphenyls (PCBs), methyl isobutyl ketone (MIBK), and chlorinated organic solvents such as 1,1,1-trichloroethane, carbon tetrachloride, and tetrachloroethylene. Primary contaminants of concern at the portion of the site with the institutional controls being discussed are radium 226 and radium 228.

In order to have this 60-acre parcel ready for reuse, the City has presently entered into a consent decree with EPA that includes a City Radon Ordinance and an easement and equitable servitude that would allow the institutional controls to run with the land. Through negotiations with the City, the institutional controls allow for greater flexibility in protecting building occupants from radon inhalation through various options, including provisions for passive and active radon-resistant construction, radon testing in future buildings and, if needed, further remedial design/remedial action (soil berming). This presentation further detailed these alternatives for radon protection within the institutional controls and also discussed how these performance-based institutional controls are implemented through enforcement, government, and proprietary requirements.

- The Turning Bases into Great Places: New Life for Closed Military Facilities presentation described the practices recommended in EPA's new guidebook, "Turning Bases into Great Places: New Life for Closed Military Facilities," and will illustrate how the practices have been successfully used in redeveloping bases closed in previous BRAC rounds. Case studies discussed include the former Naval Training Center in Orlando, Florida; the former Naval Training Center in San Diego, California; the former Lowry Air Force Base in Denver, Colorado; and the former South Weymouth Naval Air Station in Weymouth, Massachusetts.

A number of military bases around the country have been targeted for closure, and many will be made available for redevelopment. Communities may need to move relatively quickly to develop reuse plans for these properties, and regulatory agencies that oversee cleanup activities will need to adapt to changing circumstances. EPA published the guidebook for communities on how to

develop environmentally-sound reuse plans. This guidebook also provides information on smart growth principles that communities can use to develop a vision of how a redeveloped base can enhance their neighborhoods, economy, and environment. It offers ideas for communities to weave this vision into the redevelopment process to create a reuse plan that is fair and economically successful, provides people with choices, and enjoys broad public support. Local governments, community members, and others can use this guidebook to pursue base reuse that:

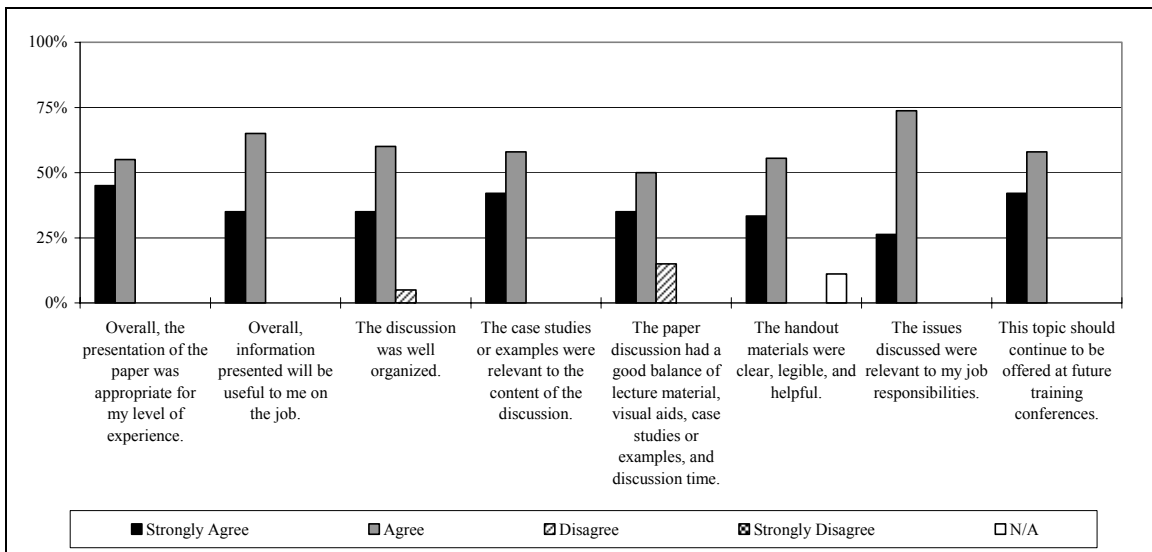
- Creates vibrant neighborhoods.
- Brings amenities to residents and the surrounding neighborhoods.
- Provides a balanced mix of jobs and housing.
- Capitalizes on historic, cultural, and natural assets.
- Protects environmental resources.
- Becomes embraced by the community.

**Participation and Average Grade**

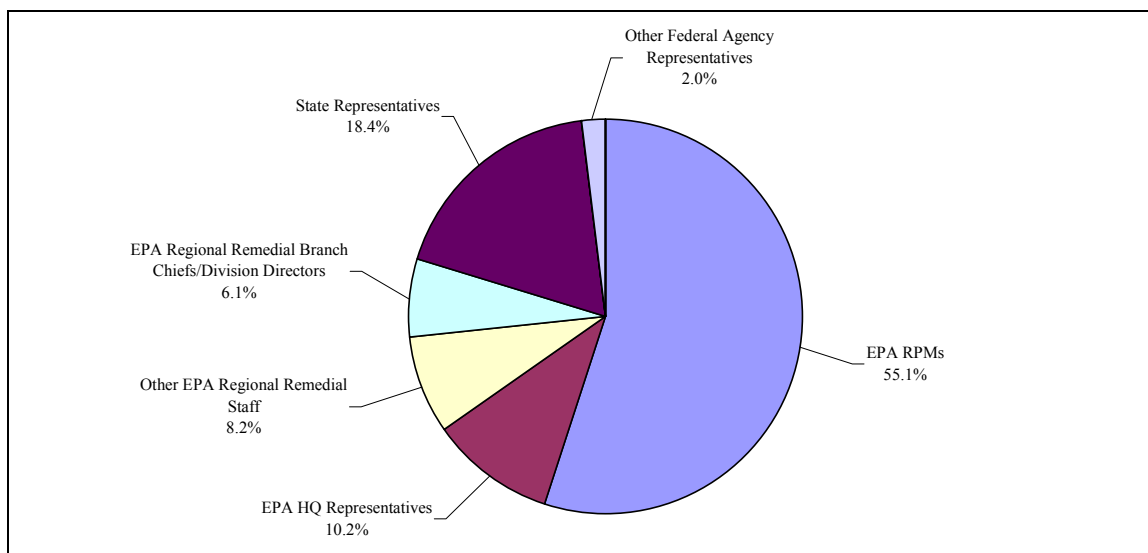
No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
61	50	21	B*

\* The grade displayed is the average of the grades selected on the evaluation forms based on a 4-point scale where A = 4 points, B = 3 points, C = 2 points, D = 1 point, and F = 0 points. The average letter grade is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4, which results in an average grade of “A”).

**Summary of Evaluation Results for the Institutional Controls/Redevelopment Paper Discussion**



The pie chart below illustrates the percentages of students for the paper discussion by job title. EPA RPMs and other EPA regional Remedial support staff represented over 60 percent of the students.

**Participants by Job Title for the Institutional Controls/Redevelopment Paper Discussion**

Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

**Comments on appropriateness for the level of experience**

- The IC presentation was not relevant but the BRAC presentation was.
- The first presentation was not helpful.

**Comments on relevance to job responsibilities**

- The IC presentation was not relevant but the BRAC presentation was.

**Comments on organization of the discussion**

- The IC presentation was not relevant but the BRAC presentation was.

**Comments on relevance of case studies or examples to the content of the discussion**

- The IC presentation was not relevant but the BRAC presentation was. (*Two responses*)
- Both discussions were well presented.

**Comments on balance of lecture material, visual aids, case studies or examples, and discussion time**

- There should be larger lettering on the slides for the IC talk.

**Comments on handout materials**

- First presentation needed handouts. (*Three responses*)

**Comments on relevance of the issues discussed to job responsibilities**

- The attendees expected a melding of IC with redevelopment.

**Comments on recommending the discussion to colleagues**

- Would not recommend the IC presentation but would recommend the BRAC presentation.

**Comments on expectations for the discussion**

- Expected more of ICs.

- First presentation was not detailed enough; second presentation was not on session topic.
- I thought it would be about the intersection of ICs and redevelopment, not one presentation about each separately.

**Comments on topics or concepts that should be lengthened**

- ICs.

**Comments on the instructor or presenter**

- Both are well-spoken.
- Great job!! Well organized!!
- It would have been helpful if some handouts were available for the first presentation to better follow it.

**Additional comments**

- Grades: 1st presentation, D (quite bad); 2nd presentation, B+.

## Mining Paper Discussion

Moderator: Andrew Bain, EPA Region 9

Presenters: Tamara Langton, EPA Region 10  
James Sickles, EPA Region 9  
Michael Wireman, EPA Region 8

The paper discussion consisted of three presentations:

- The Anaconda Copper Mine/Yerington presentation presented an overview of the site investigation approach used to identify the extent of radiological contamination at the Anaconda Copper Mine Yerington Site in Nevada. The 3,400 acre Anaconda Copper Mine/Yerington Site consists of an open pit, tailings piles, mill buildings, waste and evaporation ponds, and covers. From 1918 until 1978, the site was a low-grade copper mine and milling operation. Following the closure of the mine, the site was sold to a local citizen who used it for extracting copper from the tailing piles as well as a metal salvage facility for electrical transformers containing polychlorinated biphenyls (PCBs). In 1988, the property was sold to Arizona Metals Company (Arimetco) which set up a heap leach operation using mine tailings and ore from the nearby MacArthur Pit. Arimetco went bankrupt in 1997, ceased operations, and abandoned the site in 2000 leaving ongoing acidic rock drainage from 5 unclosed heap leach pads from 100 to 175 feet high across the site.

This session discussed the results from the December 2003 to June 2005 surface radiological survey of the process areas and soil sampling from areas of elevated radiation; a walkover screening survey of the evaporation ponds conducted in December 2003; as well as EPA's scanner van-conducted surveys on the mine site and in adjacent areas where mine materials were used for construction conducted in April 2005.

- The Bunker Hill Mining and Metallurgical Complex Superfund Facility Second Five-Year Review presentation presented how the recently completed five-year review was conducted at the Bunker Hill Mining and Metallurgical Complex Superfund Site located in northern Idaho and northeastern Washington. Included in the presentation was:
  - The steps taken to conduct a review at this mega-site.
  - How a team of RPM, external stakeholders, and the public were involved in the process.
  - The results of the review and key follow-up actions.
  - The cost of the review.
  - Lessons learned to be applied for the next five-year review.

The Bunker Hill Superfund Site is within one of the largest historical mining districts in the world. Heavy metals contamination in soil, sediment, surface water, and ground water from over 100 years of commercial mining, milling, and smelting has impacted both human health and environmental resources. Two five-year reviews have been completed for this site. The first was completed in September 2000. The second five-year review, the focus of this presentation, was completed in October 2005. The review confirmed that remedial actions are or will be protective of human health and the environment provided that key follow-up actions are carried out. These follow-up actions and other findings of the review are detailed in the final report and will be summarized in this presentation.

- The Isotopic and Hydrogeologic Characterization of Ground Waters, Mine Pools, and the Leadville Mine Drainage Tunnel, Leadville, Colorado presentation discussed the implementation of hydraulic control elements designed to contain and control mine pool water and the

investigative events that lead up to the design. This session presented preliminary conclusions based on work completed as of November 2004.

The 3385-meter long Leadville Mine Drain Tunnel (LMDT) was completed in 1952 to create a free-draining tunnel to dewater existing and future mine workings in the Leadville Mining District in the mountains of central Colorado. Since 1952, mining has been discontinued in the Leadville district and the physical condition of the LMDT, which discharges approximately 82 liters per second (l/s), has deteriorated significantly. Roof falls have resulted in blockages which cause water to pool up, increasing the hydraulic head and presenting a potential blowout problem. Using its authority under Superfund, EPA is planning to implement a number of hydraulic control elements that are designed to contain and control mine pool water. To support this work, EPA has completed a rigorous hydrogeologic characterization aimed at developing a sound conceptual understanding of the hydrologic and geologic conditions that control inflow of ground water to the underground workings being evaluated and the outflow of water from these workings. This investigation indicates that the LMDT drains only a small volume of mine pool water and a very large volume of bedrock and/or alluvial ground water. As a result of this investigation, the conceptual understandings related to the nature and extent of the regional bedrock flow system in a highly perturbed, structurally complex geologic setting has been greatly enhanced. The hydrogeologic investigation included:

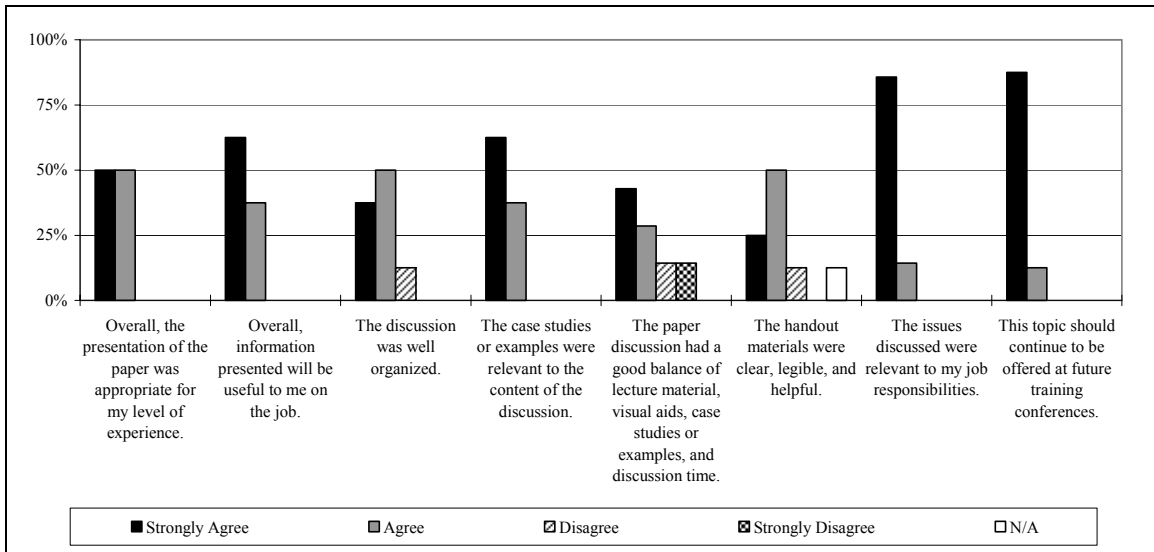
- Hydrogeologic mapping to assess geologic controls on ground water flow pathways and the hydrology of underground workings.
- Drilling, coring, installing, and sampling five monitoring wells in the LMDT.
- Using stable and radioactive isotope data as an aid in determining relative ages and sources of water to underground workings.
- Tracing using fluorescent dyes (injection of tracer into tunnel wells and monitoring breakthrough curves).
- Using End Member Mixing Analysis and Principle Component Analysis as an aid in determining sources of water to the underground workings.

#### Participation and Average Grade

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
36	27	8	B*

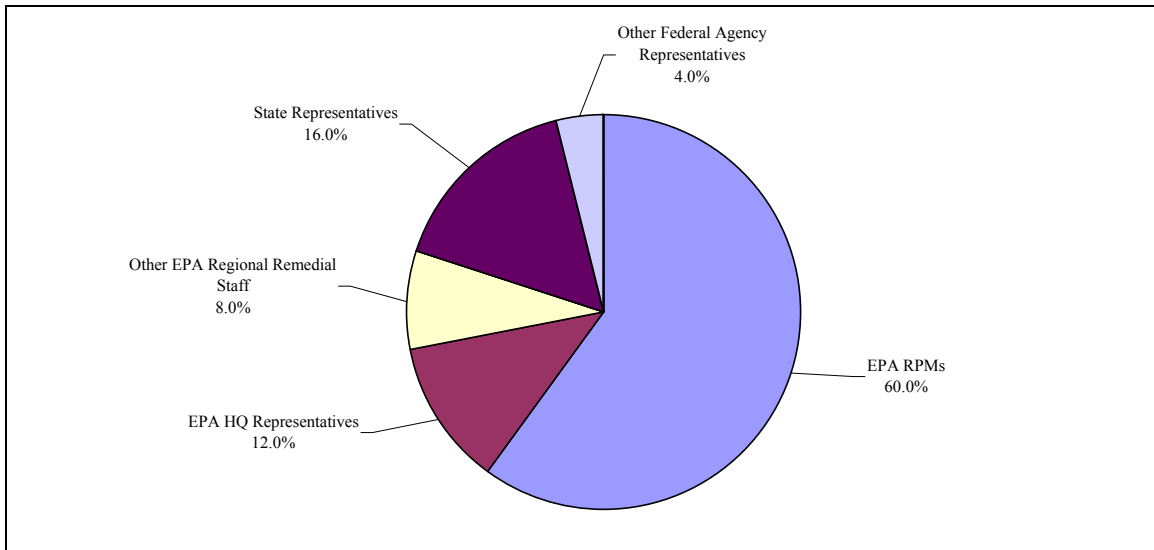
\* The grade displayed is the average of the grades selected on the evaluation forms based on a 4-point scale where A = 4 points, B = 3 points, C = 2 points, D = 1 point, and F = 0 points. The average letter grade is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4, which results in an average grade of "A").

**Summary of Evaluation Results for the Mining Paper Discussion**



The pie chart below illustrates the percentages of students for the paper discussion by job title. EPA RPMs and other EPA regional Remedial support staff represented over 65 percent of the students. One TSP member attended this session.

**Participants by Job Title for the Mining Paper Discussion**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

**Comments on appropriateness for the level of experience**

- Presenters were superb.

**Comments on organization of the discussion**

- The first speaker may have taken too much of the time creating a time management issue for the other speakers.

**Comments on relevance of case studies or examples to the content of the discussion**

- Mike Wireman did a very good job on the technical issues. However, the first two speakers went on slight tangents that weren't necessary. They did not stick to the technical issues.

**Comments on balance of lecture material, visual aids, case studies or examples, and discussion time**

- One handout received. Missing two handouts for the three presentations.
- Not enough discussion time due to great amount of information presented.
- No question and answer period because the speakers took too long.

**Comments on handout materials**

- It would have been better to have Mike Wireman's slides than this paper.
- No handouts for two of the presentations. (*Three responses*)

**Comments on relevance of the issues discussed to job responsibilities**

- Issues presented were highly relevant, but the discussion was severely limited.

**Comments on offering of the topic at future training conferences**

- There are plenty of mines and with 40 people in the course there is interest!

**Comments on recommending the discussion to colleagues**

- I look forward to seeing the wonderful post NARPM follow up.

**Comments on expectations for the discussion**

- Accurate description of session.

**Comments on topics or concepts that should be shortened**

- Technical detail about sites should be shortened and emphasis on conclusions and how it can relate to other sites.

**Comments on topics or concepts that should be lengthened**

- Discussion time.
- All should be lengthened and the session must be longer. There was too much information, it was too complex, and there needed to be more question and answer time.

**Comments on topics or concepts that should be added**

- Handouts for last two presentations.
- Discussion of emergency mining issues.

**Comments on the instructor or presenter**

- Last presenter could use more summary and less detail.
- Outstanding presentations!
- Good. (*Two responses*)
- Very impressive pool of knowledge represented by all of the presenters.

**Additional comments**

- Pace of discussion overall was good, but it ran over.
- Not enough time for my questions or discussion.

## Sediment Paper Discussion

Moderator: Ravi Sanga, EPA Region 10

Presenters: Dave Dickerson, EPA Region 1  
Humberto Guzman, EPA Region 4  
Lynda Priddy, EPA Region 10

The paper discussion consisted of three presentations:

- The Dredging to Clean Sediment at Two Superfund Shipyards presentation discussed the dredging activities that occurred at the Lockheed Shipyard Sediments Operable Unit (LSSOU) and Todd Shipyard Sediments Operable Unit (TSSOU). Both operable units are part of the Harbor Island Superfund Site in Seattle, Washington. Construction of both shipyards started in the 1920s. Shipbuilding and ship maintenance activities at the shipyards have resulted in the direct disposal of waste into sediments adjacent to the shipyard. Much of the waste is believed to have originated from sandblasting, which is a process used to remove paint and paint preparations containing copper, lead, mercury, tributyltin, and zinc. Other contaminants of concern released from the shipyards include arsenic, polychlorinated biphenyls (PCBs), and polycyclic aromatic hydrocarbons (PAHs). Large amounts of debris from almost a century of shipbuilding and maintenance exists throughout the sediment column.

The remedy for both shipyards called for dredging to specified cleanup numbers, removal of debris, pier demolition, and enhancement of the intertidal habitat. Dredging at LSSOU was very problematic for the first dredging season due to extensive amounts of debris, resulting in increased extent and magnitude of the contamination. However, a different dredging approach was used at TSSOU due to the lessons learned at LSSOU. As a result, over 35 acres were dredged at TSSOU to achieve cleanup levels. The approach was adopted at LSSOU and achieved cleanup levels during their second season of dredging. The presentation will discuss characteristics of these two OUs that ultimately led to successful dredging, the problems associated with dredging to “clean” contaminated sediments and methods to overcome them, and finally, contracting approaches that support successful field construction activities.

- The Enhanced Sedimentation Project for Mercury Contaminated Sediments at Olin Corporation McIntosh Plant presentation discussed the remedial alternatives selected for operable unit 2 at the Olin Corporation McIntosh Plant. From 1952 until 1982, the Olin Corporation McIntosh Plant in McIntosh, Alabama produced chlorinated organic pesticides, chlorine, caustic soda, and sodium hypochlorite onsite. Presently, Olin produces chlorine, caustic soda, sodium hypochlorite, and blends and stores hydrazine compounds at the site. Past wastewater discharges containing mercury resulted in contamination in a discharge channel (wastewater ditch) and floodplain areas including a basin adjacent to the Tombigbee River. The wastewater ditch, the floodplain areas, and the basin are included in Operable Unit 2 (OU-2).

OU-2 consists of a 220-acre floodplain, including the wastewater ditch (approximately 3,000 linear feet) and a basin (approximately 76 acres). Mercury, dichlorodiphenyltrichloroethane (DDT), and hexachlorobenzene (HCB) are present in sediments, surface water, and aquatic animals (fish and benthic invertebrates) in OU-2. A Remedial Action at OU-2 is necessary to reduce the ecological risks.

The 1996 Feasibility Study Report for OU-2 lists 8 remedial alternatives for the basin and 6 remedial alternatives for the wastewater ditch at the Olin OU-2 site. Proposed costs for these remedial alternatives range from \$0 to \$20 million. The \$20 million alternative cost estimate covered the dredging and disposal of mercury contaminated sediments at levels of 50 mg/kg (parts per million) and higher. Only 25 percent of OU-2 would be dredged.

Another alternative, Enhanced Sedimentation, was proposed by Olin in 2003. The theory behind this alternative is that natural sedimentation can be enhanced by building an earthen berm around the majority of OU-2. The earthen berm will hold water within OU-2 for a length of time, thus allowing suspended sediments to drop evenly across the site and form a natural cap for the contaminated sediments. Natural sedimentation occurs when the Tombigbee River floods its banks and carries fine grained (silt and clay) sediments into OU-2. EPA has planned a pilot project to test this theory.

- The 2005 New Bedford Harbor (free) Pilot Underwater Capping Study presentation will describe the creation of the Confined Aquatic Disposal (CAD) cell that provided the clean cap material, the physical, chemical and biological characteristics of the capped site; and the challenges of placing the cap in shallow water. It will also describe the evaluative monitoring performed to date and plans for future monitoring.

A 1998 Record of Decision (ROD) for New Bedford Harbor calls for the removal of approximately 900,000 cubic yards of highly PCB-contaminated sediment in the upper and lower harbor. Fullscale dredging, dewatering and offsite disposal began in 2004, and, together with earlier accelerated cleanups, approximately 100,000 cubic yards have been addressed to date. Three upper harbor confined disposal facilities (CDFs) may also be used in addition to offsite disposal. A 1979 state fishing ban covering 18,000 acres with PCB-contaminated seafood remains in effect until the harbor cleanup is complete.

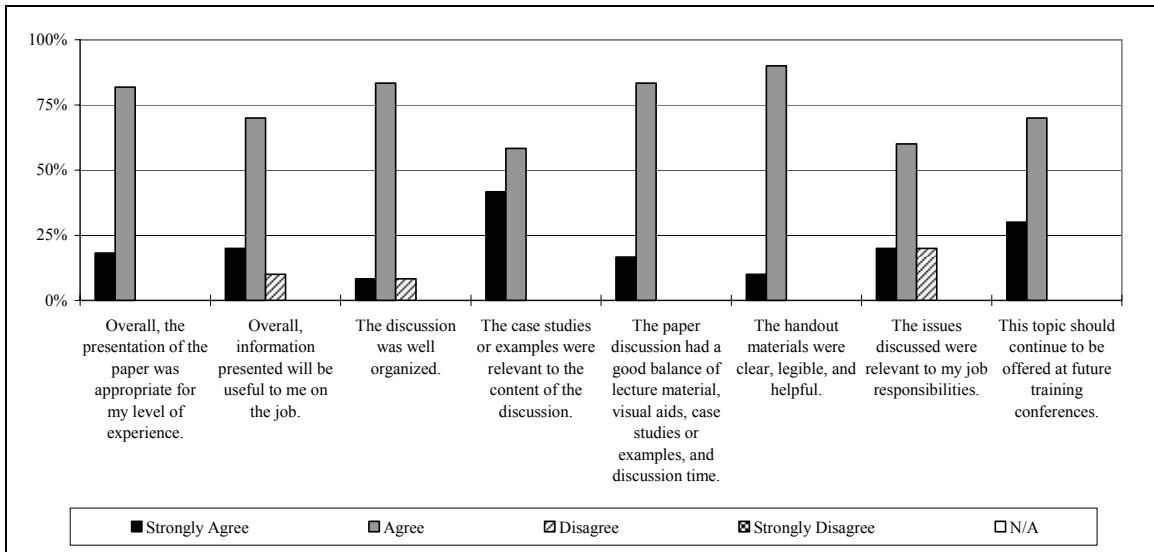
In 2005, 19 acres of polychlorinated biphenyl (PCB)-contaminated sediment in New Bedford's outer harbor were capped with 84,000 cubic yards of clean sandy material from an inner harbor navigational CAD (confined aquatic disposal) cell. Rather than disposing of the clean CAD material offshore, which had been approved, EPA collaborated closely with the port to make use of the clean material locally as part of the pilot capping study. The port agreed to pay for the engineering and placement of the cap material, provided such costs were not greater than that required for offshore disposal. As a result, EPA funding was not required to place the cap, and the remediation of the PCB-contaminated area was accelerated by many years.

#### Participation and Average Grade

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
37	26	12	B*

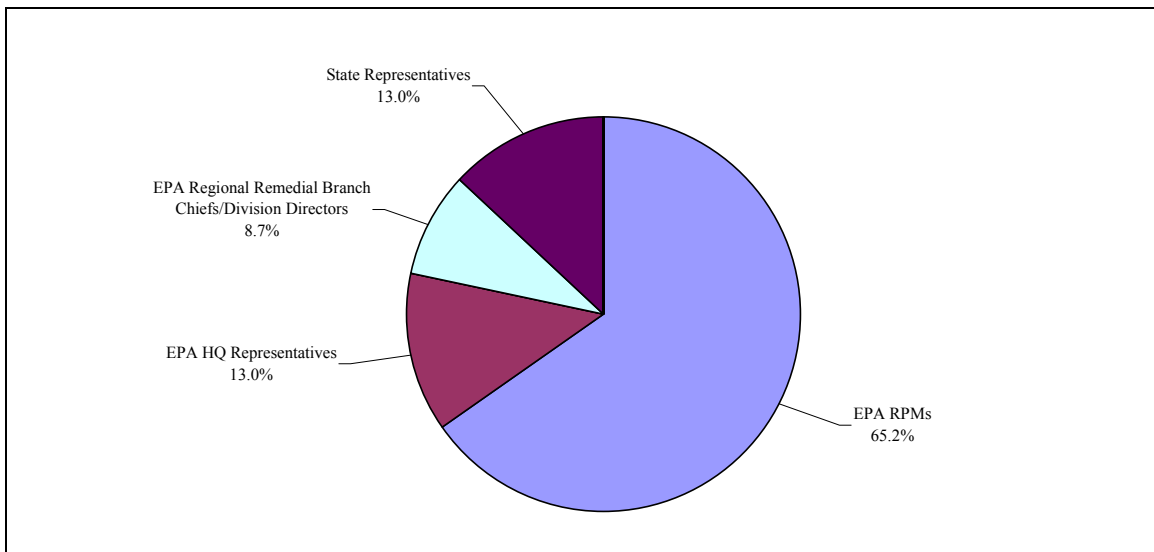
\* The grade displayed is the average of the grades selected on the evaluation forms based on a 4-point scale where A = 4 points, B = 3 points, C = 2 points, D = 1 point, and F = 0 points. The average letter grade is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4, which results in an average grade of "A").

**Summary of Evaluation Results for the Sediment Paper Discussion**



The pie chart below illustrates the percentages of students for the paper discussion by job title. EPA RPMs represented over 65 percent of the students. A total of 2 TSP members attended this session.

**Participants by Job Title for the Sediment Paper Discussion**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

**Comments on relevance to job responsibilities**

- Need more site specific results.

**Comments on organization of the discussion**

- Speakers didn't seem prepared.

**Comments on relevance of case studies or examples to the content of the discussion**

- Good mix of topics and variety. All were sediment related but different aspects and remedy options were discussed.

**Comments on balance of lecture material, visual aids, case studies or examples, and discussion time**

- Some of the lecturers had some minor issues with the equipment. Maybe get a more user friendly system.

**Comments on handout materials**

- Needed more New Bedford copies.
- Could not read paper number three.

**Comments on recommending the discussion to colleagues**

- The speakers were slow, the discussion was after lunch, and there was not enough detail.

**Comments on expectations for the discussion**

- Good case study of sediment remedies.

**Comments on topics or concepts that should be lengthened**

- Air and or water monitoring during remediation.
- CAD cells.

**Comments on the instructor or presenter**

- Speakers did not seem prepared.
- Good upfront manner of discussion of projects.

**Additional comments**

- More site hydrological background; pre- and post-chemical and biological compliance; more monitoring results.

## Soil Paper Discussion

Moderator: Maria Pino, EPA Region 3

Presenters: John Bing-Canar, EPA Region 5  
Brad Bradley, EPA Region 5  
Lynda Deschambault, EPA Region 9  
Jena Sleboda Braun, EPA Region 5

The paper discussion consisted of three presentations:

- The Innovations and Lessons Learned at the NL Industries Site in Granite City, Illinois presentation discussed a former secondary lead smelter that released lead to the environment through stack emissions, crushed hard rubber battery case material that was given away as fill, and fugitive emissions from a 250,000 ton slag pile. The cleanup ultimately addressed 1600 residential yards and cost approximately \$60,000,000.

The audience was presented with some innovative approaches and technologies that were used at the site, as well as several lessons learned.

### Innovations

- Supplemental Environmental Project
- Superfund Job Training Institute
- HEPA street sweeping

### Lessons learned

- Soil sampling
- Interior HEPA vacuuming access problems
- Paint

- The In-House Characterization of the Jacobsville Neighborhood Soil Contamination Site presentation provided an overview of the project, cost savings, data analysis, and software used at the Jacobsville Neighborhood Soil Contamination Site. The Jacobsville Neighborhood Contamination Site is a National Priorities List (NPL) site in Southern Indiana that has historical, air-deposited lead contaminated soils. The site has no viable potentially responsible parties (PRP). Using the Handbook and EPA-owned equipment, the Region 5 RPM and technical support staff (Fully Integrated Environmental Location Decision Support [FIELDS] group) were able to create the site characterization sampling designs and perform the site characterization sampling entirely in-house. This resulted in significant cost savings for Region 5.

The sample design was created using the FIELDS Software, which was developed in Region 5. Sampling designs were a random grid design, with each successive sampling event defining the extent of contamination more thoroughly. Region 5 personnel used two regionally-owned Niton model portable X-Ray Fluorescence (XRF) units to take in-field concentrations, and sent 20 percent of the samples to the EPA Central Regional Laboratory for confirmation (e.g., calibration regression). Sampling priorities were adjusted in the field (dynamic decision-making) by using the FIELDS' Risk Assessment Tool (RAT) software that can collect and combine XRF and Global Positioning System (GPS) readings in real-time and display these results on the laptop screen.

- The Field Sampling and Analysis: Split sampling plans, Quality Assurance/Quality Control (QA/QC) oversight, Tentatively Identified Compounds (TIC) and What To Do With All the Data? presentation provided a brief discussion of initial design of a sampling plan that includes a duplicate sampling strategy component. The need for incorporating this important element into the remedial investigation (RI) phase will be discussed. The presentation included a review of the split sampling data, including what it means, how it can be used, statistics that should be considered, acceptance criteria that should be used, and additional sampling needs that might still be required. The RI performed at the Casmalia Superfund Site in California was a case study example. This project required sampling of more than 2,700 site locations for more than 600

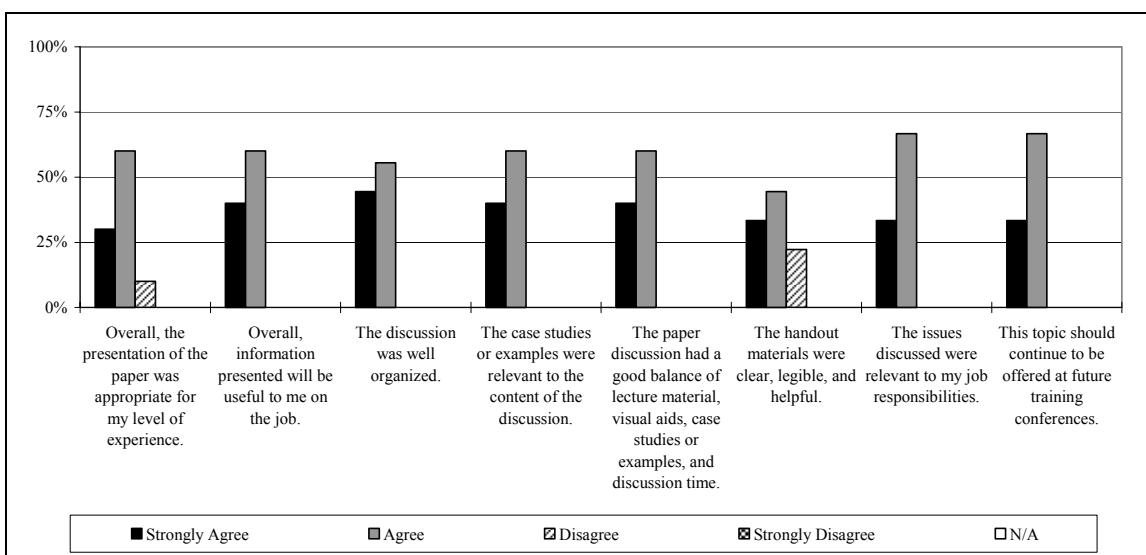
chemicals of concern. It was critical to ensure that QA/QC oversight and a split sampling procedure was in place at this PRP-lead site. This case study served as a basis for discussion of oversight factors that apply to investigations at other Superfund sites. Special consideration for how to handle TICs was also included in the discussion.

### Participation and Average Grade

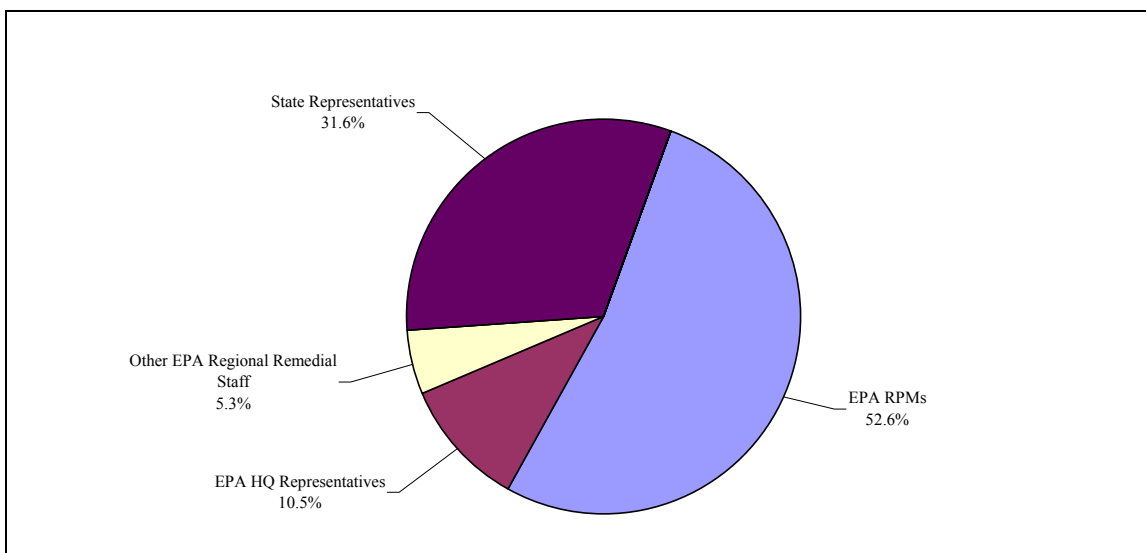
No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
27	21	10	A*

\* The grade displayed is the average of the grades selected on the evaluation forms based on a 4-point scale where A = 4 points, B = 3 points, C = 2 points, D = 1 point, and F = 0 points. The average letter grade is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4, which results in an average grade of "A").

### Summary of Evaluation Results for the Soil Paper Discussion



The pie chart below illustrates the percentages of students for the paper discussion by job title. EPA RPMs and other EPA regional Remedial support staff represented nearly 60 percent of the students. One TSP member attended this session.

**Participants by Job Title for the Soil Paper Discussion**

Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

**Comments on appropriateness for the level of experience**

- Improve the caliber of papers. Recommend speakers attend Toast Masters which includes lessons in detection level, ranges, exceedances, and depth variation.

**Comments on balance of lecture material, visual aids, case studies or examples, and discussion time**

- Increase technical information.

**Comments on handout materials**

- Brad Bradley did not provide handouts; some of the Jacobsville site slides were hard to read.
- Some graphs were too small to read.

**Comments on expectations for the discussion**

- It was about soils.

**Additional comments**

- Two papers were very good; two presenters were soft. Comments apply to the two soft papers.
- More discussion, less slides.

## Triad Case Studies Paper Discussion

Moderator: Matthew Jefferson, EPA Region 9

Presenters: John Lucey, EPA Region 9  
 Kira Lynch, U.S. Army Corps of Engineers  
 Daniel Powell, OSRTI

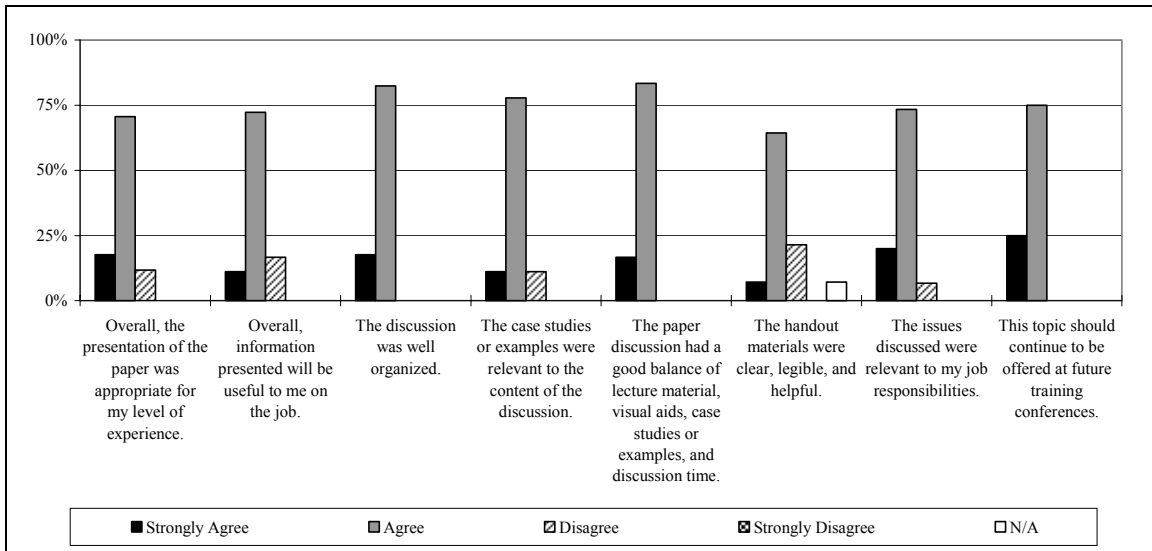
The paper discussion discussed lessons learned and tips for using the Triad approach for site cleanups. The Triad approach was developed by EPA and other federal partners to improve the quality of cleanup projects while simultaneously decreasing time and cost to site reuse. The panel discussed how the Triad cleanup approach was successfully used at March Air Force Base in Riverside, California to characterize site contamination and how the Triad approach is now being used to expedite Record of Decision remedy selection.

### Participation and Average Grade

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
44	37	19	B*

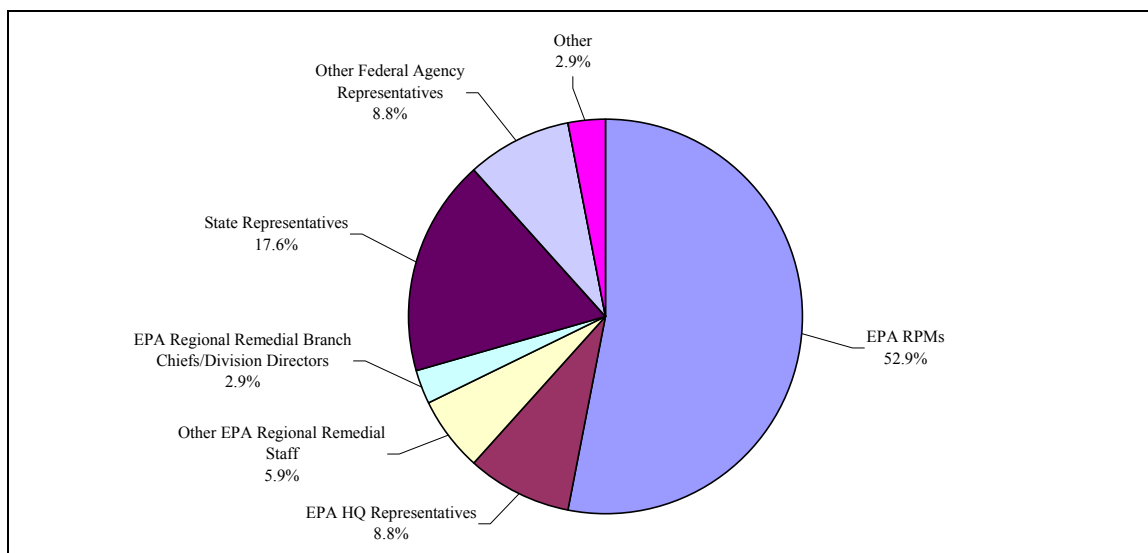
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### Summary of Evaluation Results for the Triad Case Studies Paper Discussion



The pie chart below illustrates the percentages of students for the paper discussion by job title. EPA RPMs and other EPA regional Remedial support staff represented over 55 percent of the students. One TSP member attended this session.

### Participants by Job Title for the Triad Case Studies Paper Discussion



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

#### Comments on appropriateness for the level of experience

- Needed the basics.
- This was my first presentation on Triad and this presentation assumed I had already taken Triad.
- Second speaker was a bit disorganized and could not get through the entire presentation before time ran out.

#### Comments on relevance to job responsibilities

- The site is too big and complex to use triad (large mining site).
- At this point I do not know.
- Moderately.

#### Comments on organization of the discussion

- This could have been improved.

#### Comments on relevance of case studies or examples to the content of the discussion

- Difficult to see the relationship of case study based on overview.
- John Lucey's was very different, but drove home importance of upfront meetings.

#### Comments on balance of lecture material, visual aids, case studies or examples, and discussion time

- More of a discussion format would have helped. At least more time for Q&A.
- Intro was too long. More case studies needed. Less about history of Triad.

#### Comments on handout materials

- Needed handouts for case studies. (*Five responses*)
- Please let us know when information will be available on the Web.

**Comments on relevance of the issues discussed to job responsibilities**

- Site was too big.

**Comments on offering of the topic at future training conferences**

- With updates.
- Either a four hour training built around Kira Lynch's presentation or a three RPM paper should be done.

**Comments on recommending the discussion to colleagues**

- Only a colleague with a good understanding of what Triad means.
- Perhaps.

**Comments on expectations for the discussion**

- More case studies are needed.
- Good overview and site-specific examples.
- I thought the course would cover the basics.

**Comments on topics or concepts that should be shortened**

- Intro about Triad.

**Comments on topics or concepts that should be lengthened**

- The case studies could definitely have been lengthened. (*Two responses*)

**Comments on topics or concepts that should be omitted**

- More time was not available for discussion.

**Comments on topics or concepts that should be added**

- What about applicability to PRP-lead sites?

**Comments on the instructor or presenter**

- Kira Lynch was great.
- Would have liked to hear more real-world examples. Kira Lynch provided examples but not the other presenters.
- Facilitators and or presenters were great!
- Good.

**Additional comments**

- Strongest point was where to find tools to help visualize CSM.
- It would have been great to get the actual definition of Triad. Did not understand the relationship of case study to actual Triad approach.
- A session on dynamic contracts would be useful.
- Maybe add a section and or class on what Triad is and more specifically how it works for people new to Triad. This class is good as a more advanced class.
- Good facilitation and good panel.
- For Dan Powell's presentation: for Triad sites listed, please indicate when Triad was applied (PA/SI, RI/FS, RD/RA, PCC, etc.).

## Applying the New Cancer Guidelines Information Session

Presenters: Stiven Foster, EPA OSWER  
Michael Torres, EPA Region 6

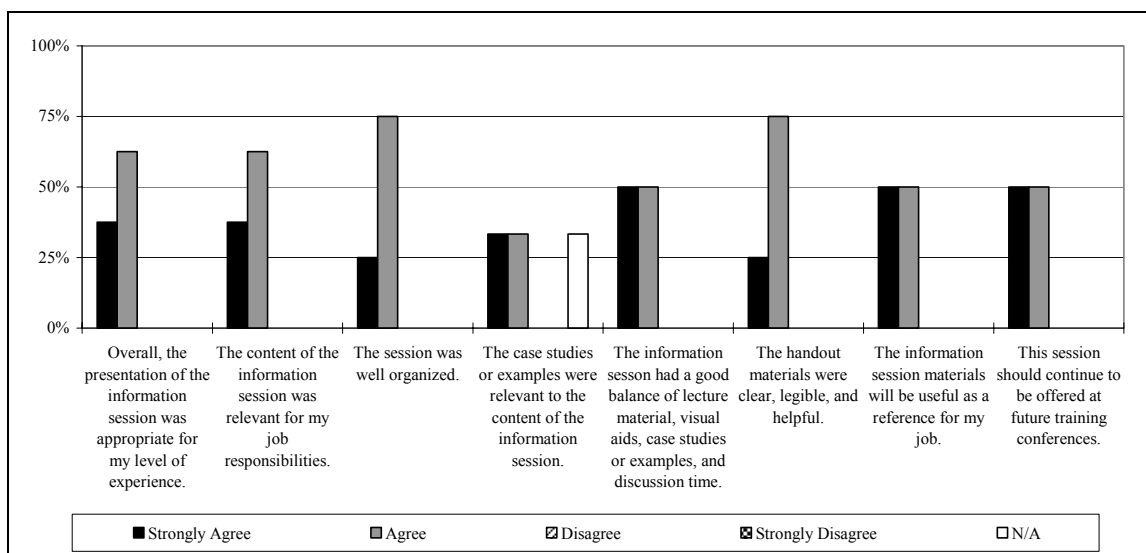
This information session addressed the new cancer guidelines and supplemental guidance for assessing risk at waste sites. In 2005, EPA released the Guidelines for Carcinogen Risk Assessment (“Cancer Guidelines”) and Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens (“Supplemental Guidance”). The Supplemental Guidance is part of EPA’s response to the recommendation by the National Research Council that “EPA should assess risks to infants and children whenever it appears that their risks might be greater than those of adults.” For several potential carcinogens, there is evidence of higher cancer risks following early-life exposure. Addressing the susceptibility of early-life exposures in risk characterization provides important information for risk managers to consider when determining the need for action. Participants reviewed the handbook, developed by the Office of Solid Waste and Emergency Response in conjunction with the regions. The handbook includes spreadsheets, questions and answers, and other tools for applying the Cancer Guidelines and Supplemental Guidance at waste sites.

### Participation and Average Grade

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
24	20	8	A*

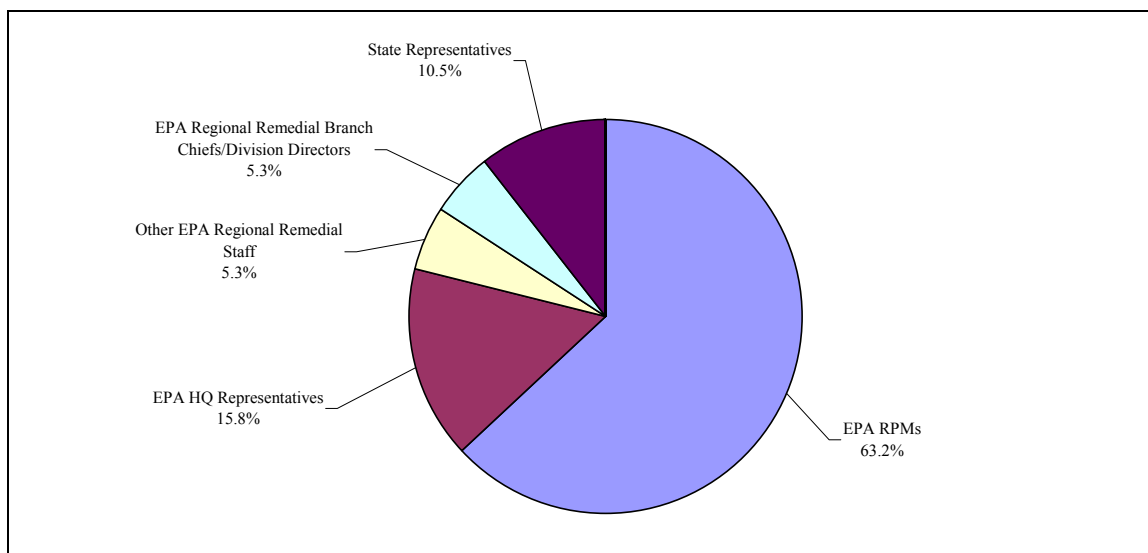
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### Summary of Evaluation Results for the Applying the New Cancer Guidelines Information Session



The pie chart below illustrates the percentages of students for the information session by job title. EPA RPMs and other EPA regional Remedial support staff represented nearly 70 percent of the students. A total of 2 TSP members attended this session.

### Participants by Job Title for the Applying the New Cancer Guidelines Information Session



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

#### Comments on appropriateness for the level of experience

- Too fast. Slow down the presentation so that students can take notes, or provide copies of slides.

#### Comments on handout materials

- Limited handouts; only one fact sheet.

#### Comments on offering of the information session at future training conferences

- Yes, but with more detailed information.

#### Comments on expectations for the information session

- Yes and no. A decision tree was not provided to assist in the use of the new guidelines.

#### Comments on topics or concepts that should be added

- What will be required of the regions to implement this data?
- Go through the example calculation in more detail to explain the impact of new guidelines on risk calculations.
- Broaden presentation to discuss other risk issues of interest to RPMs. Some topics were raised by audience questions.

#### Comments on the instructor or presenter

- Good. Lecture was a little fast, too hard to take notes.

#### Additional comments

- Go through example calculation in more detail to explain the impact of new guidelines on risk calculations. Broaden presentation to discuss other risk issues of interest to RPMs. Topics were raised by audience questions.
- Please include an example of how this can be applied to an action/no action Superfund risk based site decision.

## Federal Facilities Information Session

Presenters: Mike Carter, FFRRO  
 Lester Maurer, U.S. Army Corps of Engineers  
 Monica McEaddy, FFRRO  
 Jim Woolford, FFRRO

This information session addressed a number of new initiatives underway in the Federal Facility Program. The session met the following objectives:

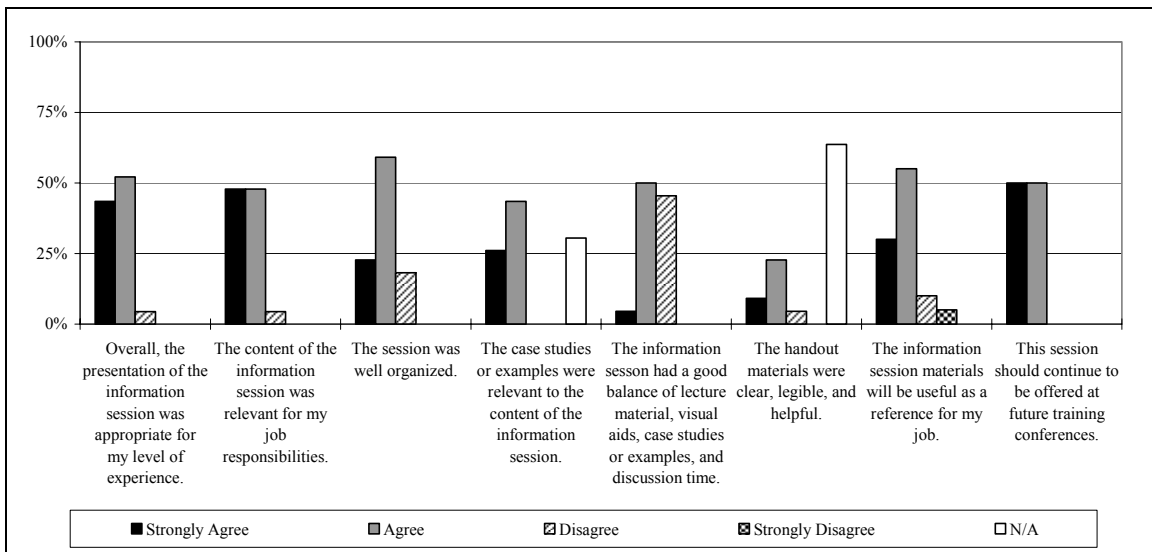
- Provided an update regarding the Munitions Hazard Assessment project which EPA is currently working on with other federal agencies; the presentation included information contained in the recently issued Unexploded Ordnance (UXO) Guidance.
- Provided an update on the Military Munitions Response Program.
- Discussed the new electronic Streamlined Record of Decision process from RPMs who are piloting it at their sites.
- Provided insights into current activities and issues ongoing in the Federal Facilities Restoration and Reuse Office (FFRRO), including relevant updates on perchlorate, the status of the workgroup addressing Federal facility issues under the One Cleanup Program, and an update on Base Realignment and Closure (BRAC) 2005.
- Updated participants on and discuss the Performance-Based Contracting (PBC) guidance prepared by FFRRO.

### Participation and Average Grade

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
45	38	23	B*

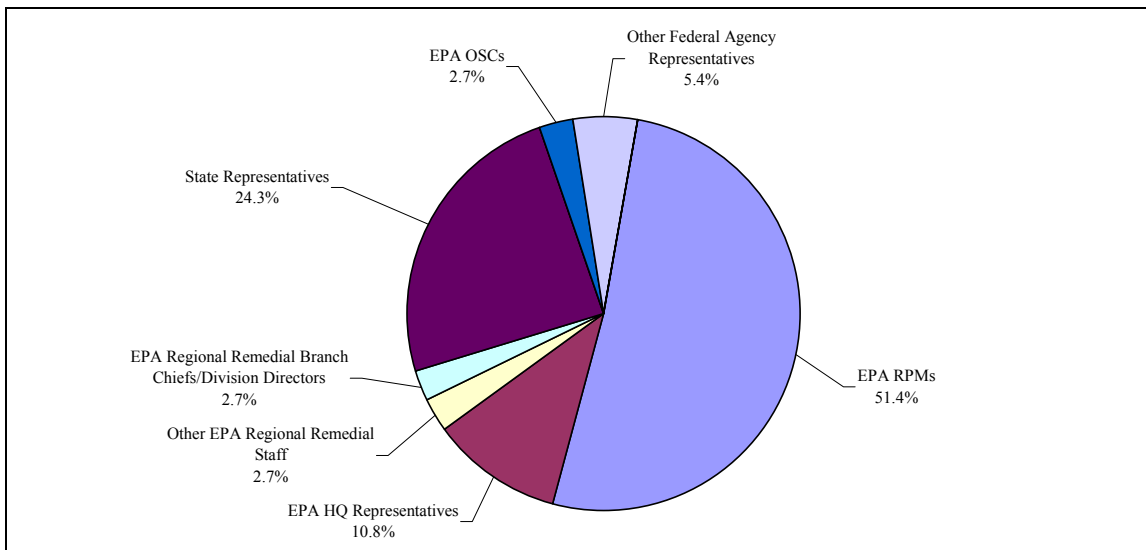
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### Summary of Evaluation Results for the Federal Facilities Information Session



The pie chart below illustrates the percentages of students for the information session by job title. EPA RPMs and other EPA regional Remedial support staff represented over 50 percent of the students. A total of 3 TSP members attended this session.

**Participants by Job Title for the Federal Facilities Information Session**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

#### **Comments on relevance to job responsibilities**

- Good discussion of contract issues!
- Could have been more interesting; not all topics were covered (e.g., MHA project); not enough detail.

#### **Comments on organization of the information session**

- Not all topics covered.
- We need to get the topics list out earlier!
- Seems somewhat haphazard.

#### **Comments on balance of lecture material, visual aids, case studies or examples, and discussion time**

- Hard to follow.
- No visual aids; would have been helpful.
- Very little prepared materials.
- Few visual aids; no concrete case studies.
- Should have talked more about non-DoD facilities.

#### **Comments on handout materials**

- Copies of presentation would have been helpful and USACE panel member should have had something.
- Got handouts after panel discussion.

**Comments on usefulness of information session materials as a reference**

- Would have been helpful to have handouts with Web site information.
- Good update on issues being worked on.
- Not much really because it was hard to follow some discussions.
- Will look at handouts later.

**Comments on offering of the information session at future training conferences**

- Good to identify the “hot” issues to be further researched in other sessions.
- Issues change each year and we learn from discussions.
- With better material.

**Comments on recommending the information session to colleagues**

- Only Federal Facility RPMs.
- If they deal with other Federal Agencies.

**Comments on expectations for the information session**

- Would have been good to hear more agency directives.
- Federal facility issues change!
- It relates to my job.
- Too short, not enough policy issues covered in detail.
- PBCs need further clarification and discussion. USACE role versus EPA and what to do to correct problems with PBC.
- Somewhat; focus on two topics that could have been better identified.
- Added more on PBCs.
- Information on topics effecting EPA work with and/or contaminated Federal property.

**Comments on topics or concepts that should be shortened**

- Audience questions and discussion did not allow all speakers enough time to present their topics.

**Comments on topics or concepts that should be lengthened**

- BRAC funding.
- MMRP myths and unknowns persist between Agencies.
- PBCs. (*Two responses*)
- Contracts.

**Comments on topics or concepts that should be omitted**

- USACE.

**Comments on topics or concepts that should be added**

- Other facilities that are not DoD.
- Principles on dealing with DoD.
- USAF using the buyer to do the investigation on USAF property that need a Finding Of Suitability for Early Transfer (FOSET) and the politics.
- The EPA role in transferred sites with waste in place. Record of Decisions (RODs), Land Use Control (LUC), and long term monitoring plans are all nightmares.
- Non-NPL FOSETs.

**Comments on the instructor or presenter**

- Could not hear the USACE presenter. (*Four responses*)
- All presenters were well spoken.
- USACE panelist should have stood.
- Jim Woolford did a good job of explaining topics and answering the audience's questions.

**Additional comments**

- Very responsive to current issues.
- Have a microphone for instructors.
- Get the four design centers at USACE on one page and engaged within HQ USACE.
- Excellent and relevant discussion.

## Financial Assurance Information Session

Presenters: Sheri Bianchin, EPA Region 5  
 Larry Zaragoza, EPA OSRTI

This information session addressed efforts to assess and analyze information on financial assurance, a topic which has become an increasing interest to the General Accountability Office (GAO), the Inspector General (IG), and Capitol Hill. The 120-day study prepared by EPA calls for the evaluation of facilities currently covered by financial assurance. The study also calls for EPA to assess whether financial assurance should be expanded to other facilities. This work is closely coordinated with other ongoing efforts to review the effectiveness of existing financial assurance for RCRA and financial assurance that is a part of settlement agreements. The session met the following objectives:

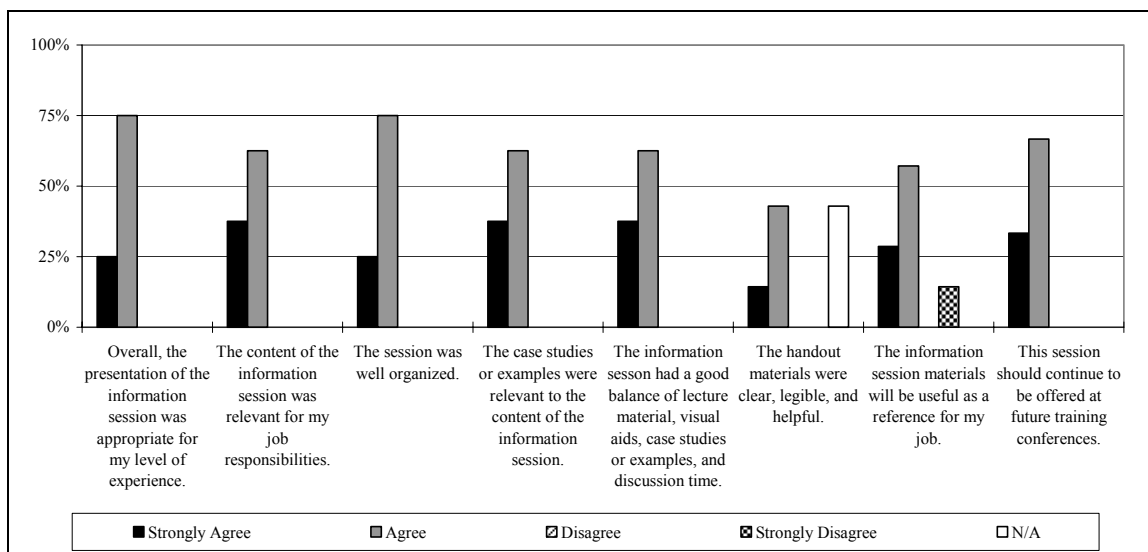
- Summarized results of analyses undertaken by EPA and states on the subject of financial assurance.
- Outlined ongoing analysis efforts that will require collecting information and that also may include asking regions and probably states to help assemble information.
- Summarized why financial assurance is an area of increasing emphasis.
- Provided an opportunity for participants to help shape efforts in financial assurance for Superfund.

### Participation and Average Grade

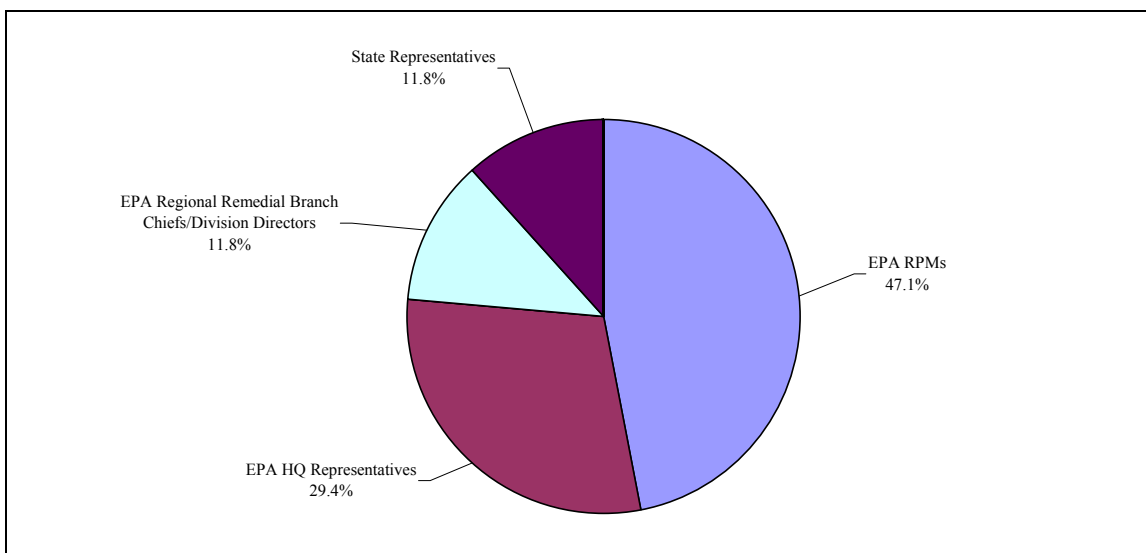
No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
25	18	8	A*

\* The grade displayed is the average of the grades selected on the evaluation forms based on a 4-point scale where A = 4 points, B = 3 points, C = 2 points, D = 1 point, and F = 0 points. The average letter grade is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4, which results in an average grade of "A").

### Summary of Evaluation Results for the Financial Assurance Information Session



The pie chart below illustrates the percentages of students for the information session by job title. EPA RPMs represented nearly 50 percent of the students.

**Participants by Job Title for the Financial Assurance Information Session**

Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

**Comments on organization of the information session**

- Good use of group discussion.

**Comments on relevance of case studies or examples to the content of the information session**

- Interesting case study.

**Comments on handout materials**

- Give relevant materials of sites and where to obtain them.

**Comments on usefulness of information session materials as a reference**

- Materials were not provided.

**Comments on the instructor or presenter**

- Sheri Bianchin and Larry Zaragoza, both, did an excellent job presenting the course materials.

**Additional comments**

- Both presenters were very knowledgeable and kept the audience engaged.

## Ground Water Remedy Optimization Information Session

Presenters: Charnjit Bhullar, EPA Region 9  
Greg Fraley, EPA Region 4  
Jen Hovis, OSRTI

This information session addressed the process and benefits of remedy optimization and a relevant case study using in situ bioremediation. This session was of particular interest to RPMs who manage long-term response action projects as optimization reviews are essential in ensuring smooth transfer of projects to the states for operation and maintenance (O&M).

A pilot pump and treat (P&T) optimization initiative began in 2001, which encouraged systematic review and modification of Fund-lead P&T systems to promote continuous improvement and enhance overall remedy and cost effectiveness. In 2004, the Office of Superfund Remediation and Technology Innovation documented completion of this pilot by outlining a commitment to fully integrate optimization into the Superfund cleanup process (“Action Plan for Ground Water Remedy Optimization,” OSWER 9283.1-25). This information session was presented in two parts:

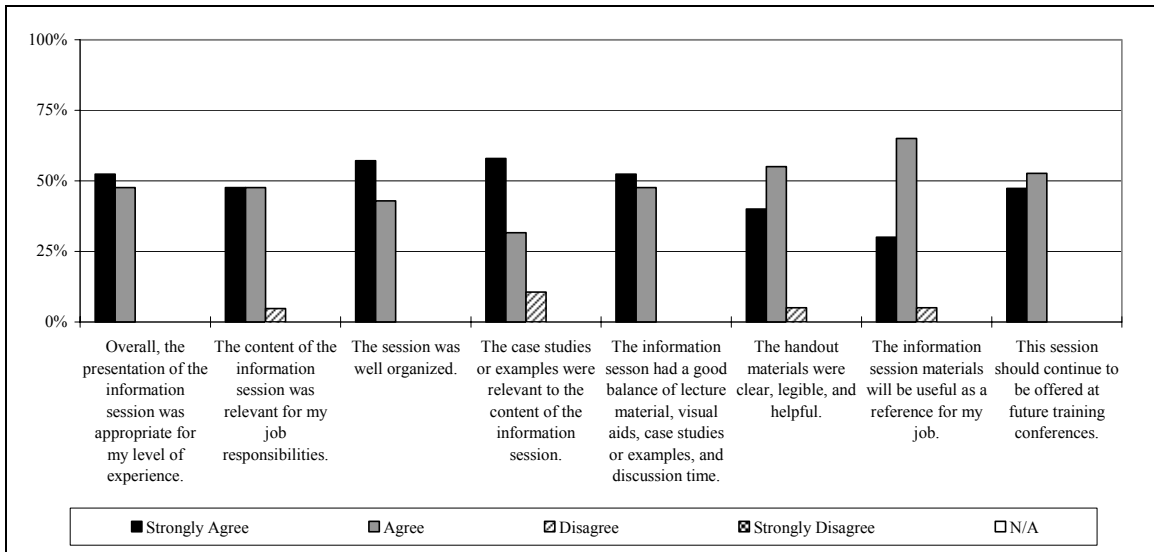
- The “Remedy Optimization in the Superfund Program” training overviewed the process and benefits of optimization and will identify when it may be appropriate for a particular site. RPMs will learn about their role and responsibilities in all phases of optimization, from site selection to the implementation of recommended system changes.
- A discussion of a case study of the highly successful in situ bioremediation effort at the Selma Treating Company site where the traditional P&T remedy was supplemented with molasses injection in order to address a source area of 80,000 parts per billion of chromium VI. It is expected that this effort will reduce the overall P&T period of operation by several decades and will potentially result in estimated savings of more than \$30 million.

### Participation and Average Grade

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
76	55	21	A*

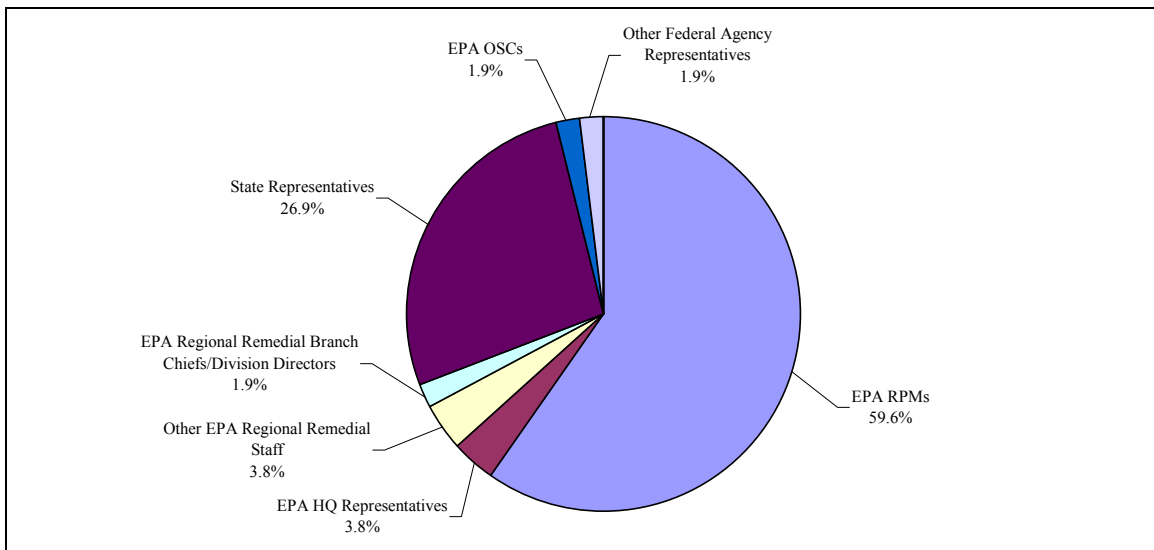
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**Summary of Evaluation Results for the Ground Water Remedy Optimization Information Session**



The pie chart below illustrates the percentages of students for the information session by job title. EPA RPMs and other EPA regional Remedial support staff represented over 60 percent of the students. A total of 3 TSP members attended this session.

**Participants by Job Title for the Ground Water Remedy Optimization Information Session**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

**Comments on relevance to job responsibilities**

- It was a good idea to demonstrate the source area reduction.

**Comments on relevance of case studies or examples to the content of the information session**

- Great graphics and very informative. They tell a story!
- The second speaker’s case study was very interesting.

- The case study should have given more detail on RSE costs and savings.
- Example should show better comparison of before and after optimization.

**Comments on balance of lecture material, visual aids, case studies or examples, and discussion time**

- Second speaker had an excellent slide presentation. Well Done!!
- The animated slides were excellent.

**Comments on handout materials**

- The handouts were not helpful.
- Color and graphs for some slides would have helped.

**Comments on usefulness of information session materials as a reference**

- A Federal facility can't use this optimization; the Navy and Army are doing their own.

**Comments on offering of the information session at future training conferences**

- If updated. (*Two responses*)
- Optimization success stories will encourage others to pursue this.
- More good case studies of source area reduction please!

**Comments on expectations for the information session**

- Did not want to hear a "story" about a site; wanted to hear about optimization (see slide number 14 of Jennifer Hovis's presentation). Abstract said the course would be "of particular interest to RPMs managing LTRA projects as optimization reviews are essential to smooth transfer ... to states for O&M" however, this was not discussed.

**Comments on topics or concepts that should be shortened**

- Case studies.

**Comments on topics or concepts that should be lengthened**

- New or change in policies (HQ and regional).

**Comments on topics or concepts that should be added**

- Optimization process; overall comments about how P&T fares compared to "newer" technologies.
- Exit strategy options for revising monitoring program.
- What factors may make your site a good candidate for changing methods.
- Theoretical issues and/or research items.
- Highlights of "Action Plan of GW Remedy Optimization."
- Examples of target versus actual capture zone, design versus actual influent concentration, and comparison of performance against objectives.

**Comments on the instructor or presenter**

- The example site was a good presentation and easy to understand.
- Good job!
- Instructor was very knowledgeable with case study, which is very helpful to understand in practical terms.
- Excellent speaker!! Ms. Hovis was very good during her presentation.

**Additional comments**

- The site presentation was very good. Jennifer Hovis had already done her presentation in Region 4 so it was repetitive.
- It seems the case study should have been in the ground water paper session. It did not tie in well to the RSE or the concept of optimization; very vague.
- The second speaker was an excellent speaker and excellent presentations!!

## Implications of the New Arsenic Maximum Contaminant Level (MCL) on Superfund Information Session

Presenters: Don Bahnke, EPA Region 7  
Jon Bornholm, EPA Region 4  
Dr. Wendell Ela, University of Arizona  
Vince Malott, EPA Region 6

This information session consisted of four presentations:

- The How Could the Revised Arsenic MCL Affect My Superfund Site? presentation discussed what RPMs should look for during each stage of the remedial process, from remedial investigations to five-year reviews. For example, how should background concentrations be considered at sites with an arsenic cleanup goal?
- The Using XRF presentation provided a number of case histories that highlight both the benefits and the limitations of using X-Ray Fluorescence analyzer (XRF). RPMs utilizing an XRF to assess arsenic concentrations in soils can face a number of quality assurance challenges. Portable XRF units yield semi-quantitative results with detection limits ranging from a few parts per million (ppm) to a few hundred ppm depending on the soil matrix and the presence of other interfering metals such as lead. Differences in data quality are also produced by the various types of XRF instruments as well as the operator's skill. A number of advantages for the use of an XRF include field portability, the absence of investigation-derived waste, rapid field analysis, and low costs. Arsenic hot spots can be located with XRF data and targeted for additional sampling. During soil excavations conducted under remedial or removal actions, the XRF instrument is an excellent screening tool to guide the cleanup provided the final cut lines are supported by higher quality laboratory data.  
The assessment of XRF data can present a challenge when the concentrations are below the detection level of the instrument. A large number of non-detects prevents the calculation of a meaningful correlation coefficient as required by standard quality assurance procedures. Concentrations far above background will occasionally be found in older urban environments. Analysis techniques are available to determine whether these sporadic hits have an industrial or consumer product origin, and can be useful when discussing occasional high hits to the public. Special considerations should be made before releasing XRF data to property owners when it cannot be correlated with lab data.
- The Compiling State Cleanup Standards for Arsenic and Addressing Related Issues presentation provided an interactive forum to discuss the following topics:
  - Ground water and soil cleanup standards for arsenic that have been developed by the states as potential ARARs to include addressing the basis for the standards; e.g. the risk level, exposure scenario, and background.
  - An update of the 1998 paper by the Association for Environmental Health and Soils, "Study of State Soil Arsenic Regulations," which provides new information from the 16 states previously not represented in the paper.
  - The supplement to the OSRTI arsenic survey of over 70 Superfund sites with additional information on the development of the cleanup standards.
- The Landfills and Arsenic: Potential for Groundwater Contamination presentation discussed the multifaceted issue of arsenic contamination of ground water induced by past and future landfill operations. Because the same set of biological and geochemical processes cause the release of arsenic from materials disposed in landfills and from subsurface soils contacted by leachate plumes from landfills, arsenic contamination can arise both from arsenic-bearing wastes in a

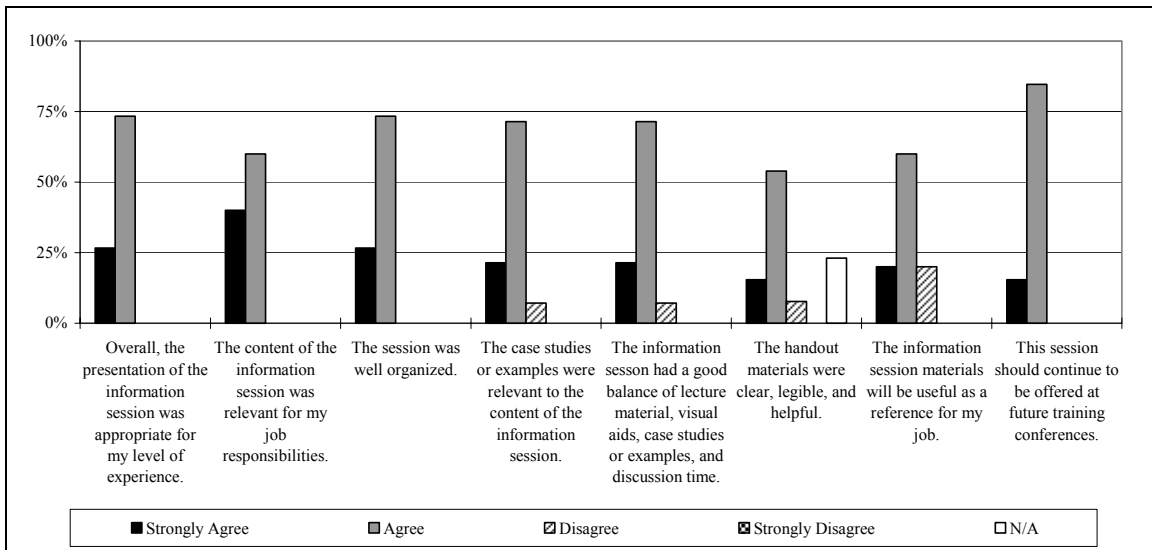
landfill as well as arsenic-bearing soils and minerals proximate to a landfill. The talk focused primarily on the potential for contamination caused by the projected landfill disposal of arsenic-bearing solid residuals (ABSR) from drinking water treatment, but will also indicate the commonality between this contamination threat and that from landfill-induced release of natural arsenic in soils. The new arsenic MCL will cause an estimated 30,000 pounds of arsenic (as As) to be removed annually from drinking water. The bulk of this arsenic will be associated with solid sorbents and precipitates that are destined for non-hazardous landfill disposal. The talk concluded with discussion of potential strategies for qualitatively predicting the likelihood of arsenic release and preventing or mitigating release where it is likely.

**Participation and Average Grade**

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
46	38	15	B*

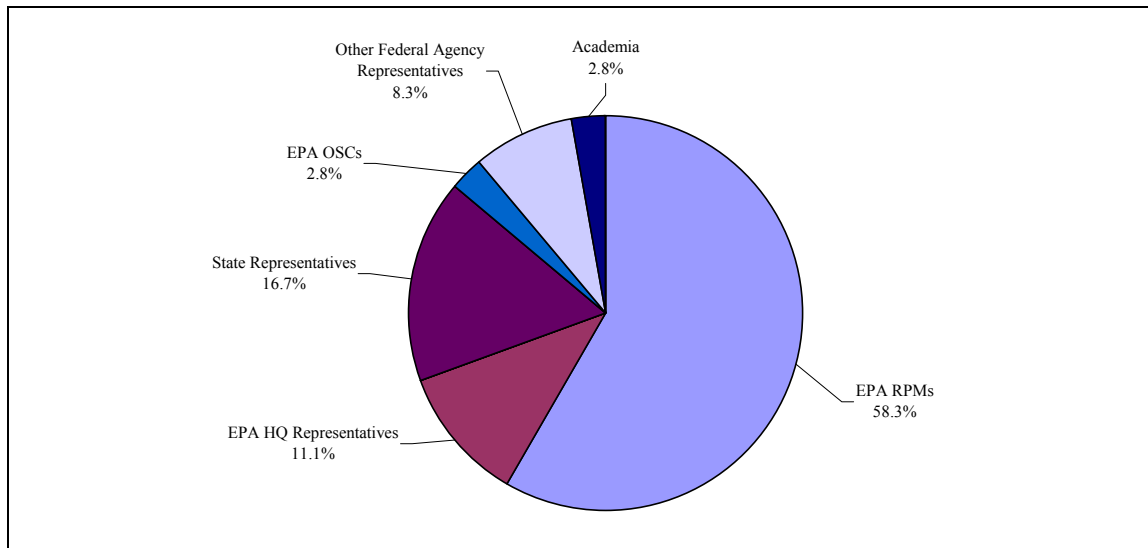
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**Summary of Evaluation Results for the Implications of the New Arsenic Maximum Contaminant Level (MCL) on Superfund Information Session**



The pie chart below illustrates the percentages of students for the information session by job title. EPA RPMs represented nearly 60 percent of the students.

### Participants by Job Title for the Implications of the New Arsenic Maximum Contaminant Level (MCL) on Superfund Information Session



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

#### Comments on organization of the information session

- Need handouts of presentation materials.

#### Comments on relevance of case studies or examples to the content of the information session

- Interesting, but did not address how new level will impact decisions.

#### Comments on balance of lecture material, visual aids, case studies or examples, and discussion time

- A lot of PowerPoint presentations.
- Please make slides available on NARPM Web page. Some slides were not legible; background too busy and white font didn't show up (*Two responses*).
- Don Bahnke (speaker) needs to improve the slides. Other than that, it was interesting.
- Need handouts of presentation materials.
- More audience interaction would have been useful.

#### Comments on handout materials

- Handouts of slides would have been nice.
- No handouts (fact sheet under development) for most.

#### Comments on usefulness of information session materials as a reference

- Only one handout (*Two responses*). I wish there were handouts for all the presentations. Are they on the NARPM Web site?

#### Comments on offering of the information session at future training conferences

- Need to provide handouts.
- May need to be tied to more specific site cleanup issues.

**Comments on recommending the information session to colleagues**

- Needs handouts and more information on the impact to decisions including Five-Year Reviews and ROD freezes cleanup goals now that there is a lower MCL.

**Comments on expectations for the information session**

- Expected more information regarding the impact on making decisions.

**Additional comments**

- Don Bahnke: Interesting theme on the slides. One slide (the “Bad” subtitle) had white letters over white background which was hard to see. Either explain or eliminate the “Metal vs. Metals” graph.

## National Hurricane Response Information Session

Presenters: Mary Aycock, EPA Region 9  
 Kim Hoang, EPA Region 9  
 Raji Josiam, EPA Region 6  
 Michael Torres, EPA Region 6  
 Debbie Vaughn-Wright, EPA Region 4

This information session addressed the crucial roles filled by RPMs during the recent hurricane response, lessons learned, preparedness for future incidents of national significance, and the status of the current response from the RPM perspective. The EPA Superfund program, as well as the entire Agency, has responded to the Hurricane Katrina cleanup in unprecedented numbers and ways. EPA was present in the early stages of the response and cleanup. Today, EPA continues to respond in both Louisiana and Mississippi. By attending this session, participants had the opportunity to discuss the following topics:

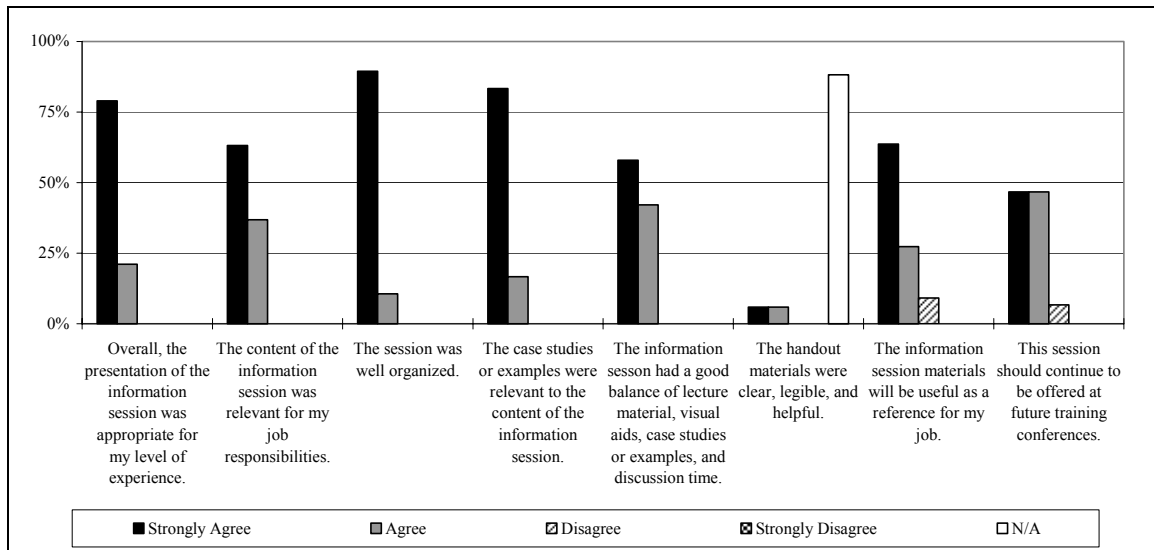
- Future training needs.
- The impact on the Superfund program and other programs throughout EPA.
- The roles RPMs filled during the hurricane response.
- The effects of the response on the RPM community.
- The RPM’s role in future incidents of national significance.

### Participation and Average Grade

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
55	50	19	A*

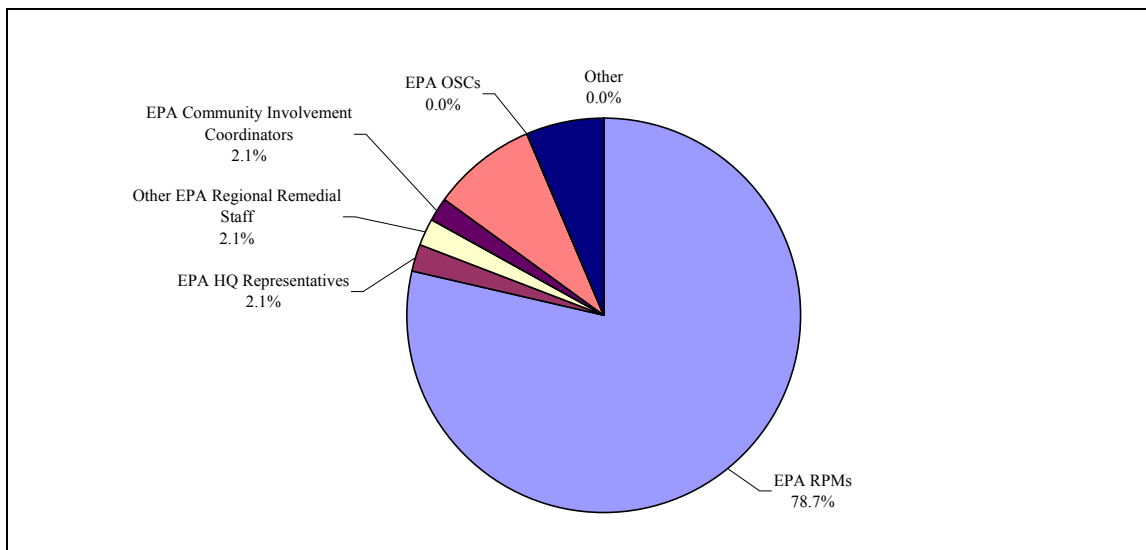
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### Summary of Evaluation Results for the National Hurricane Response Information Session



The pie chart below illustrates the percentages of students for the information session by job title. EPA RPMs and other EPA regional Remedial support staff represented over 80 percent of the students. A total of 4 TSP members attended this session.

**Participants by Job Title for the National Hurricane Response Information Session**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

**Comments on relevance to job responsibilities**

- Mike Torres presentation was especially relevant.

**Comments on relevance of case studies or examples to the content of the information session**

- Great work!

**Comments on offering of the information session at future training conferences**

- This or ICS-related training.
- If we have another Katrina response. (*Two responses*)
- Let's hope not needed!
- More natural disasters will provide lessons learned.
- One time wonder.
- An emergency response session would be helpful at future conferences.

**Comments on recommending the information session to colleagues**

- If we have another Katrina response.

**Comments on expectations for the information session**

- Needed more time because there was some overlap.
- Exceeded expectations.

**Comments on topics or concepts that should be lengthened**

- Make the session longer!

**Comments on the instructor or presenter**

- Good job. (*Two responses*)
- Best presentation attended at the conference. Thank you!
- The instructors did an outstanding job! I especially enjoyed Michael Torres's and Mary Aycock's presentations.
- Fantastic presentations!
- Good, short information session.

**Additional comments**

- Outstanding use of visual aids by each presenter!
- All presentations were well done and interesting! I appreciated the diversity of the panel members.

## Superfund Redevelopment Initiative Information Session

Presenters: Bill Denman, EPA Region 4  
 Melissa Friedland, OSRTI  
 Matthew Sander, OSRE  
 Kat West, EPA Region 4

This information session addressed the latest revisions to Superfund policies relative to redevelopment and a forum for discussion on the various tools and resources available to RPMs to enhance redevelopment efforts at their sites. A variety of redevelopment success stories from sites throughout the country were presented and discussed. The presenters provided a national, regional, programmatic, and legal perspective of reuse issues and will include time for questions from the attendees.

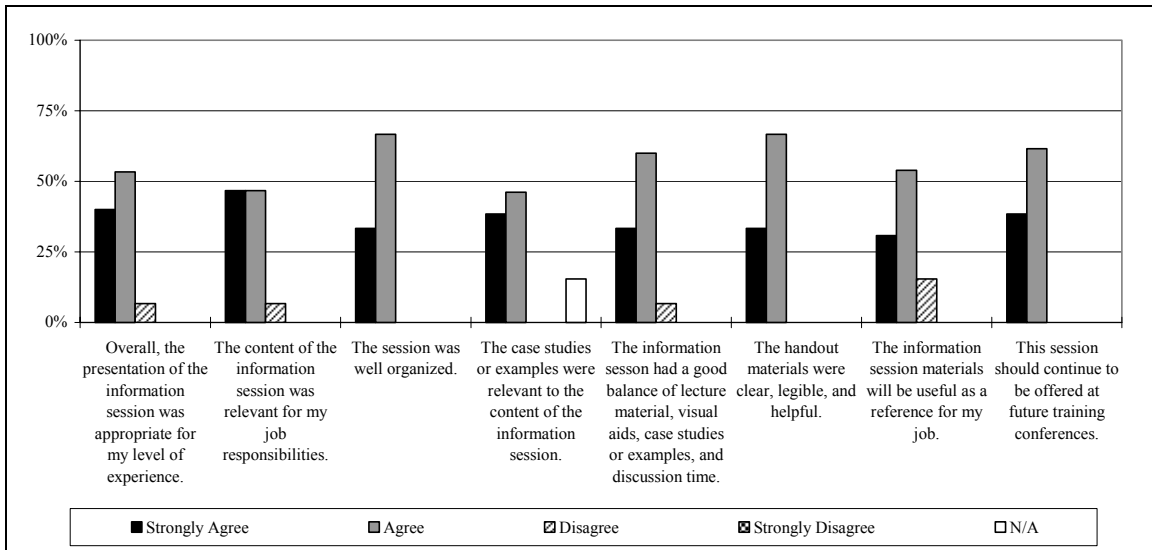
EPA’s Superfund Redevelopment Program helps communities return some of the nation’s worst hazardous waste sites to safe and productive uses. While cleaning up these Superfund sites and making them protective of human health and the environment, the Agency is working with communities and other partners in considering future use opportunities and integrating appropriate reuse options into the cleanup process.

### Participation and Average Grade

No. of Participants Who Preregistered	No. of Participants Who Signed Session Roster	Number of Evaluation Forms Submitted	Average Grade
54	37	15	A*

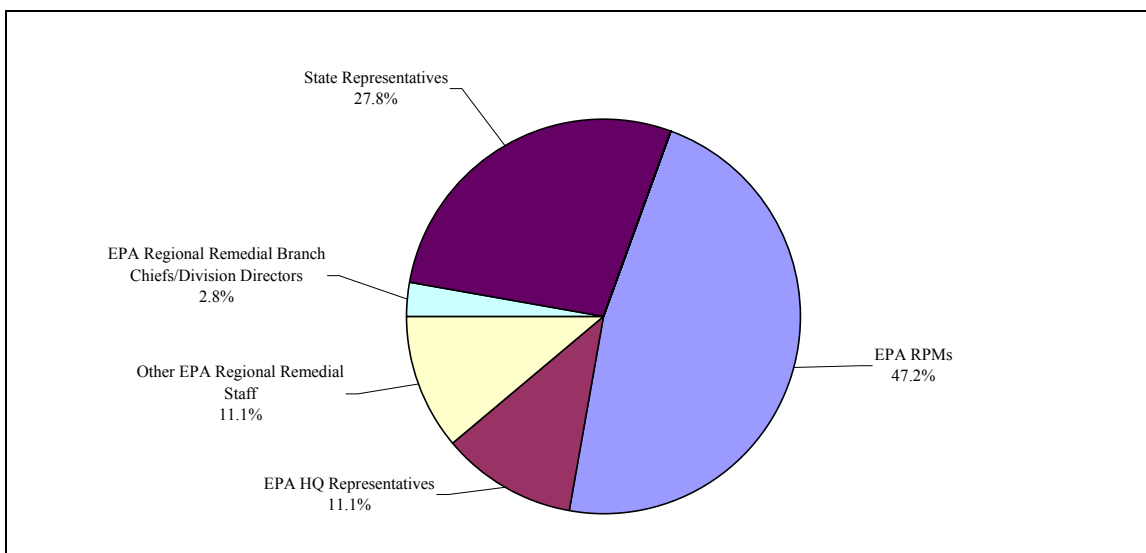
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### Summary of Evaluation Results for the Superfund Redevelopment Initiative Information Session



The pie chart below illustrates the percentages of students for the information session by job title. EPA RPMs and other EPA regional Remedial support staff represented nearly 60 percent of the students. A total of 2 TSP members attended this session.

### Participants by Job Title for the Superfund Redevelopment Initiative Information Session



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single respondent were not paraphrased and are presented verbatim.

#### Comments on appropriateness for the level of experience

- Not much I wasn't aware of, except draft Top 10 questions and fact that PPA "prohibition" is not EPA-wide.

#### Comments on relevance to job responsibilities

- Not entirely relevant, but that I understood before taking the session.
- This is not part of my job duties; we have other employees that do this.

#### Comments on balance of lecture material, visual aids, case studies or examples, and discussion time

- The questions being asked were of interest to all of the audience given that that some Regional attorneys are not promoting all the redevelopment tools. This outlines the frustration that I, as an RPM, experience: knowing what is done in another Region that is not supported in my Region and vice versa.

#### Comments on handout materials

- Not every talk had handouts however; the handouts enhanced the talks when they were provided.

#### Comments on usefulness of information session materials as a reference

- If I come across this in my job.
- This is not part of my job duties; we have other employees that do this.

#### Comments on recommending the information session to colleagues

- Most of my colleagues do not work for EPA, and, therefore, wouldn't have a relevant interest in this.

#### Comments on topics or concepts that should be shortened

- The talk given by the Region 4 gentleman, Bill Denman, went a bit too long.

**Comments on the instructor or presenter**

- Great format.

**Additional comments**

- There was not enough time to address all of the interesting questions.