

## APPENDIX D

### Comments about Individual Training Courses

This section of the report summarizes information collected from the evaluation forms that were distributed to students during each course they attended. Students were asked to respond to a series of questions about the course by selecting from the following choices:

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

The abstract that is provided for each course reflects what was originally submitted by the training team and was not changed to reflect actual content presented. The bar graphs illustrate the responses to that series of questions. In addition, students were asked to submit written comments about various elements of the course, including content, relevance and appropriateness of case studies, and instructional methods. This attachment also provides pie charts that show the percentages of students for each course by job title.

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## A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems

Tuesday, July 8, 9:00 a.m. to 12:30 p.m.

Instructor: Rob Greenwald, GeoTrans, Inc.

*A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems*, a 3.5-hour course, teaches a systematic approach for capture zone analysis and highlights a recently published EPA document on the topic (EPA 600/R-08/003, January 2008). The target audience for the course is project managers who review these analyses or make decisions based on these analyses. This course highlights:

- The importance of capture zone analysis during ground water remediation, particularly for sites requiring containment
- Key concepts of capture, such as “target capture zones” and “converging lines of evidence”
- Typical errors made in capture zone analysis

In addition, steps associated with a systematic approach for capture zone analysis are discussed. These steps include the following:

- Step 1: Review site data, site conceptual model, and remedy objectives
- Step 2: Define site-specific Target Capture Zone(s)
- Step 3: Interpret water levels
  - Potentiometric surface maps (horizontal) and water level difference maps (vertical)
  - Water level pairs (gradient control points)
- Step 4: Perform calculations (as appropriate based on site complexity)
  - Estimated flow rate calculation
  - Capture zone width calculation
  - Modeling (analytical and/or numerical) to simulate water levels, in conjunction with particle tracking and/or transport modeling
- Step 5: Evaluate concentration trends
- Step 6: Interpret actual capture based on steps 1-5, compare to Target Capture Zone(s), and assess uncertainties and data gaps

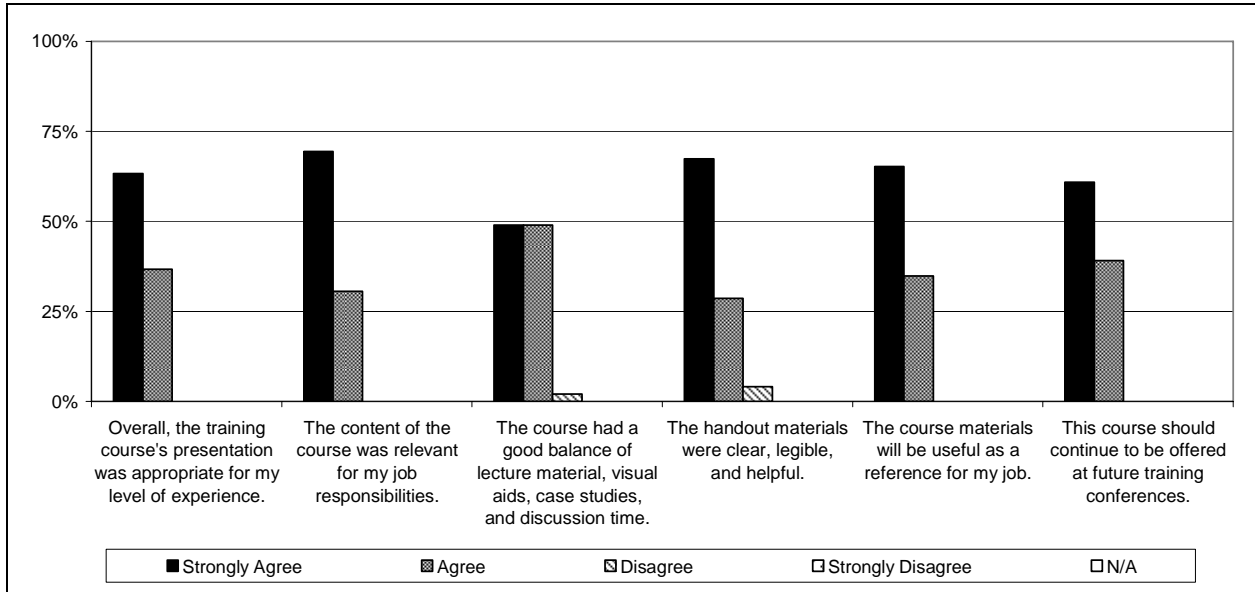
Examples are used to demonstrate key aspects of capture zone analysis.

### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
80	72	50	5*

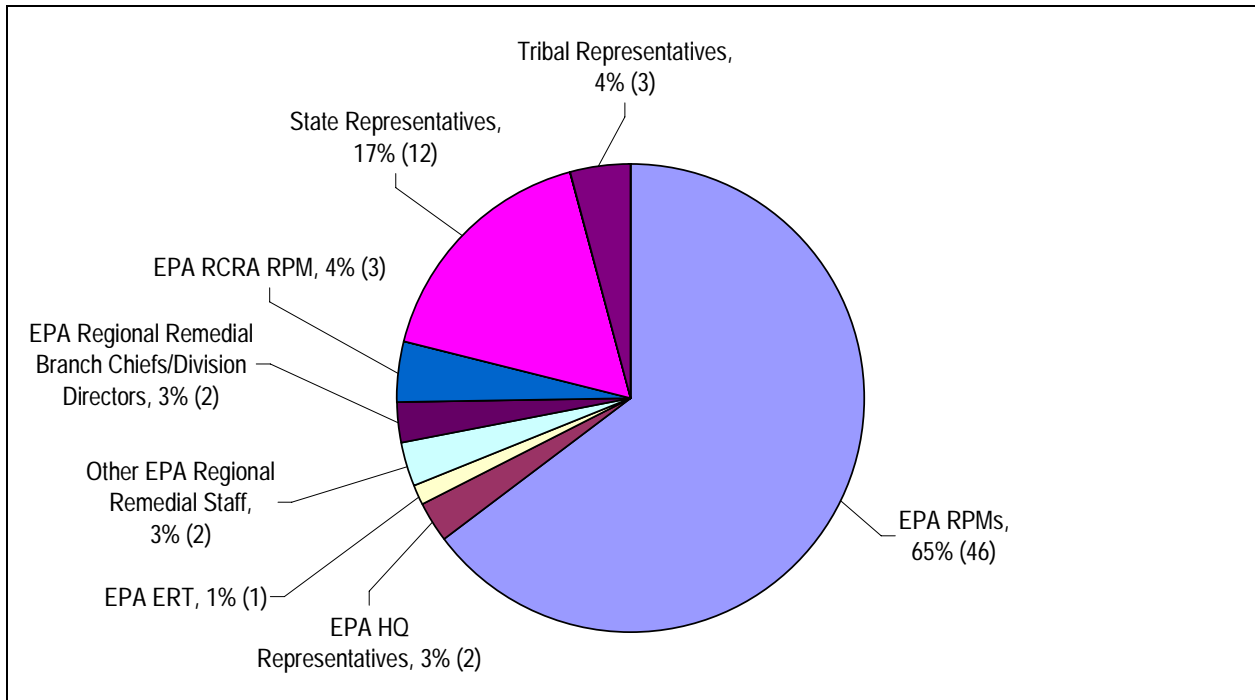
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

**Summary of Evaluation Results for A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems**



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 65 percent of the students.

**Students by Job Title for the A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems Course**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

#### **Comments on relevance to job responsibilities and experience level**

- Don't recall seeing a "target audience" experience level; I have 20+ years experience as a geologist/hydrogeologist in remediation.
- It was too low for the first 60%, but it was great for the next 40%.
- Instructor did a good job explaining terms to a "non-hydrogeologist"
- Good sweep through up front thought process to case study; just not quite enough time.
- Excellent presentation of the systematic approach.
- However, my pump and treat sites are more complex than those targeted by the course.
- Very good - glad to obtain new document.

#### **Comments on course content**

- I really liked having an actual case study - not just a hypothetical one.

##### **Add**

- Methods or examples of how to evaluate whether vertical flow component is significant and should be examined more closely should be discussed.
- Descriptions of low cost modeling programs available to RPMs.
- Add intermittent case study (short ones) to engage the audience more.
- When is numerical modeling more likely to be needed and provide the greatest benefit.

##### **Lengthen**

- Key uncertainties and data gaps - what can go wrong with case studies.
- This course can be taught in even more detail - a full day or 2 days.
- Examples of overpumping, significant figures in gradient pairs account for survey and measurement error.

#### **Comments on instructional methods and materials**

- Some animation or visualization may help with illustration.
- Visual aids were good but somewhat small (lost data) when projected on screen.
- For this training, it was nice not to have excess discussion time.
- Case study was good; however, could have used more real world examples during overview of the 6 steps.
- Little discussion.
- Good use of interaction with the audience.
- Satisfied with materials.
- When talking about concentration maps, it might be easier to use theoretical site visual aids: "actual map," drop wells in, these are the points we measured, so this is how we drew the map, show how they differ and why it could lead to us seeing increases when turning on the pumps.
- Case study materials were too difficult to read.

#### **Comments on helpfulness of handout materials**

- I really appreciate receiving a copy of ORD pub EPA/600/R-8/003; unable to order a hard copy and thought I'd have to print the PDF.
- Numbers were too small in some handouts.
- They should be in color and in a bigger scale so that figures and maps could be read.  
(Two responses)
- Good booklet/guidance combination.

**Comments on usefulness of course materials as a reference for my job**

- Please continue to provide hard copies of EPA/600/R-8/003 to participants. *(Two responses)*
- Very systematic and easy to follow approach to capture zone analysis.

**Comments on course name and abstract expectations**

- The name of the course clearly describes what the course is actually about.
- Good instructor - very well presented.
- Presented a practical, very useful approach.

**Comments on recommending course to colleagues**

- Clear methodology, logically implemented and evaluated based on results and data obtained.
- Yes, with caveat about simplistic pump and treat scenarios. The case study helped by showing how to apply evaluation to a real site.
- This course is useful for hydrogeologists and others alike.

**Comments on overall pace of the course**

- Too slow for the start, but perhaps it was necessary for people with less experience with these.
- Material was dense, but presented so that the pace works.
- Good pace with good experience input.

**Additional comments:**

- Excellent Course!
- Great Class! Best so far. Don't change a thing. Very knowledgeable instructor. *(Eleven responses)*
- Good Job!
- Excellent and knowledgeable instructor. *(Four responses)*
- Excellent teacher. Good summary statements. Really good at giving overview points and still providing enough examples and considerations to make it interesting to a variety of abilities. Good voice modulation, great ease, funny.
- I liked the presentation style - good sense of humor, asked questions to keep us involved, provided short description/framework for underlying information and background.
- This is hard for me to rate well, because I felt it did a pretty good job of presenting basic hydrogeologic concepts and evaluating capture, but it was far too basic for me. It would have been good to know its technical level in advance.

**Participants interested in developing and/or instructing future offerings of this course**

- Giang-Van Nguyen (nguyen.giang-van@epa.gov)
- Rob Weber (weber.robert@epa.gov)

## A Year in the Life: Project Management for RPMs

Monday, July 7, 1:30 p.m. to 5:00 p.m.

Instructors: Dion Novak, U.S. EPA Region 5  
 Carla Buriks, Tetra Tech EM Inc.  
 Therese Gioia, Tetra Tech EM Inc.

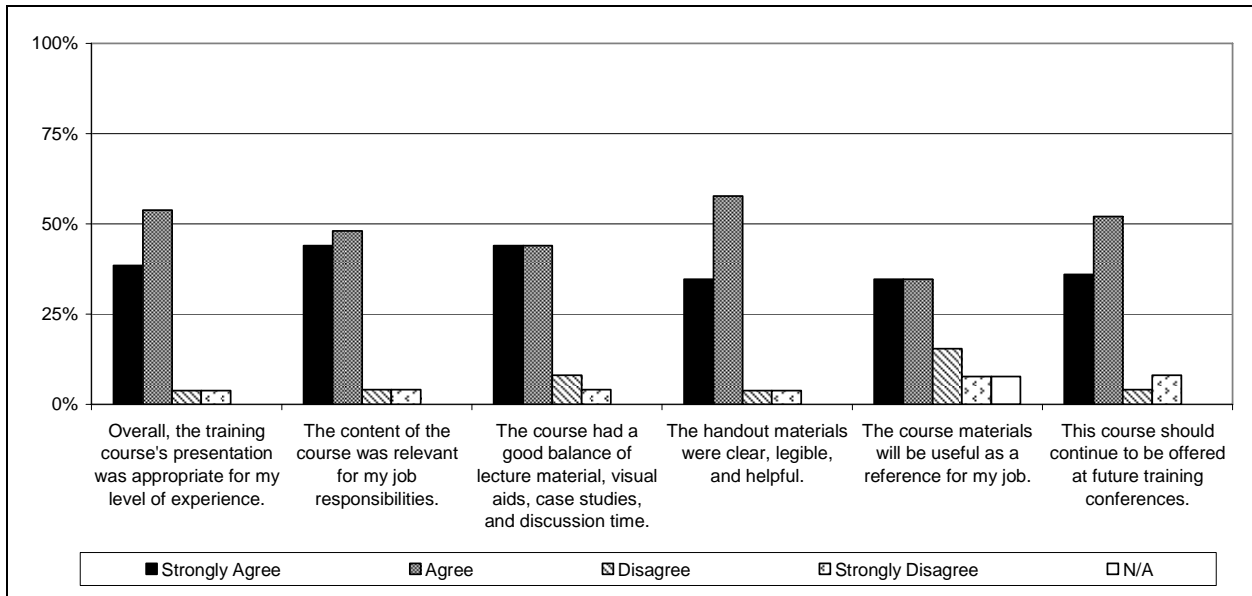
*A Year in the Life: Project Management for RPMs* is a four-hour session for both new and experienced RPMs. This session provides participants with an opportunity to learn and share good project management techniques in a fun way by applying their management skills to a specific Remedial Design/Remedial Action (RD/RA) site example. The session focuses on concepts, tools, and resources that RPMs can apply to RD/RA projects. By using a game board approach to work through a “planning” cycle—each team collected project management “dos” and “don’ts,” participant teams obtain site information, respond to changing circumstances, and build their project team and approach as they make their way along the game board path. Teams then review their site, identifying potential challenges, prioritizing these, and developing ideas to address site challenges. Each team shares project management approaches for their site by preparing and giving a simulated “briefing” to upper management. A facilitated discussion concludes the game and allows the participants to consider different approaches that can be used to manage projects effectively. A handout summarizes key concepts presented during the session and provides additional resources that RPMs can use to improve their project management skills.

### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
35	33	26	4*

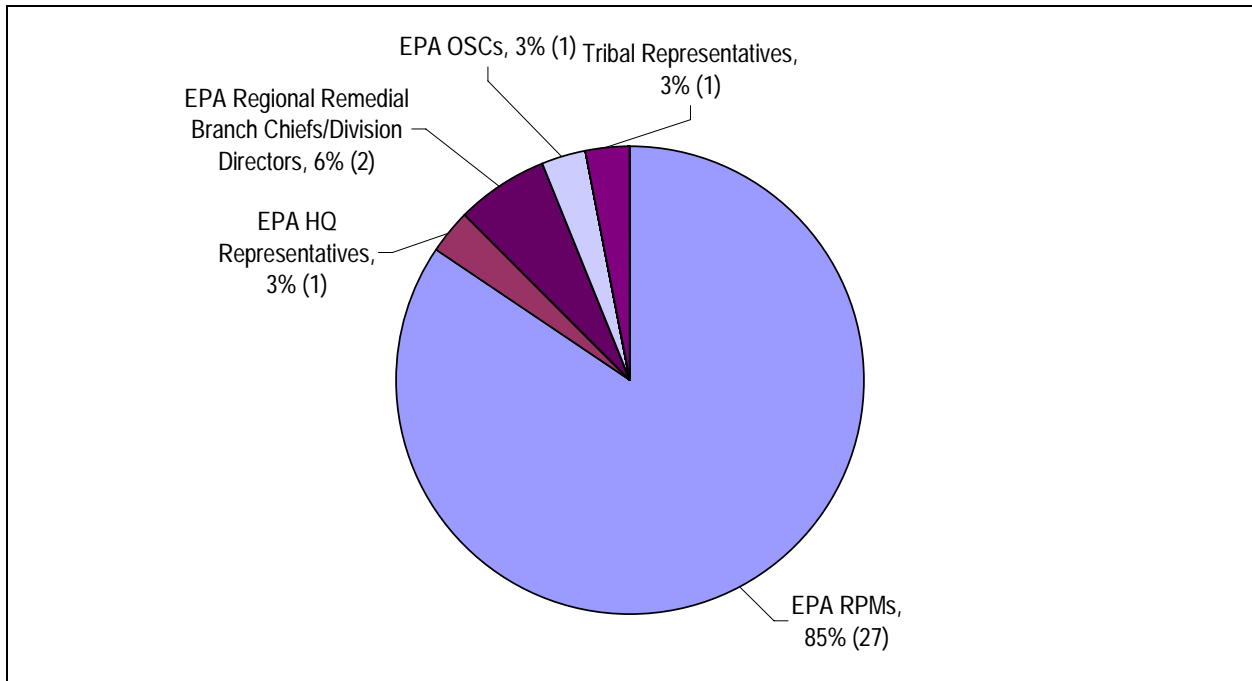
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

### Summary of Evaluation Results for A Year in the Life: Project Management for RPMs



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 85 percent of the students.

**Students by Job Title for the A Year in the Life: Project Management for RPMs**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

**Comments on relevance to job responsibilities and experience level**

- Great learning experience for a new RPM -- working cooperatively with more senior RPMs provided the necessary hand-holding
- Yes, but the time could be used better to discuss RPM issues and concerns.
- A real-life presentation practice - the game can correlate to real-life situations.

**Comments on instructional methods and materials**

- Great game!

**Comments on helpfulness of handout materials**

- The materials were thought out and kept the participants engaged.
- Too long of site description with insufficient time.

**Comments on usefulness of course materials as a reference for my job**

- As presented in this specific training.
- Good oral presentation practice.
- Maybe a good reference when scoping a project.

**Comments on offering course at future training conferences**

- Fun and involved.
- Computer-based game board might make it smoother to play the game.

**Comments on course name and abstract expectations**

- More entertaining and hands-on than expected (but that's good).
- Was expecting more management skill type of project management.
- Pretty basic - didn't draw much information.

**Comments on recommending course to colleagues**

- Very entertaining.
- Not the way PM was presented. There was wasted time playing the game.
- Maybe new RPMs.

**Additional comments:**

- You could add more toxicological challenges/game boxes.
- Modify the challenge question regarding access.
- Speed up the game play. Could have RPMs give experiences.
- The course is good in that it outlines RD/RA components; however, more time could be dedicated to discuss project management responsibilities.
- Great game for explaining management tools.
- Good tool for new RPMs. A mix of seasonal RPMs with new ones may help even more. This is a good way to talk about what everybody is doing and how creative people can be across all regions.
- Maybe need to be more interactive with Tools of Project management - more real experiences. I'm just not too big on sitting for 1-1/2 hours playing the dice.
- Provide a copy of the game board so less need to scribe to get every word.
- I appreciate all your efforts - might have better to not use the game board and just use RPM experiences as obstacles. Great Effort!
- Thank you for the up front work that you put into developing this course. The game was well thought out and made the course very enjoyable. It was thought provoking and there was great interaction with the group.

## Advanced UXO - Wide Area Assessment

Thursday, July 10, 1:30 p.m. to 5:00 p.m.

Instructors: Anne Andrews, U.S. Department of Defense  
 Harry Craig, U.S. EPA Region 10  
 Doug Maddox, U.S. EPA FFRRO  
 Herb Nelson, Naval Research Laboratory

*Advanced UXO - Wide Area Assessment*, a 3.5-hour course, focuses on the tools, case studies, and current experiences of RPMs dealing with unexploded ordnance (UXO) at military munitions sites. Investigation of military munitions contamination and response actions at current National Priorities List (NPL) and Base Realignment and Closure (BRAC) federal facilities and Formerly Used Defense Sites (FUDS) remains a large outstanding issue for the DoD. Over 3,000 sites, comprising tens of millions of acres, may contain military munitions, including UXO and discarded military munitions (DMM). The majority of these are FUDS sites, which are no longer under DoD control, and include a variety of land uses, including residential development, recreation, grazing, and parklands, often without land use restrictions. A typical site may be hundreds or thousands of acres and many exceed 10,000 acres. Although large in size, often times only a small portion of the current or formerly used facility or range may have actual UXO/DMM contamination.

The objective of the ESTCP wide area assessment (WAA) program has been to develop site characterization tools to assess an entire potentially contaminated site to identify areas of concentrated munitions use for more detailed characterization. Based on historical records, a conceptual site model (CSM) is developed to serve as a baseline for application of multiple site assessment tools. WAA assessment tools include high airborne, low airborne, ground, and underwater survey methods designed to provide multiple data layers and multiple lines of evidence regarding the presence or absence of military munitions or munitions-related features at a site. WAA tools can provide information needed to support decisions at various stages of the CERCLA process, particularly at the SI and RI phases.

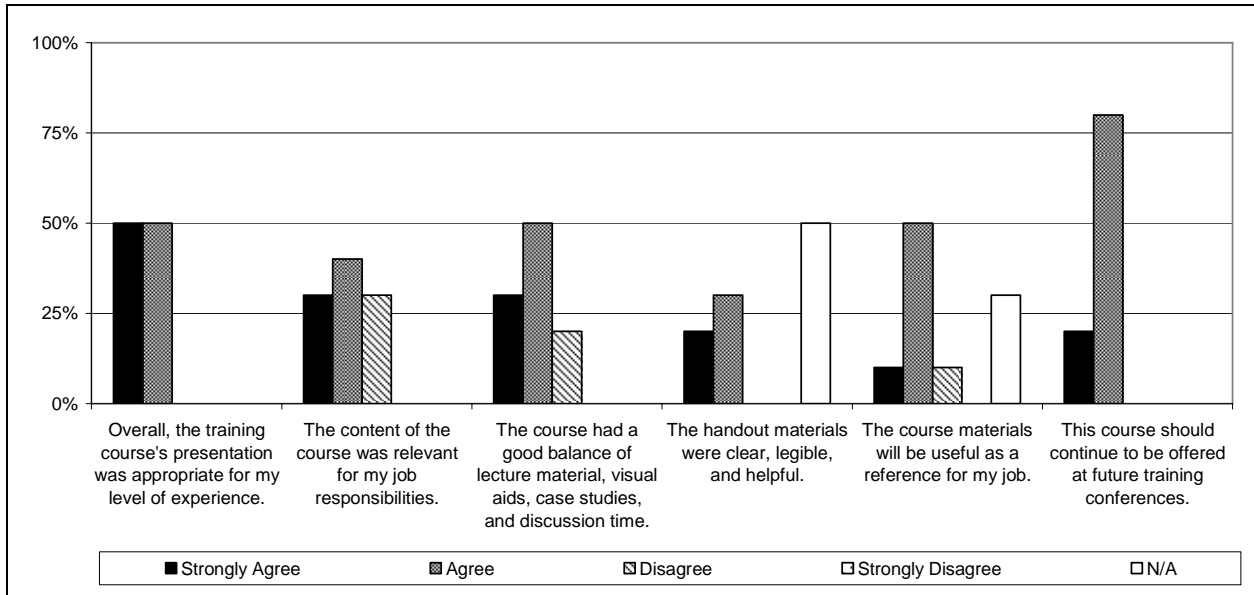
This session includes the following topics: (1) the development and demonstration of WAA tools such as LIDAR, high resolution orthophotography, and helicopter and underwater magnetometer geophysical systems, (2) case studies on the use of WAA tools at several sites currently under investigation, and (3) a panel of EPA and state RPMs to discuss considerations on the capabilities and limitations of WAA tools for potential use on a broader universe of military munitions sites.

### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
29	30	10	4*

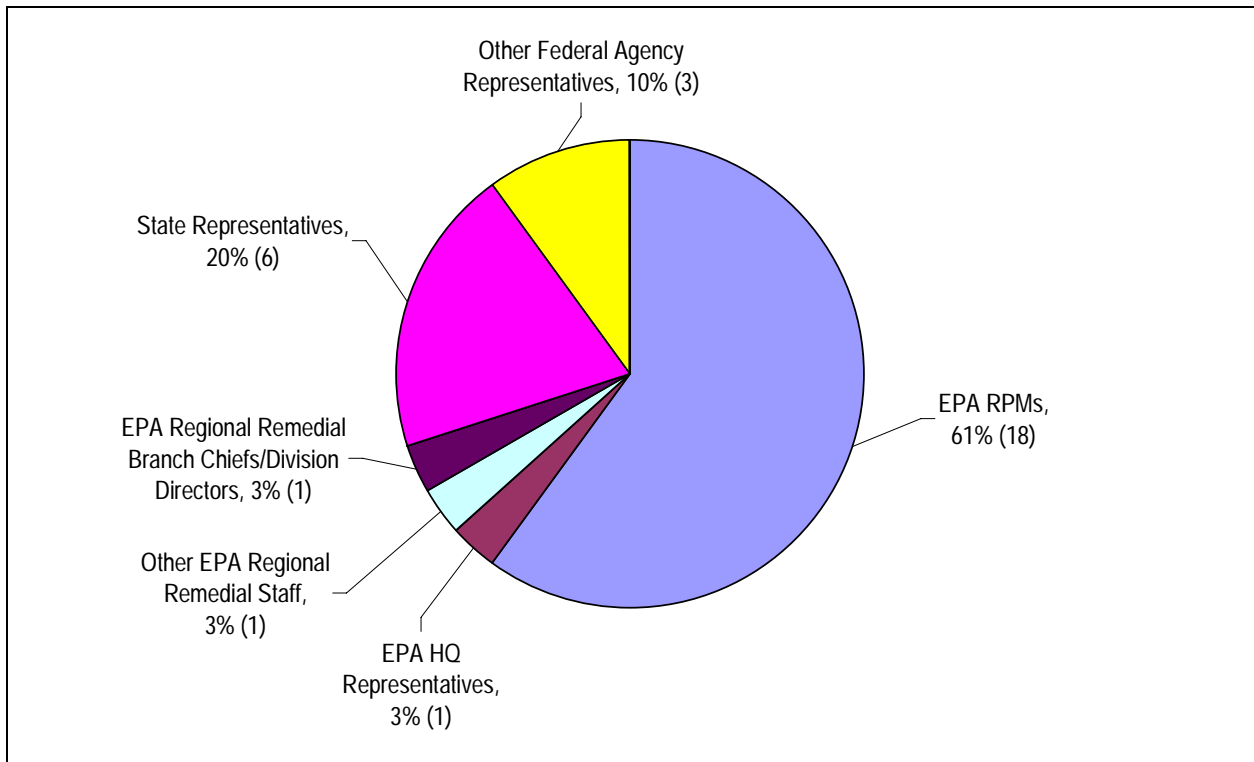
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

**Summary of Evaluation Results for Advanced UXO – Wide Area Assessment**



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 61 percent of the students.

**Students by Job Title for the Advanced UXO – Wide Area Assessment**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

**Comments on relevance to job responsibilities and experience level**

- It was more presenting research than giving the bottom line for project managers. It wasn't clear what the goal of WAA was.
- This is the first time that I heard about wide area assessment or attended a course on it.
- There weren't any handouts so I wasn't able to take notes to correspond to the power point slides.
- It would have been better to have print-outs to follow along with.

**Comments on course content**

Lengthen

- This course should be expanded to a full day.

**Comments on offering course at future training conferences**

- But have handouts.
- It should be more practical. It was unclear how WAAs fit into MMRP program.
- The audience for this topic is limited - maybe offer every 2 to 3 years.

**Comments on overall pace of the course**

- The instructors spoke too fast.

## Awake at the Wheel: Active Remedy Management

Tuesday, July 8, 9:00 a.m. to 12:30 p.m.

Instructors: Thomas Alcamo, U.S. EPA Region 5  
Charles Root, U.S. EPA Region 3

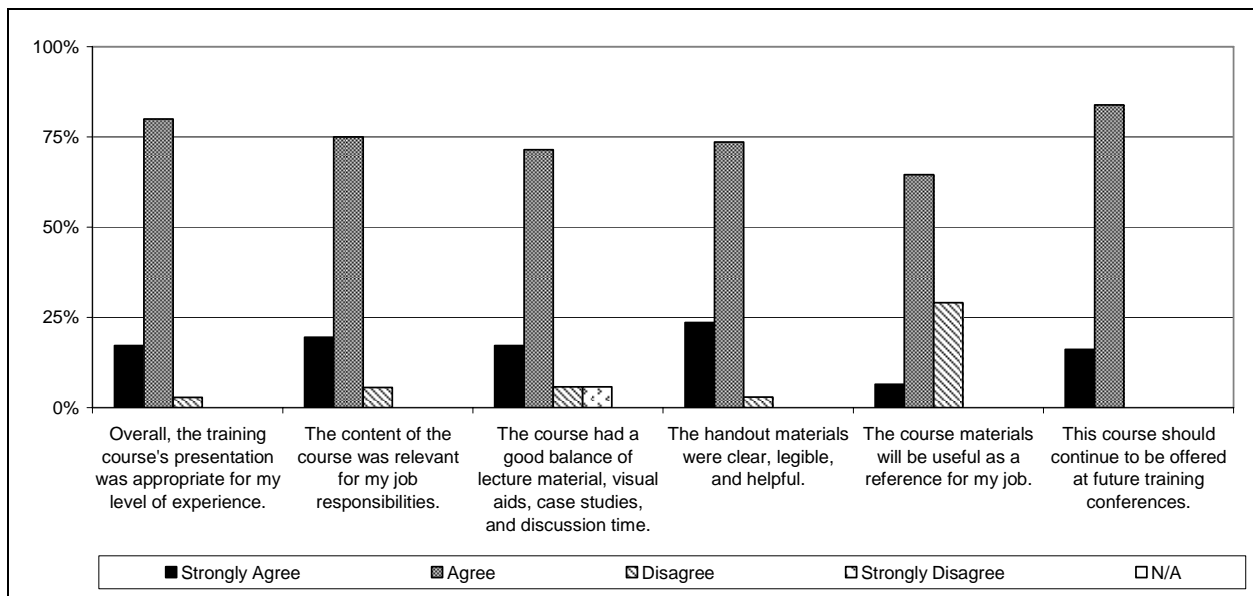
*Awake at the Wheel: Active Remedy Management* is a 4-hour, advanced-level course for RPMs and site managers who understand the basic Superfund definitions for O&M, operational and functional (O&F), and long-term response action (LTRA) and that have experience with implementation of remedial actions. Awake at the Wheel promotes an active management approach to the operation of remedies in every phase of the Superfund remedy. The course focuses on (1) the types of data collected during the operation of different types of remedies; (2) common problems with different types of remedies; and (3) the process for reviewing, assessing, and responding to operational data. Participants are challenged to review, assess, and devise strategies for responding to actual data from different types of remedies. Awake at the Wheel shows you how to put those O&M and operational reports collecting dust on your cubicle floor to good use!

### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
67	60	38	3*

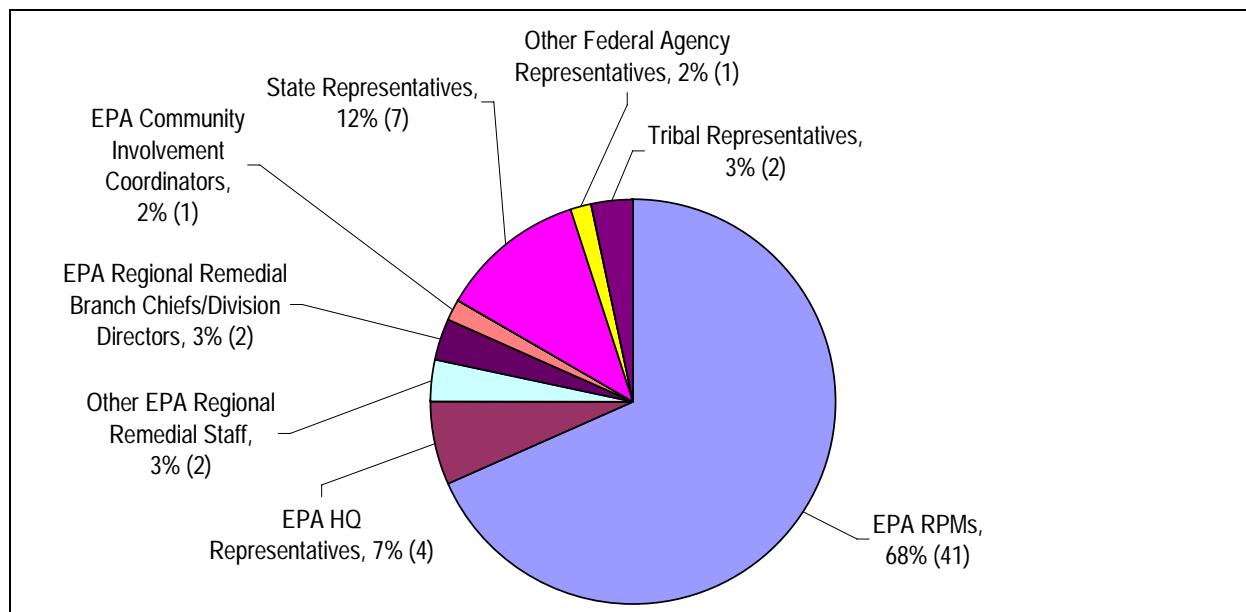
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

### Summary of Evaluation Results for Awake at the Wheel: Active Remedy Management



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 68 percent of the students.

**Students by Job Title for the Awake at the Wheel: Active Remedy Management**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

#### Comments on relevance to job responsibilities and experience level

- Good practice for someone with (no) little experience.
- Need to update the exercises.
- Case studies as group work are the way to go! (*Three responses*)
- Poor use of discussion time because at any one time, half of the class has no idea what the other half had read. Not enough time to "know" the site given its complexity. Referring back and forth between sites is very confusing.
- Like the concentration on group discussions. Very helpful to focus on actual data analysis.
- It was great to be in an interactive class.
- The instructors chose to vary from the outline that had been planned and do all the lecture upfront, then do all the case studies at the end. I think I would have preferred the original outline.
- Case study material was too long. Not the right level of detail.

#### Comments on course content

##### Add

- A break!
- Perhaps a short analysis on trends could show people how to track data on remedies.
- Background information on case studies. (*Two responses*)

##### Lengthen

- More lecture time with more specifics and 1 or 2 other treatment options.
- Case Study (*Three responses*)

Shortened

- Intro presentations
- Lecture
- Case Study (*Two responses*)

**Comments on helpfulness of handout materials**

- Except for the photo layout of P&T exercise.
- Need update.
- Case study for Raventor was not legible.
- The handouts were not really needed/helpful.
- All of the slides were binded for future reference; case study answers.
- Couldn't read map with the well locations. (*Two responses*)

**Comments on usefulness of course materials as a reference for my job**

- I don't have a site where these treatment systems are being used. (*Two responses*)
- Good for exercise but not as a tool to help in future.
- Not particularly relevant; develop fact sheets to discuss O&F of systems.
- Won't ever use this material. (*Two responses*)
- Very useful for new employees.

**Comments on offering course at future training conferences**

- May be better to indicate experience level for the course.
- Perhaps, but it needs to be restructured. (*Four responses*)
- With revised or new case studies to reflect new or current policies, technologies, and successes.
- Would like more focus on soil vapor extraction (SVE) systems.
- Simplify the examples.
- SVE was ok, but other alternatives might be more useful.
- Review one case on overhead, discuss with the class, then give each table an issue to discuss.
- Add in link between language in orders that you could refer to get PRPs to perform additional work.

**Comments on course name and abstract expectations**

- Nice car analogies.
- Expected more than SVE and P&T to be covered. (*Two responses*)
- Too much emphasis on ground water and SVE sites; consider general discussion to address other types of sites, such as post construction issues and ICs. (*Two responses*)
- Have not worked a site but learned of points to consider when such a site is discovered.
- It covered the area well but it might be worthy of expansion to an all-day course.
- Believed would be more toward optimization based on the PCC conference in Atlanta.

**Comments on recommending course to colleagues**

- All RPMs need to work to do a better job of active remedy management.
- Yes, but needs tweaking.
- Especially for SVE or ground water sites.
- Make it clearer that the level of the course is more intermediate to advance in lecture part.
- If they were going into a design phase for ground water and had no experience.
- Would be a good course for new RPMs.
- More beneficial for the instructor to review a number of case studies and engage the class for input.
- Focus on the case studies and less lecture.
- Great practicum.

- Provided good group exercises where a mix of state and regional perspectives made for a good discussion.
- Case/Course exercise was not really helpful.

#### **Comments on overall pace of the course**

- Too much to cover in the time allotted for group case study work.
- The lecture was too fast.
- Slides then case study was the way to go.
- Need a formal break - one case study at a time (two sets of questions at once).
- Too fast to incorporate reading material and too slow during the discussion (on the exercise that we were not assigned).
- Half of the class did a ground water study, and the other half did SVE. That didn't work because it was too boring to listen to the other group talk about stuff we weren't familiar with.

#### **Additional comments**

- This was well planned and was useful.
- May recommend having a different method for making groups. Some groups dwindled over the time of the course. Might be advisable to have a "helper" at tables that are a bit quiet.
- Case studies were good but we could have covered more case studies and hence more technologies if discussion was led by the instructor.
- Able to focus on only one of the case studies; not sure if it was effective to split focus of large group on two case studies. (*Three responses*)
- Allow more time to concentrate on analyzing the information. Exercises were vague enough to invoke thought discussion to answer-great job designing exercises.
- Case studies were good. As discussed in our group, a bit slow when other group's study was discussed. Maybe incorporate a "game show" theme where teams get points, prizes, etc.,
- Have the class change seats after the lecture.
- Found the seating change to be pointless and annoying. For Q5, Part 2 -Carbon Treatment and POTW - I cannot find this in the materials. Recheck before presenting course again.
- Case study is a good thing but make it a less complicated case study.
- Have always found the cessation of the SVE system to be problematic - even though one has achieved soil cleanup levels, still capturing VOCs in system - system is still functional in conjunction with P&T. Any guidance on this? Since this is the first time this course has been presented, some of the logistical planning could be better organized. The audience participation is successful.
- Too much information in case study; too long.
- Speakers were not audible. (*Two responses*)
- Don't change into groups until it is time for the exercise. Allow for breaks - it reduces people going and coming. Keep subject on focus.
- Make a rule that everyone should answer at least one question. Good to switch people around. The GW P&T system was complicated with too many fake names. Some of the questions seemed repetitive. The site layout photo - we didn't use it and you couldn't really read it. The narrative said 4 wells but there are 6 wells on PED. Give a brief summary of each case study so that both groups can follow along.
- I found the course not very useful. It did not seem to solidify around a particular "active remedy approach" that was promised in the abstract. Much of the approaches discussed could apply to RI/FS, remedial design, remedial action, or O&M and were pretty basic.

#### **Participants interested in developing and/or instructing future offerings of this course**

- Dan Keefe (keefe.daniel@epa.gov)

## Be Prepared: Know What to Say and How to Say It, An Advanced Media Training<sup>1</sup>

Instructors: Pamela Avery, Turner Strategies, Inc.  
 Dominic Frederico, Turner Strategies, Inc.

*Be Prepared: Know What to Say and How to Say It, An Advanced Media Training* is an advanced level four-hour media and spokesperson training workshop. What you say and how you say it are critical to getting information out to the news media, community groups, and others. This intensive half-day workshop is designed to give you the confidence you need to explain your work and talk about tough issues. By taking this workshop, RPMs learn:

- How to prepare for interviews or public speaking engagements;
- How to craft your organization’s messages; and
- How to deliver your messages effectively - even during a crisis.

This highly interactive workshop features customized scenarios relevant to each participant’s programs or projects, and several one-on-one videotaped sessions with professional interviewers. The course is limited to 12 participants from EPA who have taken the *Working with the News Media* course or another similar media and spokesperson training workshop. Due to the limited capacity of the course, only EPA RPMs will be selected to attend this course.

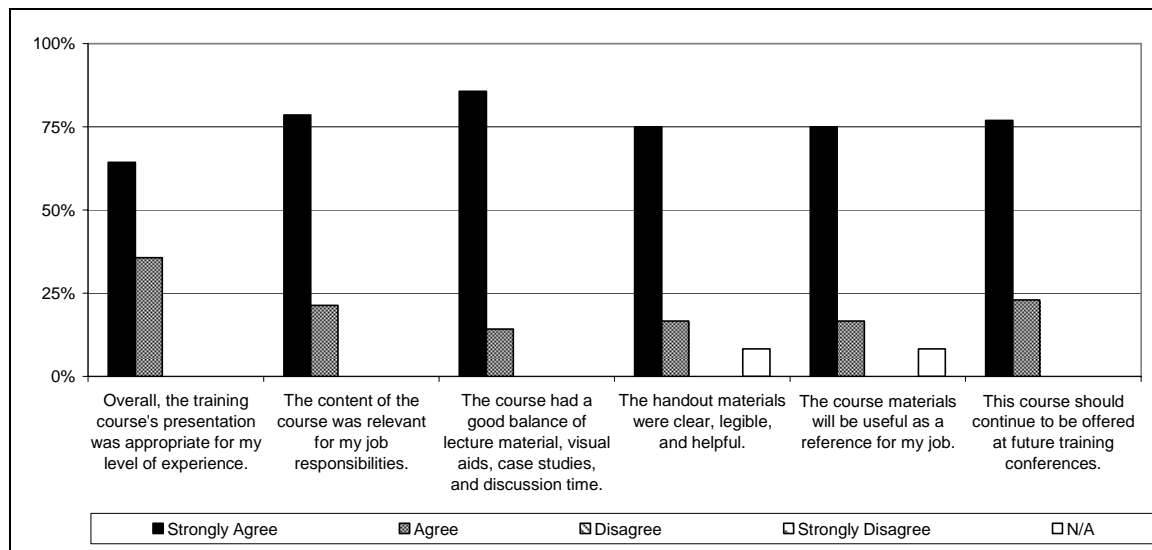
**Tuesday, July 8, 9:00 a.m. to 12:30 p.m.**

### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
12	18	14	5*

\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

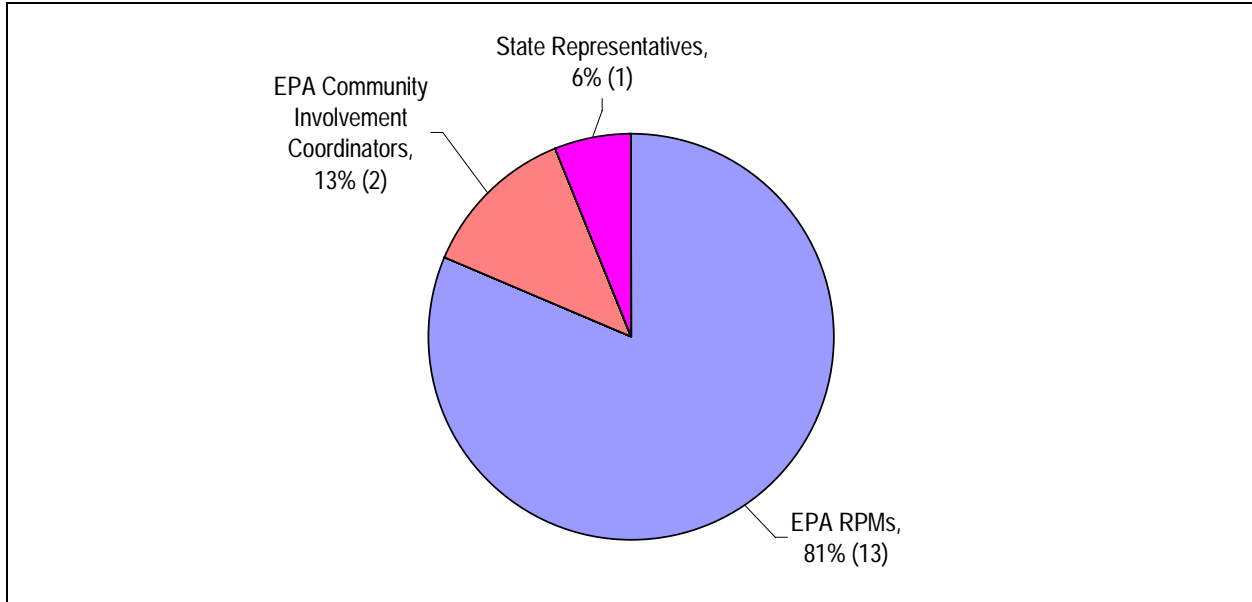
### Summary of Evaluation Results for Be Prepared: Know What to Say and How to Say It, An Advanced Media Training



<sup>1</sup> This course was offered twice. In addition, due to instructional methodology of the course, classroom size was limited.

The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 81 percent of the students.

**Students by Job Title for the Be Prepared: Know What to Say and How to Say It, An Advanced Media Training**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

**Comments on relevance to job responsibilities and experience level**

- Great!!
- Excellent course and good refresher.

**Comments on course content**

- Lengthen
- Time - not enough time to critique

**Comments on instructional methods and materials**

- Good mix of examples and lecture.
- Too short!

**Comments on offering course at future training conferences**

- Need a full day. (*Three responses*)

**Comments on course name and abstract**

- It met all my expectations.

**Comments on recommending course to colleagues**

- Excellent course for all RPMs.
- Everyone needs to practice this activity. (*Two responses*)

**Comments on overall pace of the course**

- There was a lot of info to cover in a short time. (*Four responses*)

**Additional comments**

- Need more time.
- Very good and useful. (*Three responses*)
- Good practice at developing 3 key messages and speaking in front of a camera.
- The course was good. My only thought is that the course emphasized video/media, but most of my exposure to the media is via print/newspapers.
- This has been the best training so far at this NARPM conference!

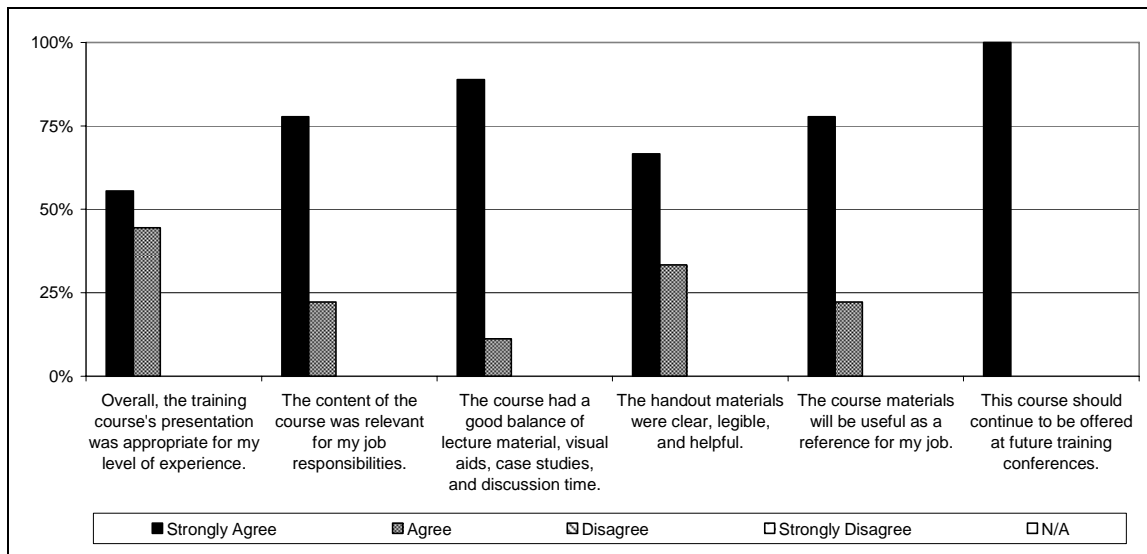
**Tuesday, July 8, 1:30 p.m. to 5:00 p.m.**

**Participation and Average Grade**

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
10	14	9	5*

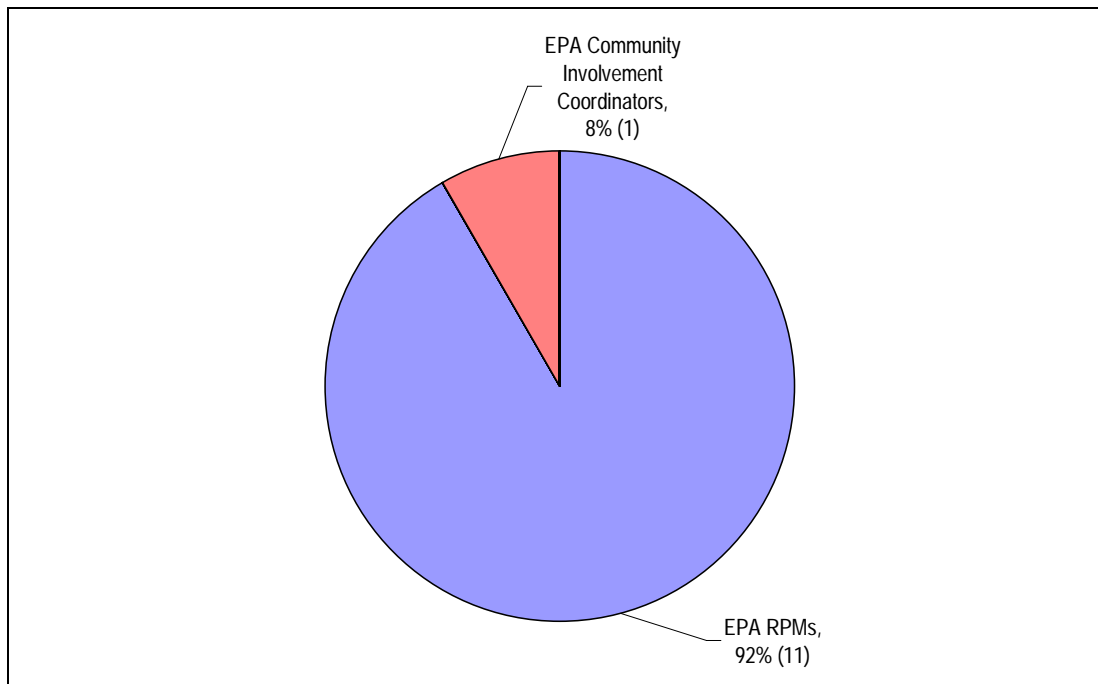
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

**Summary of Evaluation Reports for Be Prepared: Know What to Say and How to Say It, An Advanced Media Training**



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 92 percent of the students.

**Students by Job Title for the Be Prepared: Know What to Say and How to Say It,  
An Advanced Media Training**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

**Comments on usefulness of course materials as a reference for my job**

- The materials will serve as a reminder when I go back to my job.

**Comments on course content**

Added

- Examples of good interviews.

**Comments on recommending course to colleagues**

- Excellent course, chance to practice. (*Two responses*)
- Good training.
- This will help other RPMs to be better prepared and know what to say to the media.

**Comments on overall pace of the course**

- Would have liked the course to be all day and have several opportunities to practice. (*Four responses*)

**Additional comments:**

- I think watching video clips of famous personalities will inspire and serve as a model for us to practice the techniques.

**Participants interested in developing and/or instructing future offerings of this course**

- Erna Waterman (waterman.erna@epa.gov)
- Caroline Kwan (kwan.caroline@epa.gov)

## Contracts Training<sup>2</sup>

Instructors: Pauletta France-Isetts, U.S. EPA Region 7  
Barbara McDonough, U.S. EPA OSRTI  
Marie Noel, U.S. EPA Region 7

*Contracts Training*, a half-day training course that counts toward Contracting Officer Representative (COR) training requirements, provides participants with a better understanding of a variety of contracting issues through discussion, guidance, and a case study. Topics include:

- Tips for a successful Performance-Based Service Contract (PBSC) experience, including a discussion on the Procurement Initiation Notice (PIN) package.
- A case study on the Omaha Lead site to illustrate the PBSC process, including a discussion of lessons learned.
- Guidance on evaluating a contractor's performance, including review of invoices and completing questionnaires.
- Discussion of the revised policy for issuing Superfund Interagency Agreements for assigning RD/RA work to the USACE or other federal agency
- Requiring documentation of decisions to use the USACE for RD/RA work.
- Implementing the use of cost estimates of USACE staff providing support for the Superfund program.
- Encouraging the use of term and conditions as part of Interagency Agreements (IAG) to spell out USACE requirements when providing EPA support.
- Discussion of modifications in Office of Acquisition Management's COR policy and their effects on the current training program. Specifically, to emphasize the importance of maintaining the 40 Continuous Learning Points (CLP) every two years, providing guidance on the CLP requirements, updating basic training required to become a COR, and providing a resource list for basic and continuous contracts training.

This course counts for four (4) hours credit to the 40-hour COR training requirements. The instructors provide opportunities for questions and answers.

**Tuesday, July 8, 9:00 a.m. to 12:30 p.m.**

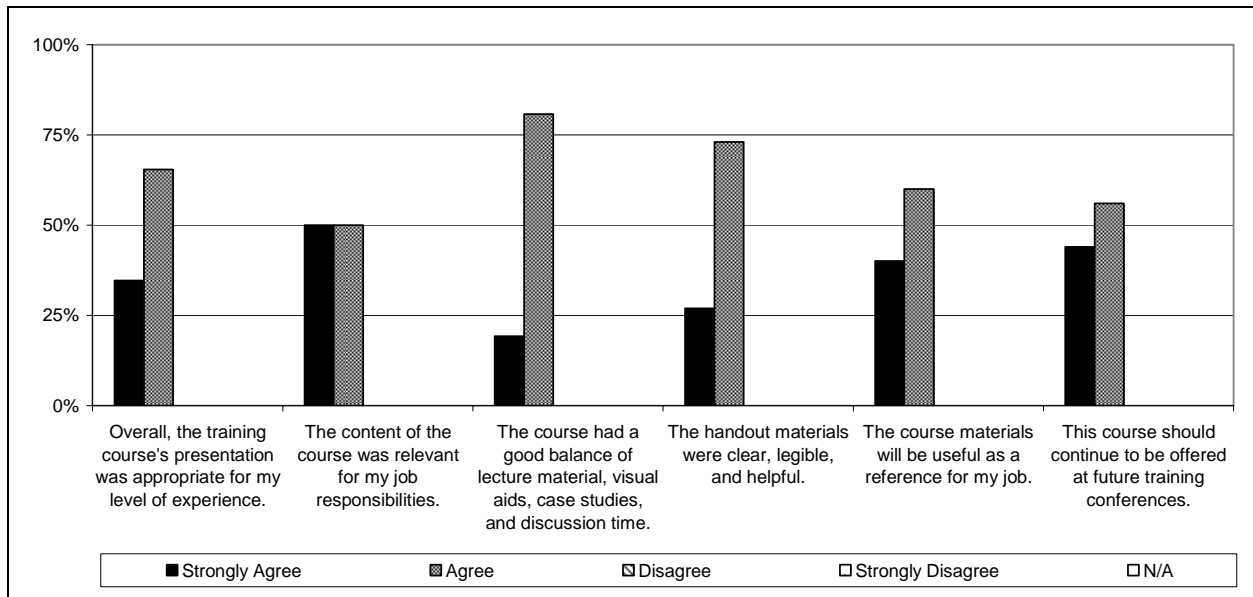
### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
41	44	27	4*

\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

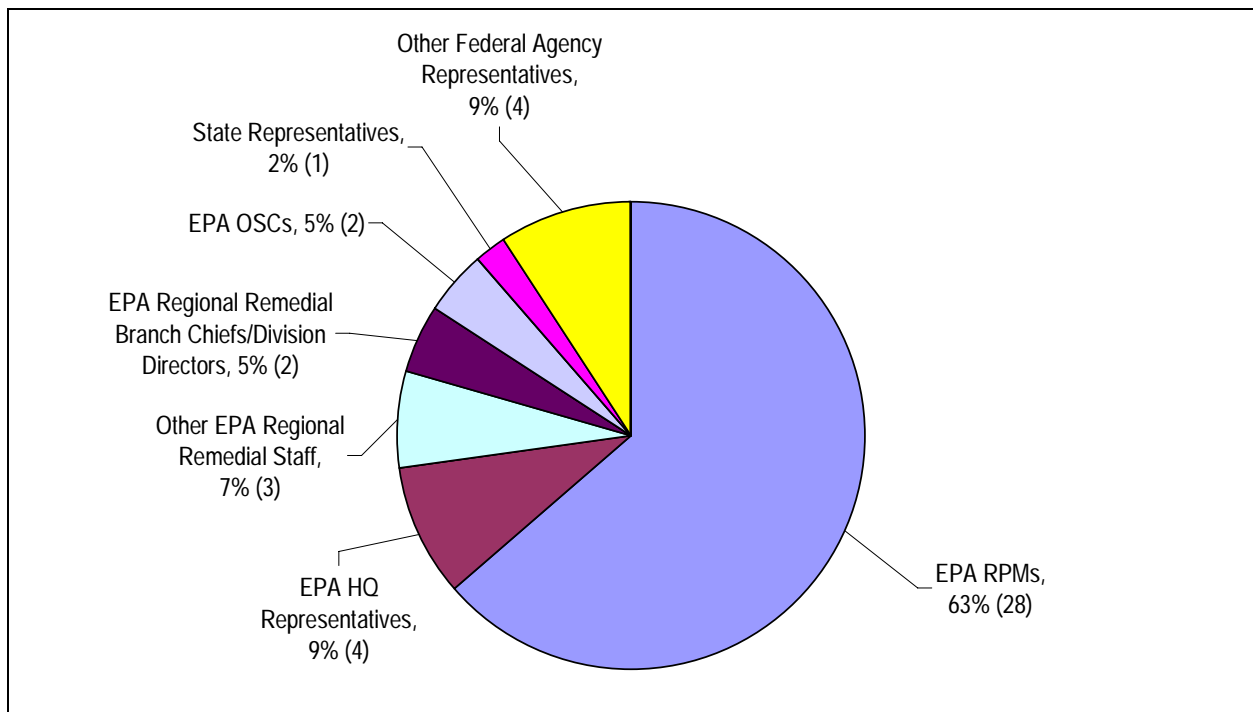
<sup>2</sup> This course was offered twice.

### Summary of Evaluation Results for Contracts Training



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 63 percent of the students.

### Students by Job Title for the Contract Training



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

**Comments on relevance to job responsibilities and experience level**

- Great refresher.
- Very good exchange of information.
- IAG info was the most important thing to me.

**Comments on course content**

Added

- Contrast the roles of COR vs. CO vs. TOPO.
- Information on how PBSC incentives could be worked into task orders for a RACS contract.
- Grants.

Lengthen

- IAG implementation information.
- Expand on incentives.

Omit

- Case Study/Exercise.
- Performance-based contracts information - these are a major hassle!

**Comments on instructional methods and materials**

- Exercise, case studies, slides.
- Exercise on RACs vs. USACE was very helpful.
- Presenters could have referenced page numbers in the workbook.

**Comments on helpfulness of handout materials**

- Copies of the overheads would have been helpful so that we could record notes.
- Should have explained the order of the handout better.

**Comments on usefulness of course materials as a reference for my job**

- Forms, anecdotes are helpful - reinforce.
- Separate the three sections by a colored paper divider. This makes locating information by each presenter easier.
- Course materials were organized as a tool box for reference.

**Comments on course name and abstract expectations**

- Mostly, but I anticipated more clarity about COR roles.
- Highlighted EPA's contracting and COR performance requirements.

**Comments on recommending course to colleagues**

- Fulfills COR requirement.
- The first two segments would be more informative if a "roadmap" were provided.
- Good refresher training.
- Reviews issues relevant to both EPA/USACE for conducting business (especially IAGs).

**Comments on overall pace of the course**

- Needed more time for the class exercise.

**Additional comments:**

- The IAG and COOP info was more useful.
- Very good - people that presented were very knowledgeable in their particular area of expertise.
- Good effort! Good idea to have an RPM give their perspective.

- The IAG segment was especially informative and engaging.
- Information on contracting was interesting, but in R6 we use RACS with Task Orders, so we aren't much involved in contracting/procurement - This should be retained, but a little more on the context of the discussion would be helpful.
- Include a written site example for the exercise.
- In the booklet, p. 44 - Doug Hosten should be Doug Holsten and Joanne Shea should be Joanne Moore.
- Form exercise instructions somewhat confusing - should be clarified in the future - discussion of selection criteria had value but could be better implemented.

**Participants interested in developing and/or instructing future offerings of this course**

- Damian Duda (duda.damian@epa.gov)
- Rob Weber (weber.robert@epa.gov)

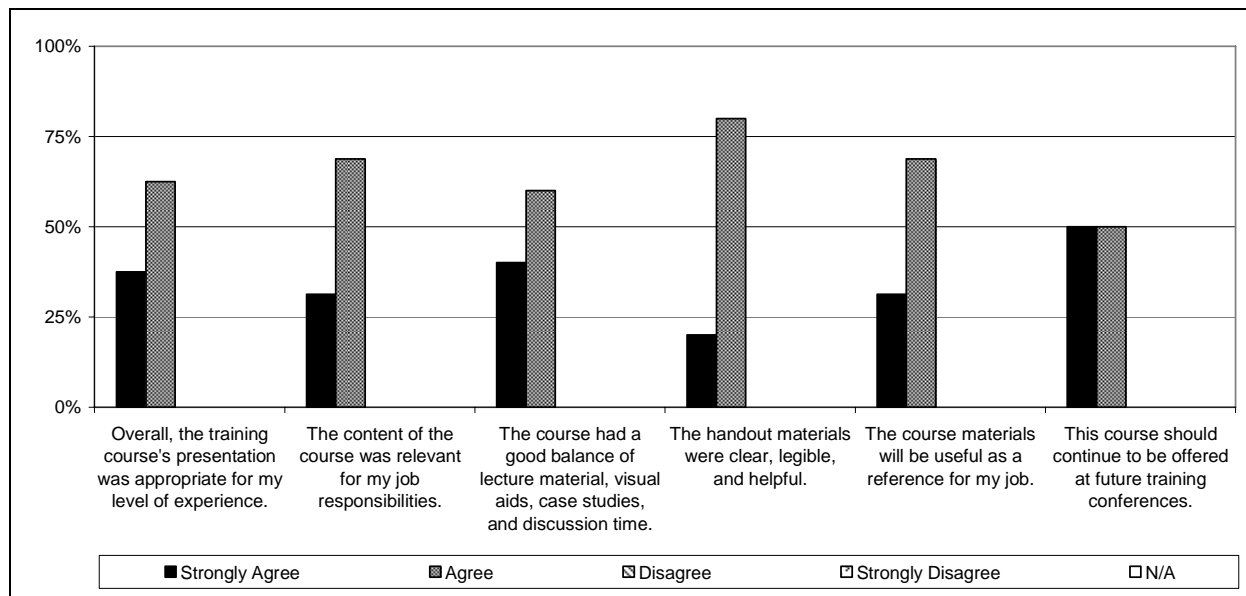
**Tuesday, July 8, 1:30 p.m. to 5:00 p.m.**

**Participation and Average Grade**

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
24	28	16	4*

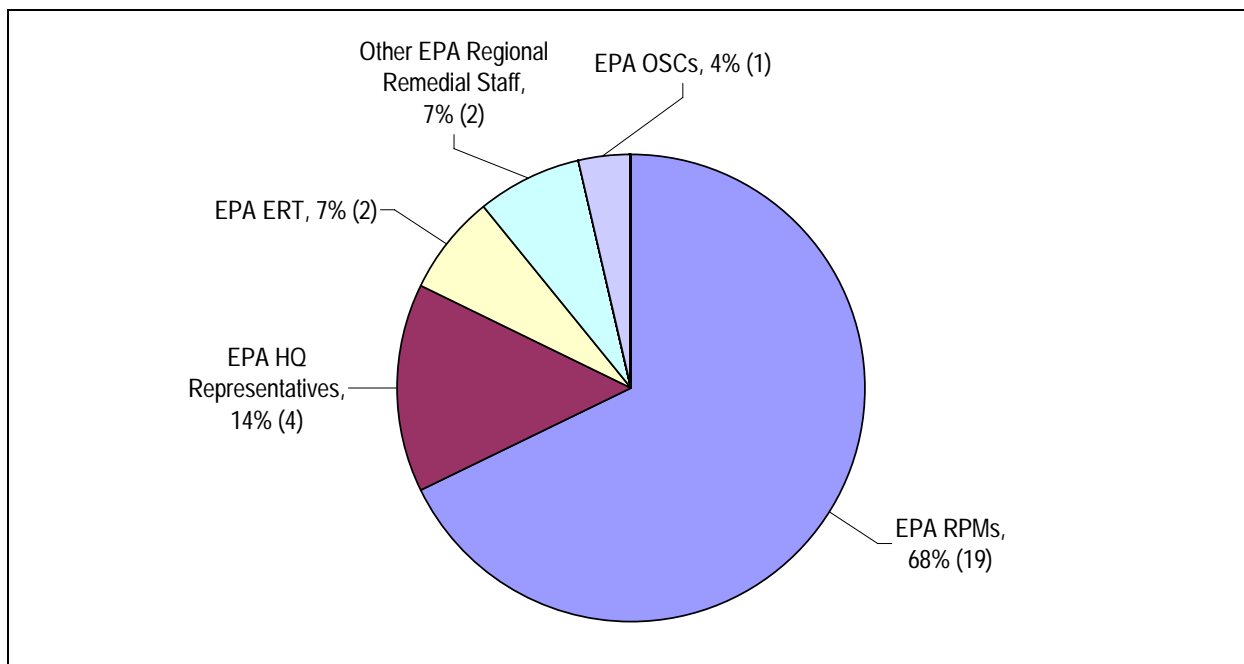
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

**Summary of Evaluation Results for Contracts Training**



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 68 percent of the students.

**Students by Job Title for the Contracts Training**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

#### **Comments on course content**

Add

- More specific examples of "performance band requirement" vs "traditional contract"
- Component on START, ERRS, and AES since RPMs work with those mechanisms.

#### **Comments on instructional methods and materials**

- Case study would be better with an example situation containing more specific solutions.

#### **Comments on usefulness of course materials as a reference for my job**

- Good template examples - could seek input on future templates.

#### **Comments on offering course at future training conferences**

- Valuable to meet 40 hr continuing contracts requirement.

#### **Comments on course name and abstract expectations**

- New information on IAGS and on COR requirements were good.

**Additional comments:**

- Great to have exercise. Thanks all!
- Case studies important; exercises always move the course along.
- Instructors' presentations were a little bit overlapping.
- RPMs may serve as RSC members and understanding the fixed rate mechanisms may be appropriate.
- I'm an OSC, but the course was very illuminating; found the IAG portion very applicable to a current site.

## DNAPL Source Zone Treatment

Monday, July 7, 1:30 p.m. to 5:00 p.m.

Instructors: Joyce Ackerman, U.S. EPA Region 8  
 Rose Marie Caraway, U.S. EPA Region 9  
 Jim Cummings, U.S. EPA OSRTI  
 Eva Davis, U.S. EPA ORD  
 Jeff Dhont, U.S. EPA Region 9  
 Richard Goehlert, U.S. EPA Region 1  
 Kira Lynch, U.S. EPA Region 10

*DNAPL Source Zone Treatment*, a 3.5 hour course, focuses on technical and project management issues that RPMs need to address when overseeing active remediation of DNAPL source areas. The course covers policy and remedy implementation issues including:

- Developing DNAPL source zone remedial action objectives
- Developing holistic plume management strategies with consideration of source zone hot spots, residual phase “warm” spots, and dissolved-phase plumes
- Determining appropriate roles for monitored natural attenuation (MNA) and technical impracticability (TI) waivers
- Overcoming the mindset that we can not actively treat DNAPL source zones
- Exploring approaches for addressing residual uncertainties on technology performance
- Reviewing options for evaluating treatment technology performance
- Reducing DNAPL source strength—what have we been able to achieve?
- Developing and overseeing remedial action contracts for active DNAPL treatment

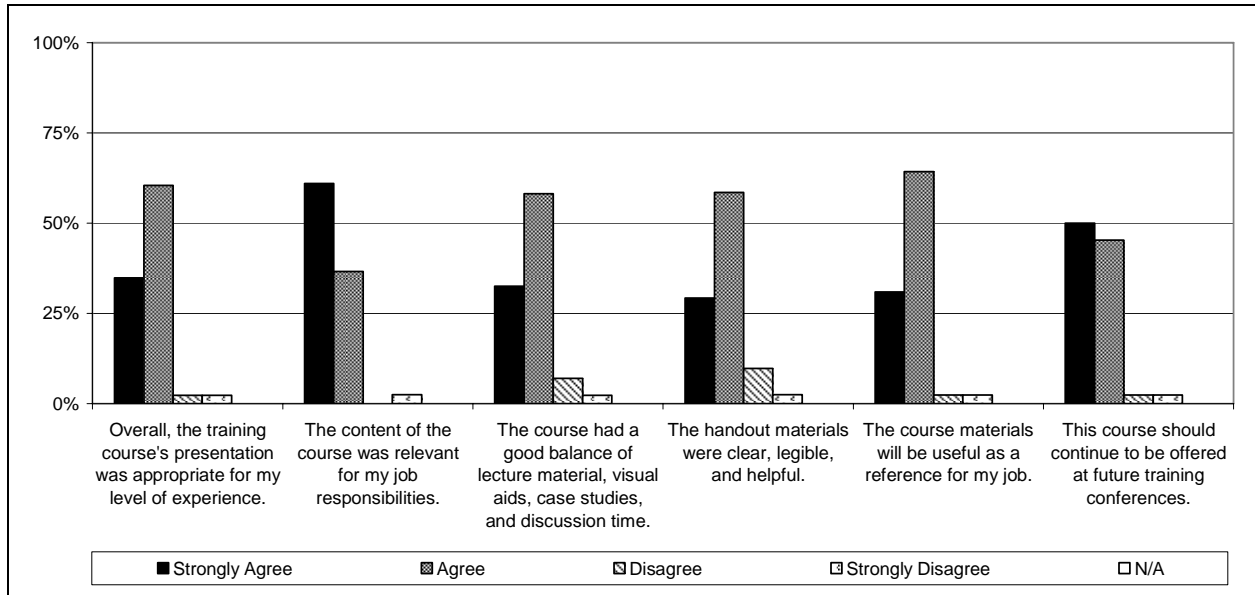
The instructional methodology for this course includes lecture, case studies, and an interactive panel discussion. The target audience for this course is experienced RPMs who are working on DNAPL sites in the RI/FS or RA implementation stage or are considering active DNAPL source zone treatment for a post-construction completion (PCC) site.

### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
96	92	45	4

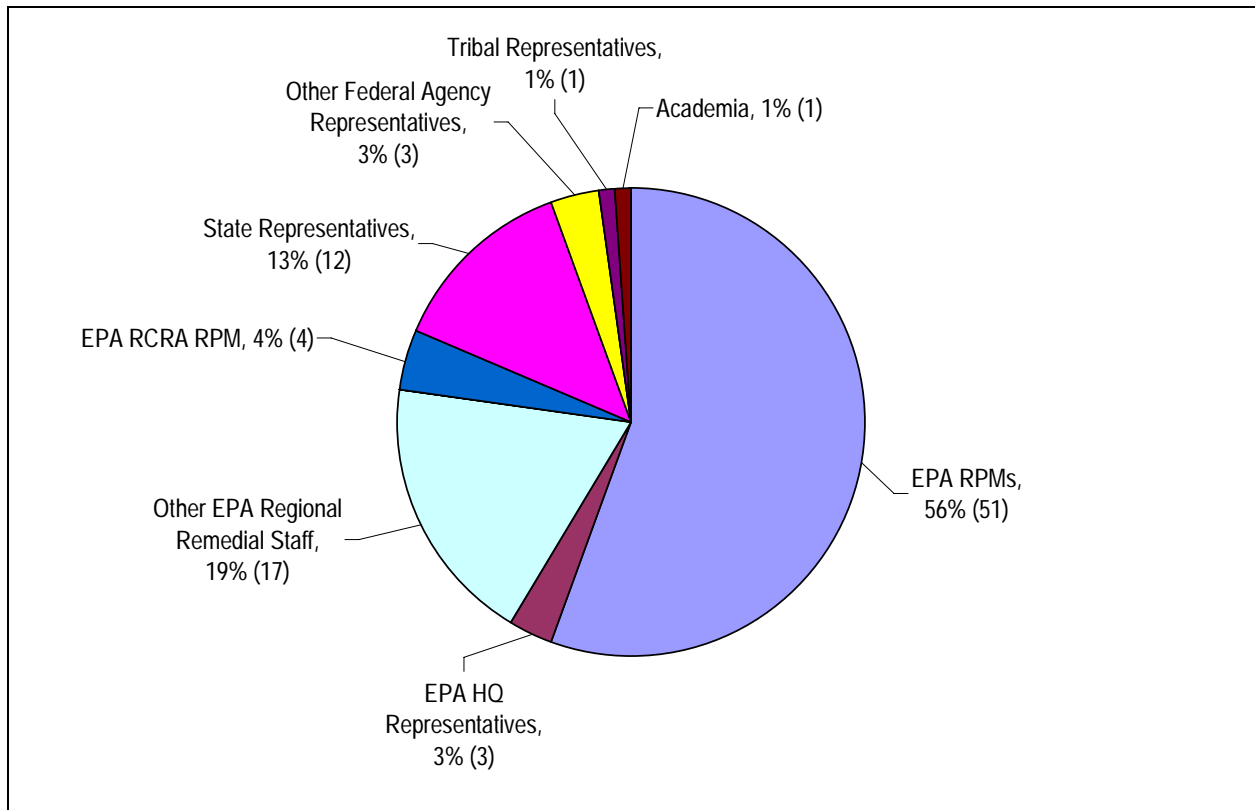
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

**Summary of Evaluation Results for DNAPL Source Zone Treatment**



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 56 percent of the students.

**Students by Job Title for the DNAPL Source Zone Treatment**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

#### **Comments on relevance to job responsibilities and experience level**

- Combining technologies to remediate DNAPL sites is a promising policy. Can the policy work at industrially or commercially active sites where the contamination site is underneath a manufacturing building?

#### **Comments on course content**

##### Add

- Chem OX case studies or other DNAPL remedies.
- Upcoming technologies/nano technologies.
- Information about increased contaminant transport/dispersion with these aggressive technologies.
- Merging of science and policy/law.
- What factors could affect overall treatment as well.
- Case studies on how to argue with PRPs against TI waivers.
- More time for questions/discussion. (*Three responses*)
- More state of the science for DNAPL remediation.

##### Shorten

- Removal example.
- Too many case studies. (*Two responses*)
- Less preliminary FS data presentations and more with actual remedy implementation.

##### Omit

- Contract changes.
- Not so many ERH case studies.
- Case studies without measurable outcomes.
- TI waivers.
- Reality check on capital US O&M costs in current political climate.

#### **Comments on instructional methods and materials**

- A little more time for Q&A would be good. (*Three responses*)
- Each presentation was done well, but there were too many case studies so there wasn't much time for questions and each presentation was rushed.
- Less time for discussion and questions from the audience.

#### **Comments on helpfulness of handout materials**

- Handouts were hard to read and presenters went through a lot of material quickly therefore the handouts end up providing a lot of value.
- Not all handouts were legible. (*Four responses*)
- Please introduce each presenter. Liked consistency in PowerPoint format across the speakers.

#### **Comments on usefulness of course materials as a reference for my job**

- Suggest constructing case studies that provide a more complete description of results.

#### **Comments on offering course at future training conferences**

- Too much focus on thermal case studies. (*Two responses*)
- The course should be offered with more variety built into it.
- Have a shorter session with a summary of new information and insights.
- If new sites are brought in and across the board comparisons and lessons learned are discussed.
- More case studies.

#### **Comments on course name and abstract expectations**

- The presentation was spot on.
- The lecture material was fine, but I was under the impression that a wider array of technologies for a wider array of sites would be discussed. Course seemed to be a sales pitch for ERH.
- Not all presentations were DNAPL source zone treatment.
- The course should be called Thermal Treatment for DNAPLs.

#### **Comments on recommending course to colleagues**

- The course has brought in the latest information, even since the 2007 offering.
- Depends on level of expertise (experts no, new RPMs and greater experience yes).
- Too much inconsistency in presentations.

#### **Comments on overall pace of the course**

- Would be great as an all-day class.
- Needs to be better organized; suggest presentations are edited before they are actually made.
- It's a lot of material for 1/2 day.
- Some presentations were very slow.
- Slow to start.
- Needed to finish on time - some speakers exceeded their allotted time.

#### **Additional comments:**

- Include the presenters' names on the presentation to follow up later. (*Four responses*) Good to get an OSC perspective. Speakers need to identify acronyms for new RPMs. (*Two responses*)
- Slides not always legible/readable. Print was too small.
- More quarterly monitoring results to show specific concentration time during the treatment.
- Need training on how to reduce the costs and to persuade the PRPs to evaluate thermal - i.e., cost incentives. What are the remedial objectives in the RODs for sites with DNAPL? What depths is thermal effective?
- Overall, very good session!
- "Take home" points were excellent to include for each presentation, along with the recap summary. This is very helpful, especially with long courses with a lot of detail.
- Need to track, at least a representative sample, site to a point where the agency can say with greater confidence that mass removal is a more cost effective way of dealing with DNAPL source areas than containment or less aggressive remedies.
- Joyce's presentation was great! Also, she was the perfect presenter for 3:00 p.m.
- Contract/bid/procurement discussion was good; should count for CEU under the contract requirements.
- Thanks! Moderator did not keep presentations on schedule; session ran over and there was no time for questions.
- Believed this was very useful for RPMs with NAPL sites; covered not only technical issues but issues related to remedy selection for NAPL active remediation. This is an area that had had far too little policy and direction and precisely the kind of thing that is beneficial at NARPM.
- Need good national examples from each region on how to effectively and successfully cleanup DNAPL source zones. The course should focus less on thermal and more on other cost-effective technologies.

#### **Participants interested in developing and/or instructing future offerings of this course**

- Roy Schrock (schrock.roy@epa.gov)
- Robert Weber (weber.robert@epa.gov)

## Federal Facility Remediation Short Course

Wednesday, July 9, 9:00 a.m. to 5:00 p.m.

Instructors: Martha Brock, U.S. EPA Region 4  
 Mary Cooke, U.S. EPA FFRRO  
 Jerald Cross, U.S. EPA Region 8  
 Nancy Harney, U.S. EPA Region 10  
 Ginny Lombardo, U.S. EPA Region 1  
 Scott Marquess, U.S. EPA Region 7  
 Paul Mushovic, U.S. EPA Region 8  
 Rich Muza, U.S. EPA Region 9  
 Brian Nishitani, U.S. EPA Region 3  
 Robert Pope, U.S. EPA Region 4  
 Debbie Vaughn-Wright, U.S. EPA Region 4

*Federal Facility Remediation Short Course*, a full-day course, focuses on current and evolving issues that RPMs may encounter while managing environmental cleanups at federal facilities. The target audience for this course is RPMs with less than five years experience working with federal facilities. Instructional methodology for this course includes lectures and case studies, taught by variety of experienced instructors. Senior RPMs and attorneys assist participants in the course to examine the following topics and issues:

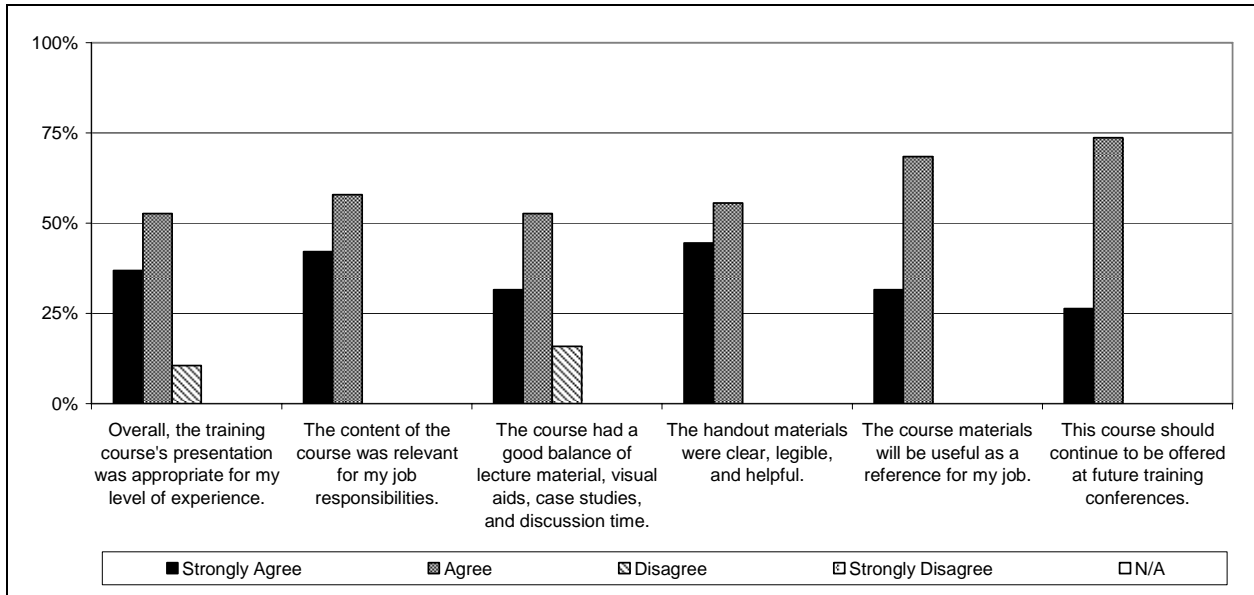
- *Federal Facility Agreements (FFA)* -- Review the legal, technical, and management framework under which the response action at the Federal facility is conducted. Review roles and responsibilities, milestone tracking, and sample FFA language.
- *Federal Facilities Project Management* -- A panel of experienced RPMs will discuss the project framework for cleanup at Federal facilities and experiences partnering and teaming with other Federal agency representatives. The panel will include RPMs with experience at both DoD and DOE sites.
- *Institutional Controls* -- Examine of the role of ICs in remedies under CERCLA and RCRA; explain planning and analysis for ICs during the RI or RCRA facility investigation (RFI) and remedy selection process; and provide guidelines on IC implementation.
- *Post-ROD Changes* -- Discuss changes that can occur at Federal facilities after the ROD, define types of changes to the ROD, and examine how to address changes under CERCLA and RCRA.
- *Five-Year Reviews* -- Outline the elements of a five-year review, examine the purpose and requirements, define roles and responsibilities for five-year reviews of federal facilities, and explain the procedures for assessing the protectiveness of the remedy.
- *Federal Property* -- Introduce the Federal property screening and transfer process, identify statutory and regulatory authorities and policy statements that affect transfers of Federal property, define roles and responsibilities of stakeholders, and compare types of Federal property transfers.

### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
40	43	20	4*

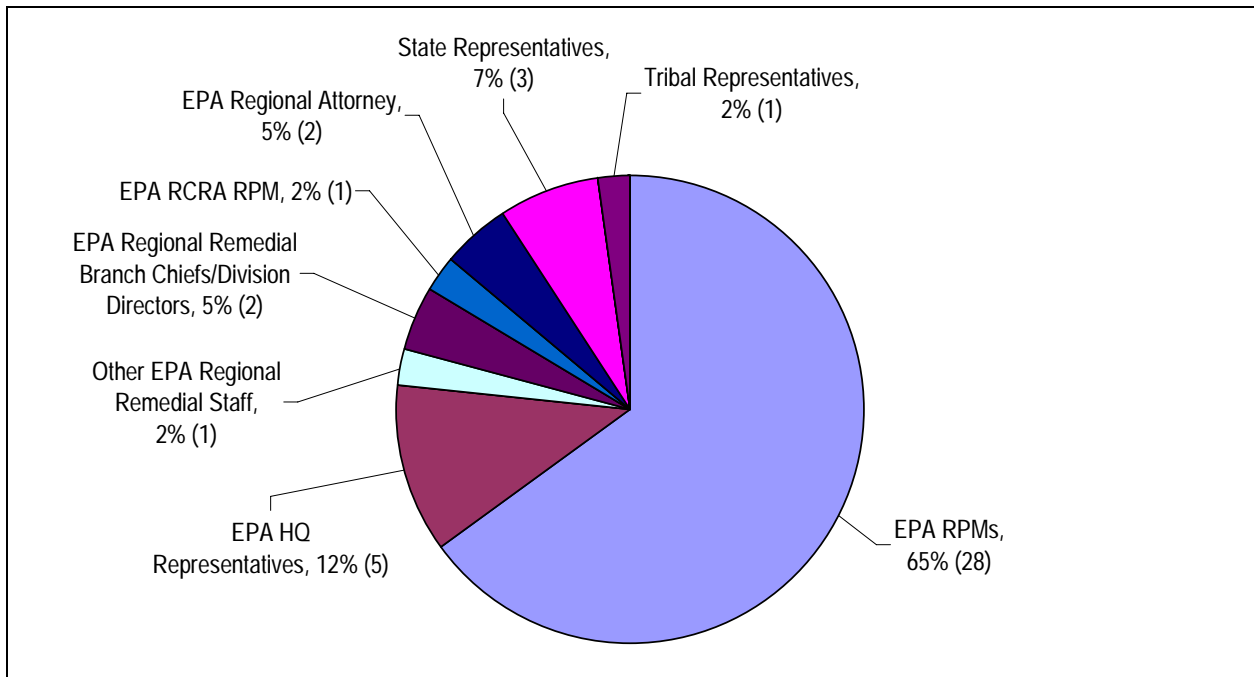
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

**Summary of Evaluation Results for Federal Facility Remediation Short Course**



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 65 percent of the students.

**Students by Job Title for the Federal Facility Remediation Short Course**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

**Comments on relevance to job responsibilities and experience level**

- Too much basic defining ESD, ROD amendment, etc. It would be nice to just focus on how FF are different, not give whole basic background.
- I was more experienced than the target audience (but I still got a lot out of it).
- It would be nice to have more DOE.
- Module 6 was directed to just military sites, yet the overall session was supposed to be for federal facilities. Most of the audience was not BRAC RPMs.
- Preferred more specifics on transfer topics relevant to RPMs and less background information.

**Comments on course content**

Add

- Information on external programs which can impact site cleanup such as MMRP
- Information on HQ role (FFRRO and FFEO)
- Lengthen
- Property transfer.
- Site examples of FF sites.
- Q&A time.
- FFA.

Shorten

- BRAC.
- Basic background.

**Comments on instructional methods and materials**

- If examples are presented, have presenters focus on the "correct" methodology to resolve the issues; need to consider not addressing "bad" protocol - especially enforcement (example: Fairchild).
- Need an exercise - maybe 5 Yr Review or ESD vs. ROD amendment; need more case study slides.
- Parts of program really dragged.
- More discussion would have been nice.

**Comments on helpfulness of handout materials**

- Last minute changes by the instructors made the slides out of order. *(Two responses)*
- In 5 year review module the actual guidance document reference was not identified until near the end - should have been up front.
- Very good materials; will be a nice reference. *(Two responses)*

**Comments on usefulness of course materials as a reference for my job**

- The hotlinks list will be very useful.

**Comments on offering course at future training conferences**

- If there is a need by newer RPMs; in R4 50% of the FF RPMs will retire in the next 2-7 years.
- Needs to be more dynamic.
- Training topics will continue to be occurring for the short- and long-term future.
- Provide updates to generalized topics, Headquarters policy directives and changes.

**Comments on course name and abstract expectations**

- Fairly general overview of all cleanup topics as they relate to Federal Facilities.
- Way more basic and more DoD than expected.

**Comments on recommending course to colleagues**

- Not in this form.
- If they were on a DoD site, not all FF.
- But mainly to new Fed/Fac or RPMs. (*Two responses*) Or to folks starting a new focus, i.e., 5 year reviews and skip the others.

**Comments on overall pace of the course**

- Could be half-day without basic background.

**Additional comments**

- Excellent course with knowledgeable and good speakers/presenters.
- It was hard to follow the instructors for the 5-year review and Federal Property Transfer.
- Please provide a list of acronyms with the materials. (*Three responses*)
- Like a legal training! Excellent!
- It would be nice to have small group discussions with people with similar sites. Property transfer should probably be discussed by an attorney.
- I thoroughly enjoyed the course; please continue to offer more training courses geared toward Federal Facility RPMs.
- Overall the course was good but due to the limited amount of time available, perhaps the panel discussion should be held separately.
- Great training! Every new FF RPM should get this material early on in career.
- More information on non-DoD LUCs would be helpful.

## Green Remediation: Opening the Door to Field Use

Wednesday, July 9, 9:00 a.m. to 5:00 p.m.

Instructors: Cathy Allen, U.S. EPA OSWER  
 Robert Boughton, California Department of Toxic Substances Control  
 Rose Marie Caraway, U.S. EPA Region 9  
 Dave Drake, U.S. EPA Region 7  
 Michael Gill, U.S. EPA Region 9  
 Deborah Goldblum, U.S. EPA Region 3  
 Penelope McDaniel, U.S. EPA Region 9  
 Carlos Pachon, U.S. EPA OSRTI  
 Sean Sheldrake, U.S. EPA Region 10  
 Aimee Storm, U.S. EPA Region 5

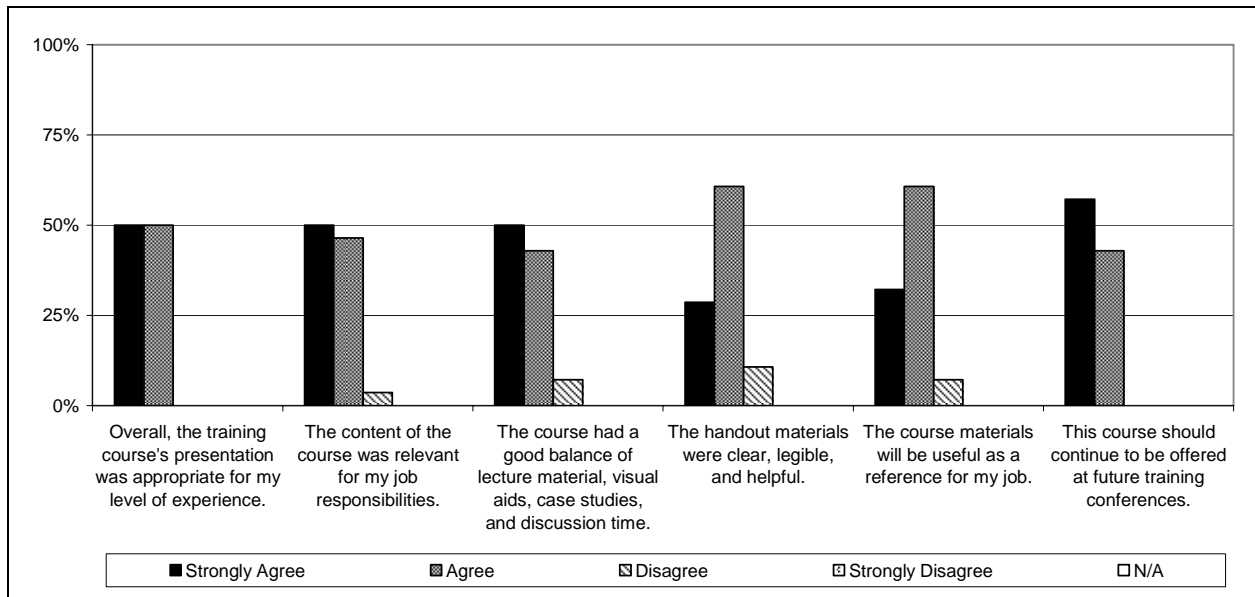
*Green Remediation: Opening the Door to Field Use* is a full-day training course on green remediation (GR), the practice of considering the environmental effects of a remediation strategy (i.e., the remedy selected and the implementation approach) early in the process, and incorporating options to maximize the net environmental benefit of the cleanup action. Some practices are quite “mature,” such as construction site best management practices including stormwater runoff management and construction and demolition (C&D) debris recycling, while others are still emerging, including the use of renewable energy sources such as wind and solar to power remedial systems. The training introduces you to the key technical, policy, and application aspects of GR. After an introduction to GR and a review of GR tools available to you, you learn about current best practices through case studies from RPMs and others, and an exercise to apply lessons learned. The case study addresses some of the challenges you might encounter while practicing GR. We close with a discussion of where GR should go next and what additional tools can help you increase the environmental benefit of your cleanups.

### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
75	85	30	5*

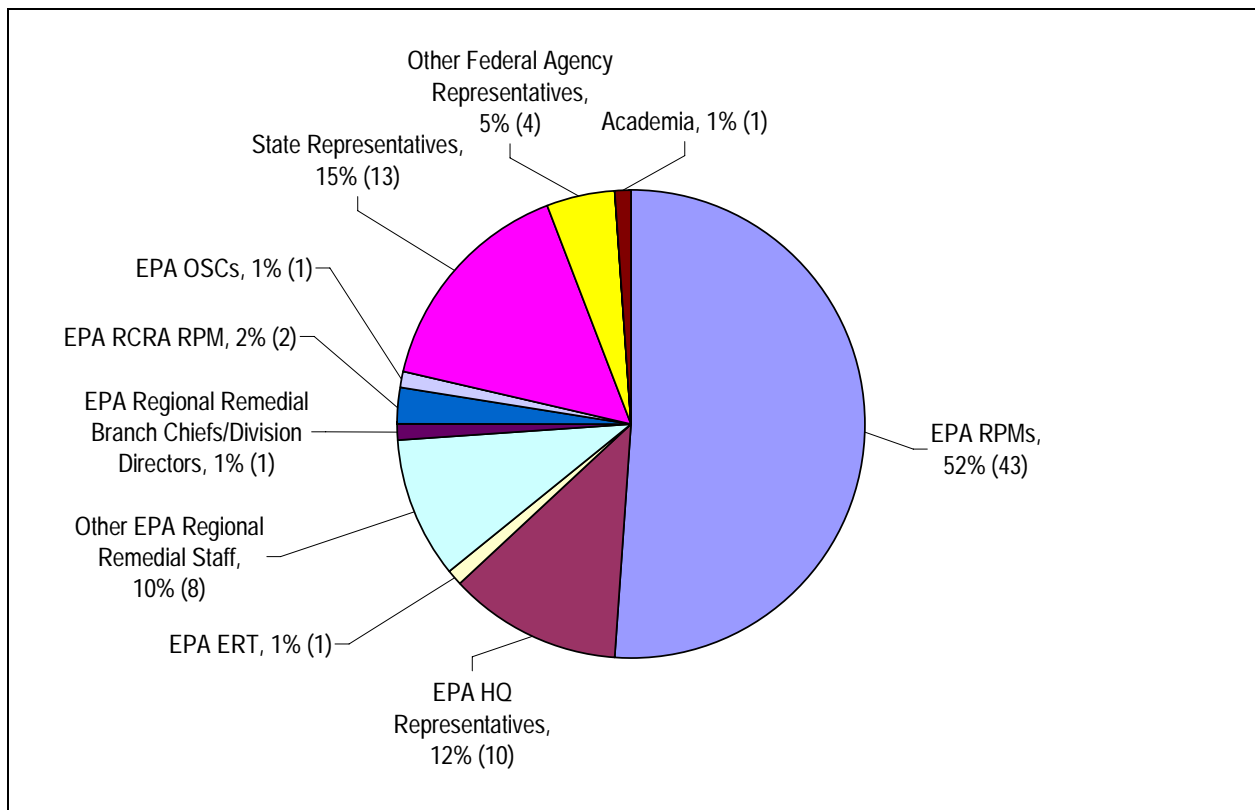
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

**Summary of Evaluation Results for Green Remediation: Opening the Door to Field Use**



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 52 percent of the students.

**Students by Job Title for the Green Remediation: Opening the Door to Field Use**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

**Comments on relevance to job responsibilities and experience level**

- Some presentations over my head.
- Can't require green remediation under Brownfield grants, but can certainly discuss with grantees all the techniques and considerations that were discussed.

**Comments on course content**

Add

- What types of green technology can EPA allow/approve.

Lengthen

- Case studies.
- Would like to see additional training on "greening" specific technologies.

Omit

- Case study as presently structured. (*Three responses*)

**Comments on instructional methods and materials**

- A good variety of speakers. (*Two responses*)
- Less time on exercise; more case studies of what can be done at different types of sites.

**Comments on helpfulness of handout materials**

- Very hard to read tables and flow charts on slides in handbook. (*Three responses*)

**Comments on usefulness of course materials as a reference for my job**

- Links to sample SOW language would be helpful.

**Comments on offering course at future training conferences**

- Go on the road - this needs to get wider coverage.
- Expand as knowledge grows.
- If there is a way to offer this course through CLU-IN, it also would go towards setting the example of the "green" theme.
- Would suggest it include some additional perspectives like the LCA presentation. EPA view is pretty narrow.

**Comments on course name and abstract expectations**

- Now know better what green remediation is and how to enhance it.

**Comments on recommending course to colleagues**

- GR is becoming more and more important, so they need to learn what it is and how to do it.
- Very timely topic.

**Comments on overall pace of the course**

- Stayed on time - kudos.
- A little fast maybe.

**Additional comments:**

- This course was superbly organized - they got 11 panelists from HQ and regions to present and a full case study example (that was actually very useful!) and ended right smack on time. This is a new and emerging thing for RPMs and this greatly raised the consciousness of those in attendance. The abstract was true to its content. The content was useful and engaging. The issue of how this could be incorporated into the actual 9 criteria analysis is left hanging, but that was to be expected and can be fodder for future discussion.
- Need more of these sessions. Great mix of big picture and case studies. Can have a weeklong conference on green remediation. Great course. With so much information on each slide, would prefer 2 slides on one page so can take back and use the handout-document as a reference.
- Please bring this training to the regions and to OSC Readiness Training.
- Could reduce the amount of site details on some of the case studies to focus on more process of getting renewable energy.
- I think this was a very well planned and balanced session. Good presentation of "this is where we are - this is what we are developing for the tool box." Excellent course!
- I think this was a good initial effort. Some things can use polishing (such as the group exercise), but glad this is getting more attention and that we offered this course at NARPM. Keep it up!
- Management needs to be brought into the fold.

**Participants interested in developing and/or instructing future offerings**

- Mike Gill (gill.michael@epa.gov)

## Know What To Say and How to Present It

Monday, July 7, 1:30 p.m. to 5:00 p.m.

Instructors: Pamela Avery, Turner Strategies, Inc.  
Gloria Sosa, U.S. EPA Region 2

*Know What to Say and How to Present It* is a 3.5 hour advanced, leadership-level workshop for EPA staff who conduct technical training for their peers at NARPM and throughout their regions. Participants learn how to target their presentation to other technical people, develop and refine messages, and engage the audience in ways that promote effective communication.

Participants learn about:

- Developing a presentation that meets your training goals
- Applying interactive techniques that will engage learners and maximize retention
- Managing group dynamics and handling problem situations
- Delivering more effective presentations by applying delivery techniques that will take your presentation style to a new level

What's in it for you?

- More polished platform skills
- Improved ability to manage content
- Greater skill using a variety of training techniques
- Ability to manage participants and facilitate discussions

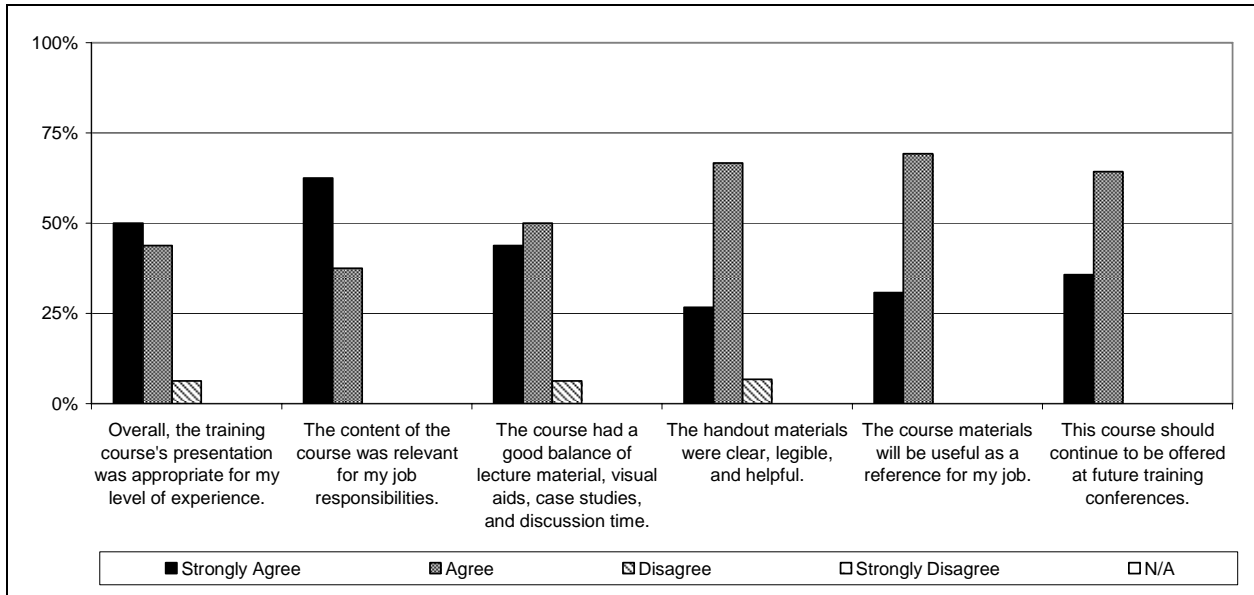
Teaching a technical course to your coworkers involves much more than standing in front of the room and telling them everything you know. Effective trainers know that not only does substance count, but so does their presentation style. This course provides hands-on techniques to help you develop and deliver presentations that boost the ability of your workshop participants to retain and apply what they learn. This highly interactive workshop is limited to 15 participants.

### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
20	19	17	4*

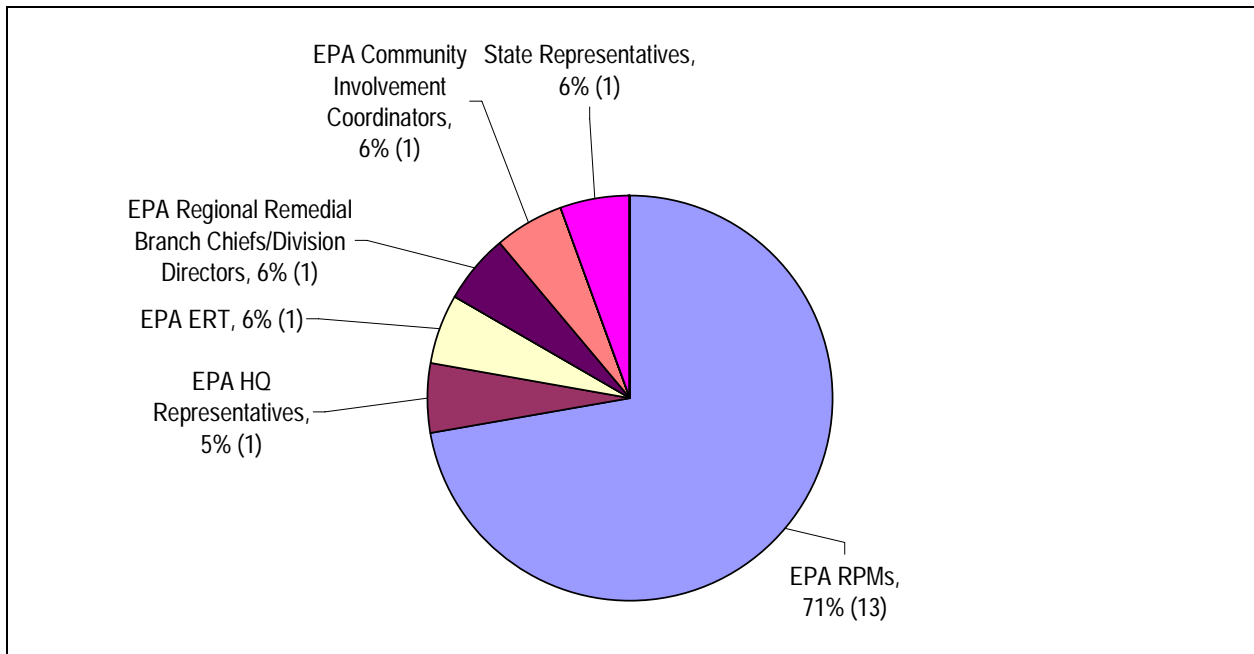
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

**Summary of Evaluation Results for Know What to Say and How to Present It**



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 71 percent of the students.

**Students by Job Title for the Know What to Say and How to Present It**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

**Comments on course content**

Add

- Specific examples of each point.

Lengthen

- Provide examples of various presentation styles.
- The presentations to the group are good; probably better suited for an all-day format.

Omit

- Exercise. (*Three responses*)

**Comments on helpfulness of handout materials**

- Handouts were provided at the end of the course and would have been more useful if I could have written notes on the slides. (*Two responses*)
- Enjoyed listening to the instructor. Would have been better for the last exercise.

**Comments on usefulness of course materials as a reference for my job**

- But the practice is probably more valuable.

**Comments on offering course at future training conferences**

- But course needs more time to fully develop points and allow participants to take full advantage of video taping.

**Comments on overall pace of the course**

- Need more time for this course.

**Additional comments:**

- Good short course.
- Very Good. Most important thing in public speaking is practice and with an upcoming public meeting this was a good opportunity for a warm up.

## Leadership is an Inside Job

Wednesday, July 9, 9:00 a.m. to 5:00 p.m.

Instructors: Michael Montgomery, U.S. EPA Region 9  
Jennifer Reynolds, Wenska Communication Works, LLC  
Mary Wenska, Wenska Communication Works, LLC

*Leadership is an Inside Job*, a full-day training course, provides both new and experienced RPMs with a chance to take stock of themselves as leaders and participate in skill-building exercises to strengthen their leadership skills.

Superfund projects involve many individuals from groups in and outside of the Agency. The challenge and burden of leading these diverse parties through the Superfund process ultimately falls on the RPM.

This one-day course focuses on three topics:

- Self-deception: our perception of events as someone else's fault and actions we can take to get ourselves out of this box.
- Deep listening: Are we aware of what others are saying? Do we check for understanding? Or do we focus mostly on what we want to say next?
- Constructive speech: learning to express what we see happening, our feelings about what's happening, our needs in the situation, and what we would like to see happen next, especially when leading small group meetings that include people we experience as difficult.

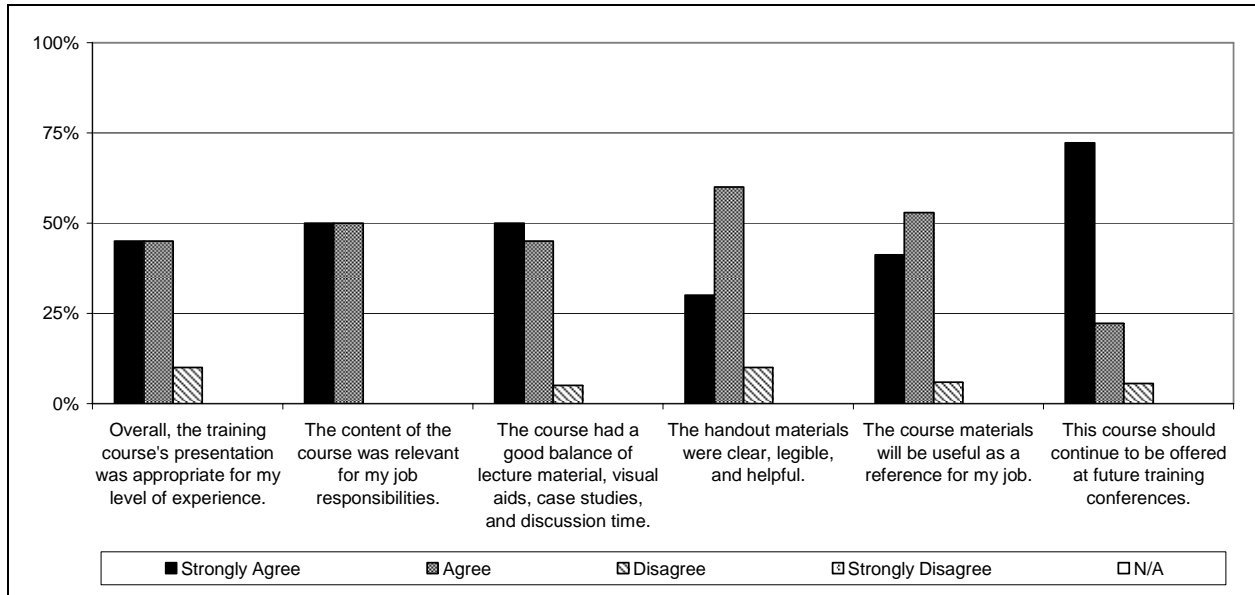
With daunting environmental concerns and shrinking financial resources to address them, overcoming self-deception, applying deep listening skills, and practicing constructive speech are essential to leadership. This class is aimed at helping RPMs strengthen their leadership skills to meet 21st century challenges that impact their projects and EPA as a whole.

### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
38	34	20	4*

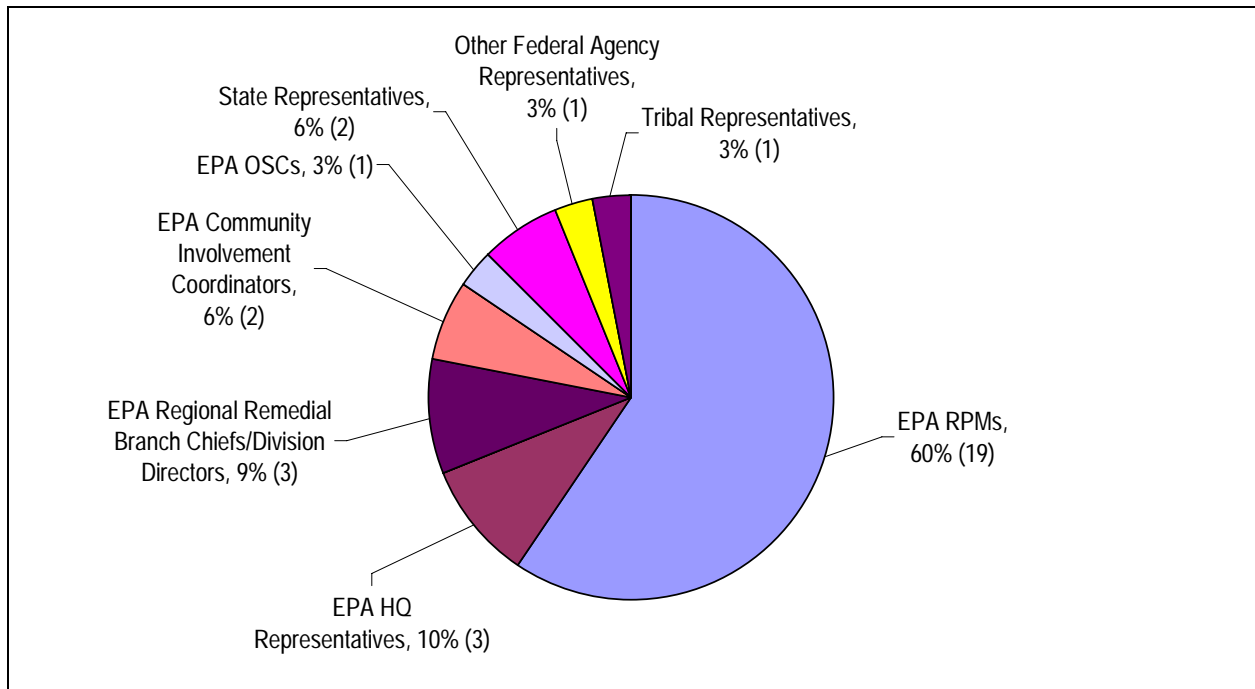
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

**Summary of Evaluation Results for Leadership is an Inside Job**



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 60 percent of the students.

**Students by Job Title for the Leadership is an Inside Job**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

**Comments on relevance to job responsibilities and experience level**

- Everyone can benefit because being a leader is an evolving process.
- Higher level leadership content to build on basics would be a good next step.
- The course is a bit simplified for me; it is a helpful refresher class.
- Leadership is crucial for management and communication.

**Comments on course content**

Add

- Ask for real stories before the course begins.

Omit

- Some of the stories.

**Comments on instructional methods and materials**

- Nice break-up of materials. (*Two responses*)

**Comments on helpfulness of handout materials**

- Short and to the point.
- In the effort to save paper I think the exercise papers could be displayed on screen.

**Comments on usefulness of course materials as a reference for my job**

- Copy of slides would have been useful too. (*Six responses*)

**Comments on offering course at future training conferences**

- Yes with a bit more beyond basics of communication; i.e. other aspects of leadership.
- Understanding that the first step to leadership is self awareness; expand to include core characteristics of leadership.
- Everyone needs to be aware of leadership and its building blocks.
- This and communications classes should be required training for all RPMs.  
(*Four responses*)

**Comments on course name and abstract expectations**

- Expected a bit more "advanced" content though. (*Two responses*)
- A better name -- "how to be an effective communicator" rather than "leadership is an inside job."
- But the course was great; just wasn't what I expected.
- If this course aims to educate the audience on self awareness, then the title should be so.

**Comments on recommending course to colleagues**

- Skills good for any staff level.

**Additional comments**

- This was a good life-learning, self enhancement course.
- Excellent course in leadership; had tools and useful information to apply at our jobs.
- Great exercises for emphasizing course topics.
- Leadership is an inside job did not really reflect what was discussed in class but it was very relevant to everything we do.

**Participants interested in developing and/or instructing future offerings of this course**

- Viola Cooper (cooper.viola@epa.gov)
- Lida Tan (tan.lida@epa.gov)

## **Monitored Natural Attenuation and In-Situ Bioremediation for Organic Contaminants**

Wednesday, July 9, 9:00 a.m. to 5:00 p.m.

Instructors: Robert Borden, North Carolina State University  
Matthew Charsky, U.S. EPA OSRTI  
John Wilson, U.S. EPA ORD

*Monitored Natural Attenuation and In-Situ Bioremediation for Organic Contaminants*, a full-day training course, focuses on technical issues that RPMs address during cleanups under CERCLA. After taking the course, participants can:

### **Monitored Natural Attenuation (MNA)**

- Distinguish sites where MNA has a reasonable chance of success from sites where MNA will be disappointing
- Estimate the rate of natural attenuation in concentration over time from long-term monitoring data.
- Determine the uncertainty associated with the estimate of the rate of attenuation
- Analyze data from a five year review cycle to determine whether a site is on schedule to meet a concentration-based cleanup goal within a predetermined time frame
- Design the best monitoring schedules to learn the rate of natural monitored attenuation at a site
- Use spreadsheets to easily and quickly evaluate long-term monitoring data to determine whether a site is on schedule to meet a cleanup goal

### **In-Situ Bioremediation**

- Identify the chlorinated solvents that are amenable to in-situ bioremediation or MNA
- Distinguish sites where in-situ bioremediation has a reasonable chance of success from sites where in-situ bioremediation will be difficult and disappointing
- Identify the design considerations and design tradeoffs for in-situ bioremediation using soluble substrates and in-soluble substrates
- Recognize appropriate and attainable goals for in-situ bioremediation
- Interpret site-specific data necessary for site characterization prior to in-situ bioremediation, with a focus on contaminant distribution and hydrogeological characteristics
- Interpret necessary site-specific data for appropriate process monitoring during in-situ bioremediation, with a focus on daughter product distribution, biogeochemical parameters, and molecular tools for characterizing active microorganisms

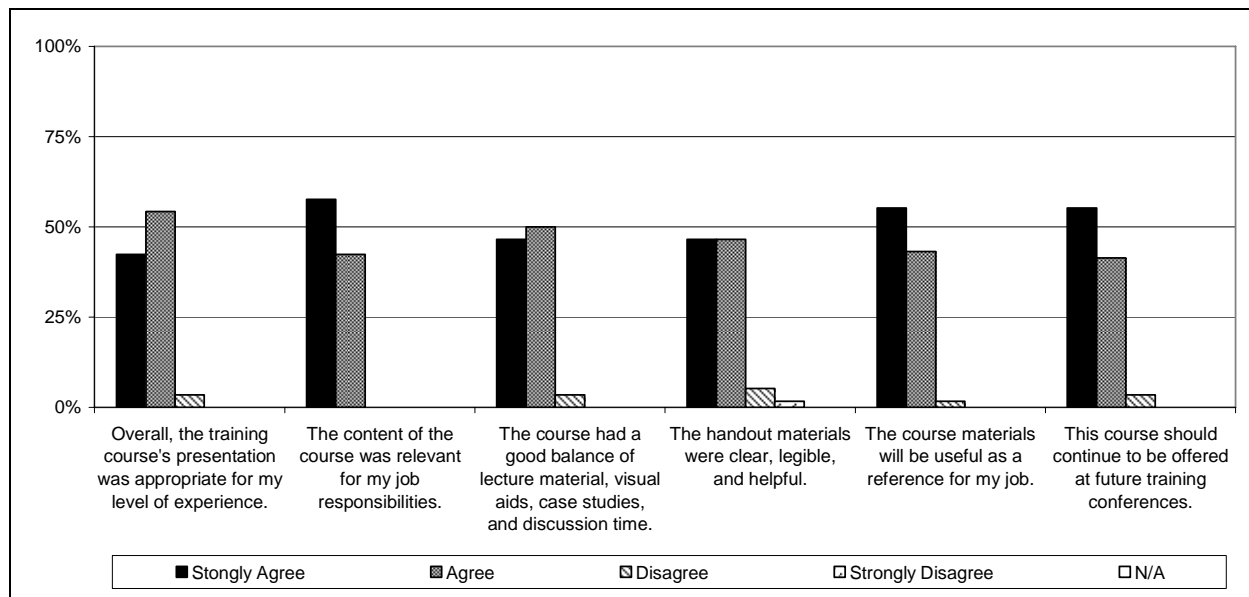
The instructional methodology for this course includes lecture, case studies, and group exercises. The target audience for this course is RPMs who review plans and reports for in-situ bioremediation and MNA and find the information presented to them to be cryptic, confusing, and incomplete. This course helps RPMs gain a more complete understanding of the performance of in-situ bioremediation or MNA at their sites. You do not have to be a subject matter expert to benefit from this course.

**Participation and Average Grade**

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
99	93	59	4*

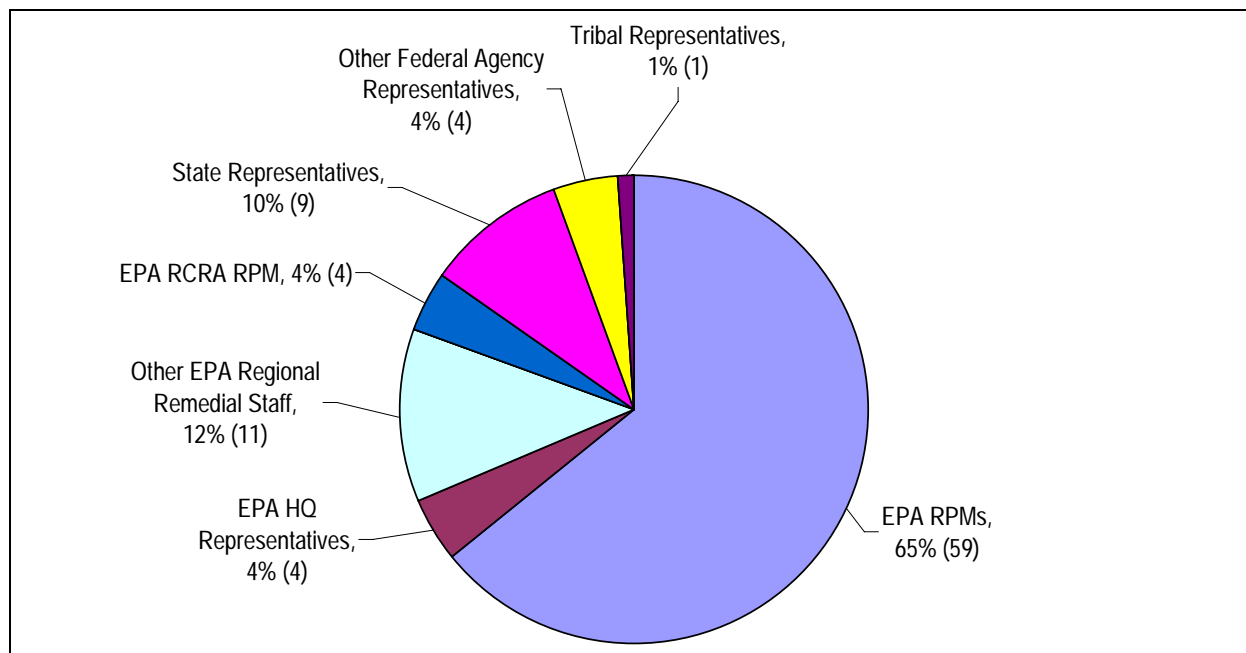
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

**Summary of Evaluation Results for Monitored Natural Attenuation and In-Situ Bioremediation for Organic Contaminants**



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 65 percent of the students.

**Students by Job Title for the Monitored Natural Attenuation and In-Situ Bioremediation for Organic Contaminants**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

#### Comments on relevance to job responsibilities and experience level

- Too much material cannot be covered in the small amount of time allotted. (*Two responses*)
- Statistics for dummies should be a pre-requisite.
- Fairly technical at times and a bit over my head, but very good information to know and for further study.
- In-situ bio bit better (newer) discussion and information than MNA; both were good.
- The course was good, but just a tad bit too much on the academic side
- Sometimes too fast. Figures without code. Add discussion on variability; change of substrate; change adding TPH or other COCs.
- I have several solvent plume sites where bio/MNA may be applicable.
- Hoping to also learn more about biodegradation of fuel oxygenates. (*Two responses*)
- Provided practical tools and approaches.
- Especially MNA.

#### Comments on course content

Add

- General discussions on how well degradation rate constants and predicted performance compare to actual performance and would it work better in certain types of sites and not others.
- Discussion of bio as "polishing step" to thermal remedial activities.
- More "EPA" case studies.

#### Lengthen

- MNA and Bio-remediation can be longer.
- EPA policy and EPA implementation of MNA.
- More on application.
- Geochemical changes and potential impacts to downgradient wells and or surface water.
- Research information.

#### Shorten

- Less emphasis on calculations.
- Case studies. (*Two responses*)
- How to Design an Emulsified Oil Project - almost seemed like a separate course or could be.
- It should be shortened to allow more detail in what is presented.
- Statistics - EPA can provide via contract support or RPM can review.

#### Omit

- Less college level discussion and more application at real sites.
- Remove industry promotion of their technologies.

#### **Comments on instructional methods and materials**

- Wish we could have gone through all case studies. (*Two responses*)
- Less statistical discussion and more EPA policy and implementation discussion.
- A lot of good questions got cut short or were not addressed. (*Two responses*)
- Course materials are adequate for class but time is too short.

#### **Comments on helpfulness of handout materials**

- Some were, some will be difficult to read later without the overhead screen.
- Several corrections identified by instructors.
- Many figures need x, y axis labels; code labels for boxes, etc.
- Confusing slides; not always easy to grasp the message. (*Two responses*)
- They should be in color.

#### **Comments on usefulness of course materials as a reference for my job**

- The CD was an excellent idea.
- I will refer to guidance.
- Select portions.

#### **Comments on offering course at future training conferences**

- Especially MNA.
- Add more case studies to discuss variability. Last speaker ran out of time and did not review case studies.
- With technical updates.
- Break up course into day length for each MNA and In situ Bio. (*Three responses*)
- Depends on RPMs request; depends on course evaluation.
- It should be modified before being offered again. It should focus on MNA implementation in the context of EPA policy and less on detailed college statistics discussion and less vendor driven presentation. (*Two responses*)

#### **Comments on course name and abstract expectations**

- It exceeded my expectations - information presented was useful and practical. (*Two responses*)
- Too much time spent on statistics and also in selling in situ specific substrates.
- To a certain extent - real life applications would help.
- Specifically MNA was exactly what I was looking for as far as content.
- Partially; the abstract did not quite capture the course content.

**Comments on recommending course to colleagues**

- Depends on scope of RPMs needs.
- Especially MNA portion.
- Excellent speakers.
- The technical content.

**Comments on overall pace of the course**

- Though some portions/speakers were a little slow.
- A lot of technical material in short time - maybe bioremediation could be a full day.
- The course was really good but too many slides had instructors rushing through many of them. *(Three responses)*
- Mixed - 2 instructors - with different paces.

**Additional comments**

- I liked the spreadsheet demonstration. Too much detailed information on design of EOS remediation systems; would have preferred case studies.
- Borden's sections contained too much material with obvious conclusions - don't spend so much time demonstrating and proving the obvious - he should include more field results from case studies and use those to illustrate the principles.
- Excellent; record and place in Web site.
- Very good information.
- Design considerations and tradeoffs - how to design an emulsified oil project - actual costs of their demonstration projects should be included. I left without knowing if this is a cost efficient technology. Although we didn't get to the case study, it doesn't look like the case study provided this information either.
- Great session - CD with programs and guidance links are very helpful.
- Too much time on the statistics; condense with summary of why you need more samples at beginning and then at end without walking us through the equations and rationale.
- When industry is invited to speak, caution should be taken to ensure that their promotion of their technology of interest does not conflict with EPA or other vendors in industry (no sales pitches).
- There are RPMs who are engineers and do not have a lot of knowledge of hydrogeology. It will be helpful if there are basic courses taught in future NARPM (to understand hydrogeology).
- Maybe include practical applications, from RPM's perspective. Good scientific overview. Good case study.
- I'm already planning on using this for a site when I return.
- Overall very good course and good instructors.
- John Wilson was excellent.
- Should go back into some of the basics.
- Would have been nice to address Dr. Borden's and John Wilson's disagreement about dehalococoides head on. J. Wilson is a brilliant lecturer. I think his presentations were wonderfully well put together.
- A good "reality check" for actual process and time frames.
- This course made the whole conference worthwhile.

**Participants interested in developing and/or instructing future offerings of this course**

- Ben Bentkowski (bentkowski.ben@epa.gov)

## Monitored Natural Attenuation for Inorganics

Tuesday, July 8, 1:30 p.m. to 5:00 p.m.

Instructors: Steve Acree, U.S. EPA ORD  
 Matthew Charsky, U.S. EPA OSRTI  
 Pamela Molitor, U.S. EPA Region 5  
 Richard Wilkin, U.S. EPA ORD

*Monitored Natural Attenuation for Inorganics*, a four-hour course, uses lectures and case studies to present an overview of site characterization approaches to support evaluation of the potential for MNA as a remedy for inorganic contaminants in ground water. The course discusses the following technical issues:

- Identifying attenuation processes that can lead to attenuation of inorganic contaminants in ground water.
- Determining the type of field and laboratory data needed to support site evaluation.
- Understanding the role of models to support site characterization.
- Examining the tiered process for structuring the site characterization effort.
- Looking at case studies where MNA was evaluated as part of the remedy selection process.

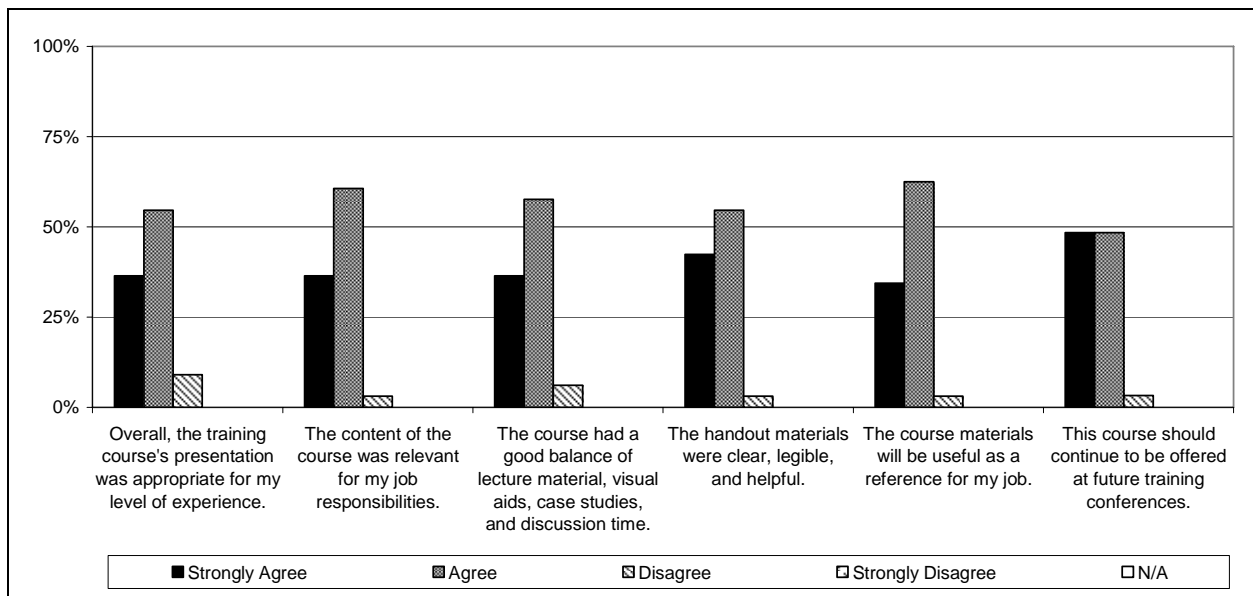
The instructional method for this course includes lectures and case studies. The target audience for this course is RPMs interested in MNA for inorganics.

### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
68	64	33	4*

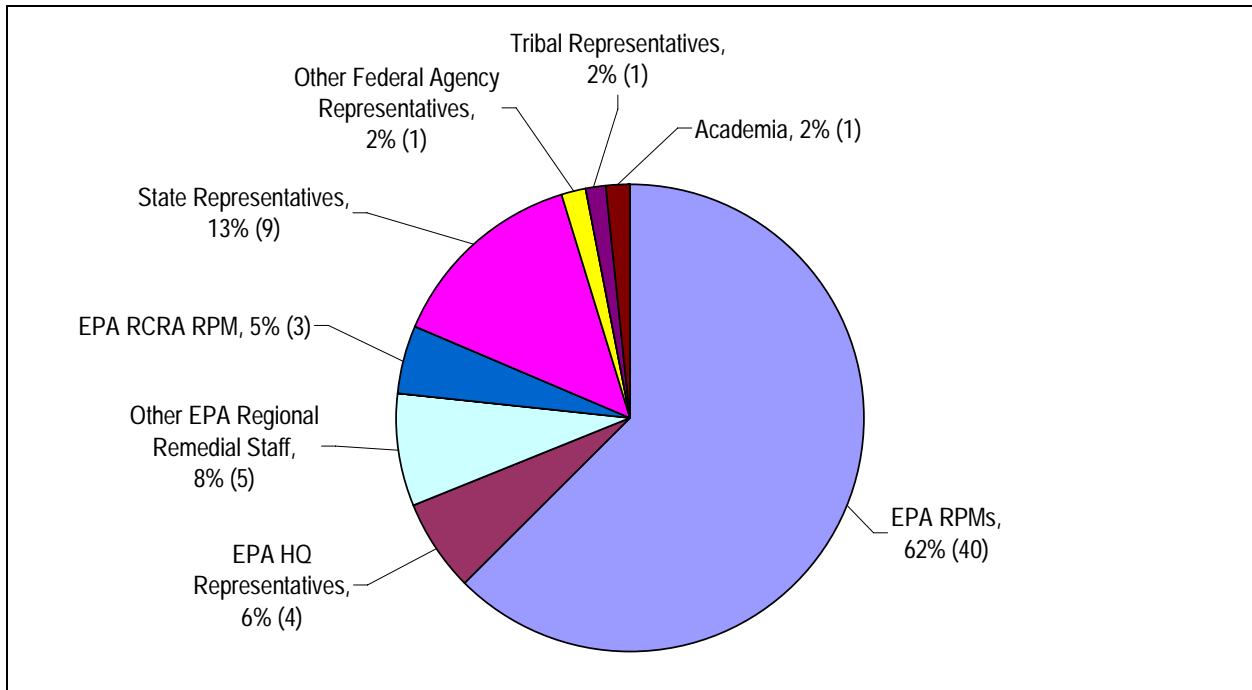
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

### Summary of Evaluation Results for Monitored Natural Attenuation for Inorganics



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 62 percent of the students.

**Students by Job Title for the Monitored Natural Attenuation for Inorganics**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

**Comments on relevance to job responsibilities and experience level**

- A little complicated and difficult to understand, but relevant and exciting material.
- However, the contaminants of concern at my site are organics, VOCs, PAHs, etc.

**Comments on course content**

Add

- Add organic attenuation.
- Go through different types of models currently available.
- More science and exercises are needed.

Lengthen

- Reasons for moving from Tier 1 to Tier 4.
- The basic concept of MNA for inorganics vs. other chemicals.
- How to read Geochem phase diagrams.
- Reversibility.

Shorten

- The ground water hydrology discussion was too basic.
- Drilling problems and normal hydrology.
- Geology.

**Comments on instructional method and materials**

- Would like more interaction with the instructors.
- Suggest bringing examples of representative compounds - colorful oxides or at least a photo to emphasize point.
- Too monotonous.
- Great idea - including CD with guidance and white papers.

**Comments on helpfulness of handout materials**

- Some slides were too busy.

**Comments on usefulness of course materials as a reference for my job**

- Limited application to my sites at this time.
- Great materials - the phase diagrams were very helpful. (*Two responses*)

**Comments on offering course at future training conferences**

- Especially with RADs and more science.
- Not with the same format and style.
- Make it a workshop.
- Good to be aware of the resource.

**Comments on course name and abstract expectations**

- Way too much geochemistry.
- Yes, the course met my expectations and materials supported the over-arching theme.

**Comments on recommending course to colleagues**

- Useful course for RPMs dealing with inorganics - maybe not so good for RPMs without a strong chemistry background.
- Tech support staff mostly (chemist & geologist particularly).
- MNA is used quite possibly too much. Knowledge is power.

**Comments on overall pace of the course**

- Some geochemistry intro and review might be good as an introductory module.

**Additional comments**

- The length of the presentation was good and allowed for plenty of time for discussion. (*Two responses*) The presenters were well prepared to answer questions that they were asked.
- Make material presentation easy to use in the future for the RPM. Answers to key questions and red flagging things to take into account are helpful for RPMs. Present steps to follow to determine if MNA is appropriate.
- Did not seem that all lectures were clearly applicable to the topic. Please cover more on re-mobilization of AS or ways to prevent it from becoming mobilized after MNA has met cleanup numbers.
- Great course - look forward to more info on other metals.
- Consider making a full day course - more science, more information about decision points; advance level course. (*Two responses*)
- Excellent Instructors. Very interesting material.
- It is a very dry subject that needs a lot of different skills by the presenters. Also it needs more audio-visuals.
- Rick was an outstanding instructor - very knowledgeable.
- How about a name change to MNP-monitored natural processes?

**Participants interested in developing and/or instructing future offerings of this course**

- Wayne Praskins (praskins.wayne@epa.gov)

## Multi-Increment Sampling/Decision Unit Sampling

Thursday, July 10, 9:00 a.m. to 12:30 p.m.

Instructors: Harry Craig, U.S. EPA Region 10  
 Rene Fuentes, U.S. EPA Region 10  
 Alan Hewitt, U.S. Army Corps of Engineers  
 Kira Lynch, U.S. EPA Region 10  
 Doug Maddox, EPA FFRRO  
 Charles Ramsey, EnviroStat, Inc.  
 Zanna Satterwhite, Geomatrix Consultants

*Multi-Increment Sampling/Decision Unit Sampling* is a 3.5 hour course targeted for RPMs. Multi-Increment Sampling (MIS) and analysis procedures have recently been utilized that integrate high density field sample collection procedures with laboratory subsampling procedures to address the greatest source of uncertainty in the sampling and analysis process, which is field sampling design.

MIS procedures were originally used primarily for military explosive compounds in soil due to the substantial heterogeneity of explosives in training range soils. Application of MIS procedures improved both sample representativeness and reproducibility for these contaminants, and MIS field sampling design and laboratory subsampling procedures have been incorporated into EPA SW-846 Method 8330B, Appendix A. Additional research has also been conducted on other classes of contaminants, including propellants, perchlorate, metals, and some additional non-volatile organic compounds in soils.

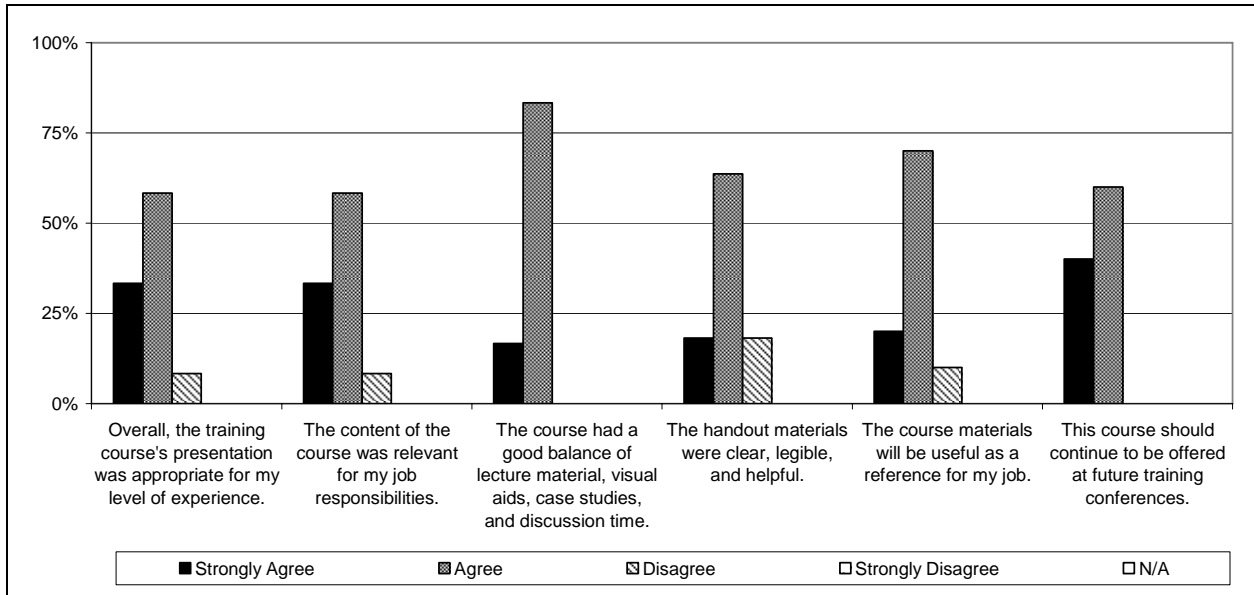
This session focuses on: 1) an overview of the concepts and principals of MIS sampling procedures, and 2) case studies on the application of MIS procedures to explosives, propellants, perchlorate and metals in soil. Results are presented to demonstrate the effectiveness of sample representativeness and reproducibility of MIS sampling procedures in field application. In addition, research on the potential application of MIS to volatile organic compounds (VOC) in vadoze zone soils is presented.

### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
34	34	13	4*

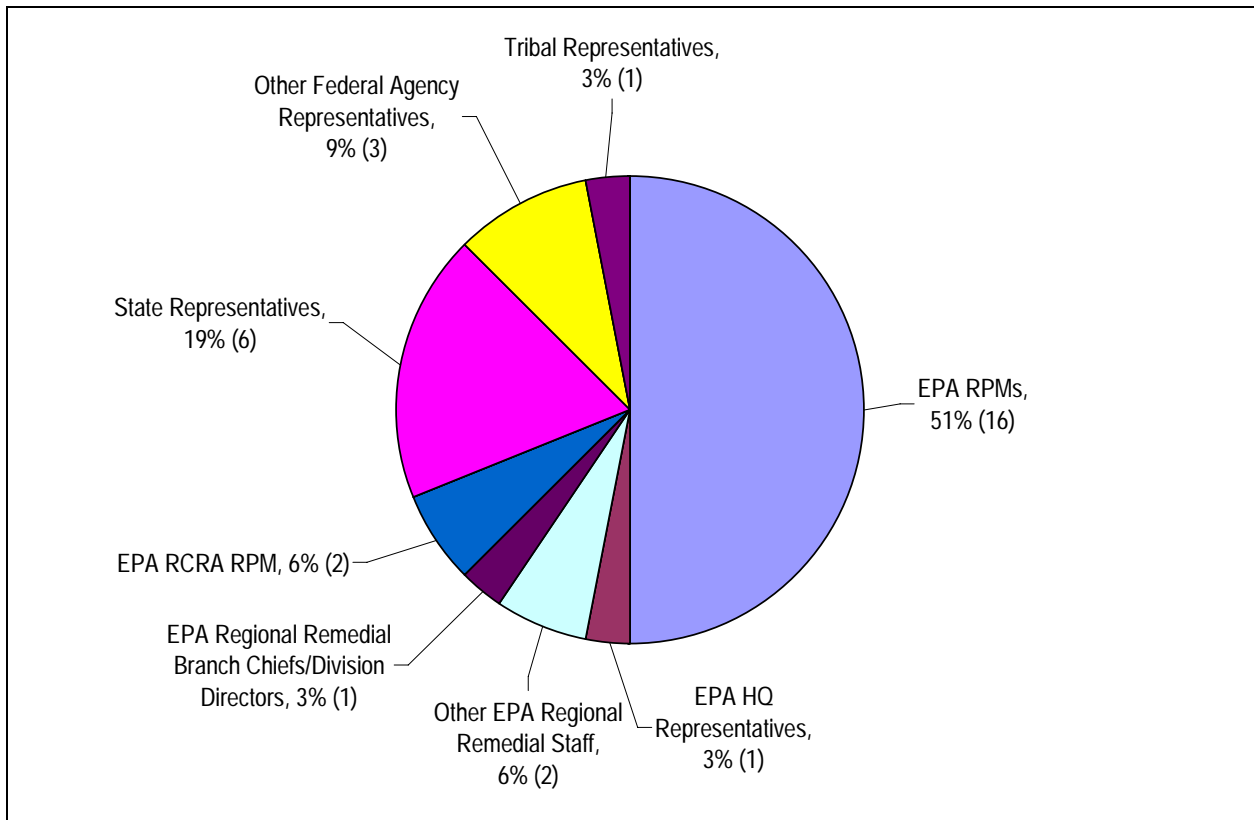
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

**Summary of Evaluation Results for Multi-Increment Sampling/Decision Unit Sampling**



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 51 percent of the students.

**Students by Job Title for the Multi-Increment Sampling/Decision Unit Sampling**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

**Comments on relevance to job responsibilities and experience level**

- Appreciate references and direction to further information.
- How about offering a course with field sampling or showing a video about field sampling.

**Comments on course content**

Lengthen

- The first and second module on MIS.
- Key approaches and benefits (use the video of Monte Carlo situation of true concentration v. discrete results). (*Two responses*)
- In section on resistance to MIS talk about risk assessor's concerns about dilution and address in DU discussion.
- The whole thing should be mandatory.
- Need to set stage for those unfamiliar with topic.

**Comments on instructional methods and materials**

- Tables were too small; hopefully the downloadable version will be more legible.

**Comments on helpfulness of handout materials**

- Some of the handout materials were illegible and unclear with small print. (*Two responses*)

**Comments on course name and abstract expectations**

- But I think the title should be changed to attract/inform more staff and management.

**Comments on recommending course to colleagues**

- Those who go out into the field.
- The term "multi-increment" is correct, but not accessible immediately for average talks.

**Comments on overall pace of the course**

- This should be a full day course; the instructors were rushed through the material so that they could get it done in the allotted time. (*Two responses*)

**Additional comments**

- Very good class but may need more time with more examples. (*Two responses*)
- Verbal explanation in response to question worked well, add more pictures to illustrate sub-sample error would be helpful and makes concepts more accessible.
- This course covered a potentially very important issue and technique/approach (relates directly to the data used to make our remedial decisions), but unfortunately did so in a very confusing and obfuscated way. Well over an hour and a half passed by and people were raising their hands asking "what is multi-increment sampling?" (*Two responses*) I also felt that the panelists had a very strong reluctance to acknowledge the approaches' limitations - they represented it as applicable to any and all data gathering and sampling situations, regardless of medium or objective. In reality, the method applies well to surface soil and sediment data collection in which an average of concentration data (central tendency) is desired. People left disappointed and, not as impressed with the approach as they could have been.

## Nanotechnology: Practical Considerations for Use in Ground Water Remediation

Monday, July 7, 1:30 p.m. to 5:00 p.m.

Instructors: Mary Logan, U.S. EPA Region 5  
Sankalpa Bajpai, Tetra Tech EM Inc.

*Nanotechnology: Practical Considerations for Use in Ground Water Remediation* is a 4-hour intermediate level course. Participants should have a basic level of understanding of the Superfund process and ground water remediation. Nanomaterials consist of atomic, molecular, and supramolecular particles of approximately 1 to 100 nanometers (nm). Nanomaterials are effective in degrading volatile organic compounds (VOC) and are becoming increasingly useful in ground water remediation at hazardous waste sites. This course presents information on issues a site manager should consider when evaluating the applicability of nanotechnology for remediating ground water during the major stages of the Superfund process before issuing a ROD, including site characterization, bench- and pilot-scale tests, and feasibility studies.

For the site characterization phase, instructors discuss which contaminants are amenable to treatment, and geochemical parameters and site hydrogeology that influence effectiveness. The course covers when and how to conduct bench- and pilot-scale tests, and the cost of those studies. For the feasibility study phase, the course addresses factors affecting the development, screening, and potential selection of nanotechnology as a ground water remedy, including challenges to implementation. Interactive question-and-answer sessions and a ground water remediation case study allow the participants to evaluate the applicability and effectiveness of nanotechnology for the case.

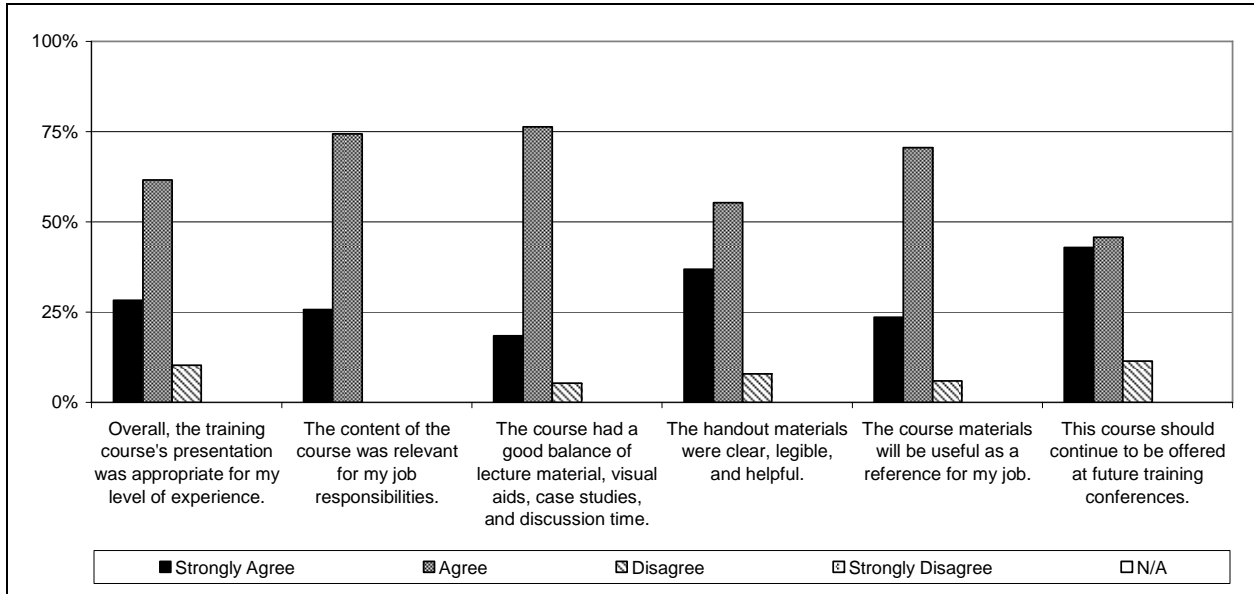
Participants do not need to have prior experience with nanotechnology. The instructors present an overview of nanotechnology at a level reflecting the attendees' experience, based on a pre-training survey.

### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
78	65	39	4*

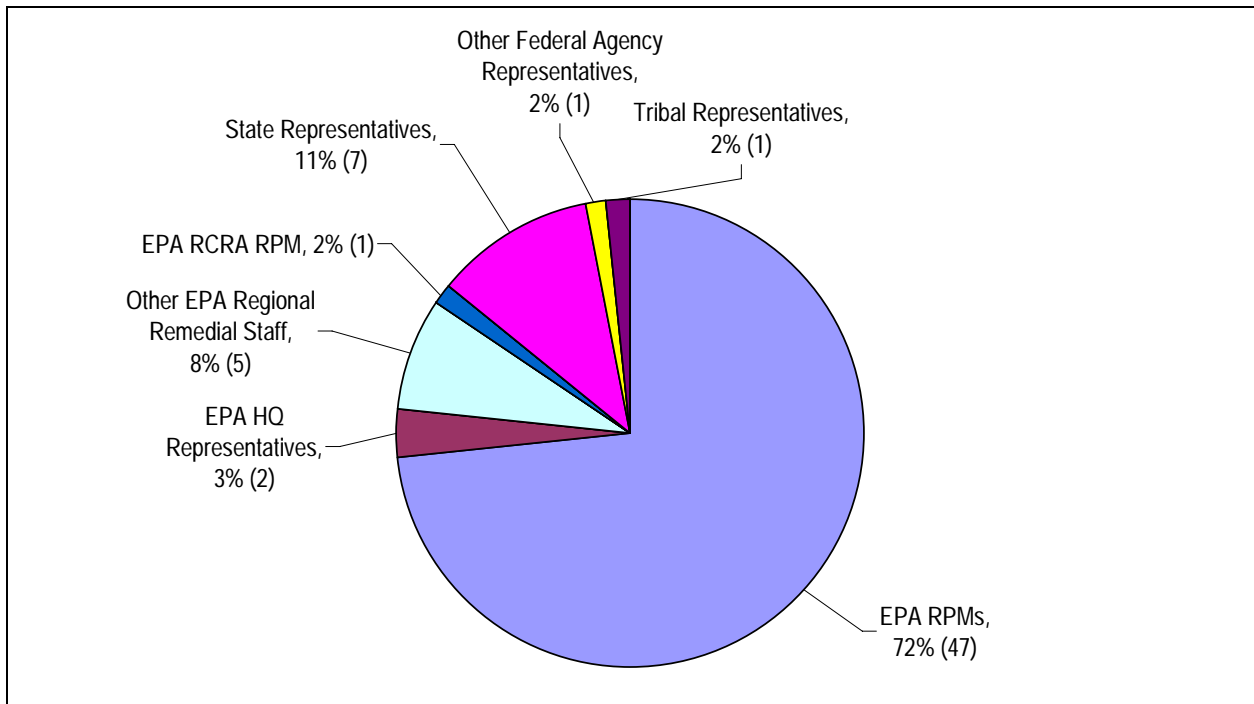
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

**Summary of Evaluation Results for Nanotechnology: Practical Considerations for Use in Ground Water Remediation**



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 72 percent of the students.

**Students by Job Title for the Nanotechnology: Practical Considerations for Use in Ground Water Remediation**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

#### **Comments on relevance to job responsibilities and experience level**

- Mixed, this course indicated in the beginning that it was intended for RPMs familiar with the RI/FS process. However, it spent a lot of effort on the RI/FS process. (*Three responses*)
- Thought it would be more technical. (*Two responses*)
- Yes and no - I knew very little about NanoIron but felt I knew as much as what was presented.
- Course started well; I would like to see more case studies with maps presented first, then the discussion on the process.
- Good overview of nanotech.

#### **Comments on course content**

Add

- Other new nano technologies in scientific literature. (*Two responses*)
- Need to address monitoring performance of the remedy.
- Non n-ZVI cases (even if lab scale).

Lengthen

- Would like more info on available research grants.
- Case Studies. (*Two responses*)
- Risk of nanotechnology.
- Eco/HH studies. How this meets the intent of the SDWA?

Shorten

- ZVI.
- RI/FS section.

#### **Comments on instructional methods and materials**

- It needed a greater discussion on fate and transport and ecological/human health effects, or at least a comparison to natural forms/concentrations of nanoscale iron.
- Maybe include a few more practical applications - videos of implementation in field?
- Spend more time on actual case study.
- Lecture and visual aids were good, but lack of relevant case studies was disappointing.

#### **Comments on helpfulness of handout materials**

- Material was very well done.
- I appreciate the handout materials. Its helped focus the course and to get through more material.
- Most of the first half was very basic and not always associated with nanotechnology. Might consider eliminating next time.
- Some of the handout materials had small print which was unclear and not legible. (*Seven responses*)
- Please provide information for figures that are in black and white, but notes refer to color of lines.

#### **Comments on usefulness of course materials as a reference for my job**

- It was simple enough and concise for RPMs who had no experience with nanotechnology.
- The materials presented do not indicate knowledge that is safe to use in potential drinking water sources. That isn't to say I would rule it out, but I would turn to other studies.

#### **Comments on offering course at future training conferences**

- Course should be shortened - some materials were repeated.
- Until the course can cover more than ZVI treatment of VOCs.
- More information.
- With more case studies.

- I would suggest a vendor to give a segment since this is a developing technology.
- Should be updated and presented as technology experience evolves. (*Four responses*)
- Include info/studies if available from SERDP/GSTCP
- It does not appear that we have the knowledge to use this in uncontrolled situations, but sites where we can ensure it will be contained would be a good test site with regular monitoring to establish long term safety.
- The field is still maturing, so yes, it makes sense to continue to offer this as a course.

#### **Comments on course name and abstract expectations**

- I didn't think the course was very practical.
- Expected more nano variety.
- But it could have been more technical. (*Two responses*)
- Technology is still in its infancy.
- Expected that we would be at this point and know more, or that we would be studying for future use.
- Should be called "intro."
- Recommend indicating focus in ZVI.
- Good intro to nanoscale, knowledgeable instructors.
- The lecture material matched the course title.
- With a little tweaking.
- It covered the basics of nanotechnology.
- Touched on but need more on the risk of nanotechnology.
- It covered the use of ZVI for remediation using the available tools.
- Very Informative! However, from abstract, I was not sure about limited use of technology (to date). Therefore, probably will not be able to use at my current sites.
- Seems like it could have gone into more case studies.

#### **Comments on recommending course to colleagues**

- Course moves too slowly for RPMs.
- If they have a high concentration VOC site.
- Good primer on nanotech for RPMs.
- Only as an introductory course. (*Two responses*)
- Very practical material.
- Very useful and realistic.
- It is not ready for primetime. That would change in a few years (perhaps even just one year).
- Excellent intro course in Nanotechnology Remediation.
- Much of the beginning seemed disconnected from nanotechnology.

#### **Comments on overall pace of the course**

- Some of the process and the theory need to be removed - RPMs need applicability.
- Information goes by really fast! Needed some key info up front - What is nanotechnology? - What kinds? Is it natural or manmade?
- Spend more time on actual case study.

#### **Additional comments**

- Instructors did a good job with the material presented. Need more info on tox and dangers of nano that is not ZVI.
- Good Format, but material needs to be rearranged to highlight case studies first. Presentation was not very convincing.
- The RI portion really seemed to go over what anyone would look at in a RI but didn't have much specific to the nanomaterials.

- Mary gave good real life perspectives. Both presenters good.
- At the beginning, the organization of the presentation should have been discussed. Name of instructors not shown on the slides - need contact info for future questions. Like the notes included with the slides.
- Many course materials/information still unknown.
- Comments should be held at the end of the presentation and not after each module.
- I appreciate the amount of work that went into the prep of this 3+ hour course, but it may have been more valuable with more speakers (for each section). Mary did too much work herself in this session and should have tapped into RPMs for more experience.
- More info on why nanoscale treatment is more viable than other currently used in situ technologies. A comparison of similar sites (contamination) with various types of treatment level would be helpful.
- For the excel chart, telling it to print the first row on each page would have been helpful. It would be wise to stick with IUPAC nomenclature.
- Use of third instructor would have been beneficial for mixing the session up a bit. How does HQ view nanotechnology process as a viable treatment technology? Do they support the use? Do they review site specific process?
- There wasn't really a need to present the remedial process since the audience was composed of RPMs. The material could have been presented in a much shorter time frame.
- It was not clear that questions asked might be addressed in later modules; add this statement at the beginning.
- Great to have RPMs perspective - considerations that have to be considered or that can help e.g. determining goals, making this work with other technologies, etc. Questions asked by audience could generally get by with a shorter answer.

**Participants interested in developing and/or instructing future offerings of this course**

- Terry Burton (burton.terry@epa.gov)
- Brad Bradley (bradley.brad@epa.gov)

## Negotiations - You Can Do It, We Can Help

Thursday, July 10, 1:30 p.m. to 5:00 p.m.

Instructors: Matthew Jefferson, U.S. EPA Region 9  
 Dion Novak, U.S. EPA Region 5  
 Marla E. Wieder, U.S. EPA Region 2

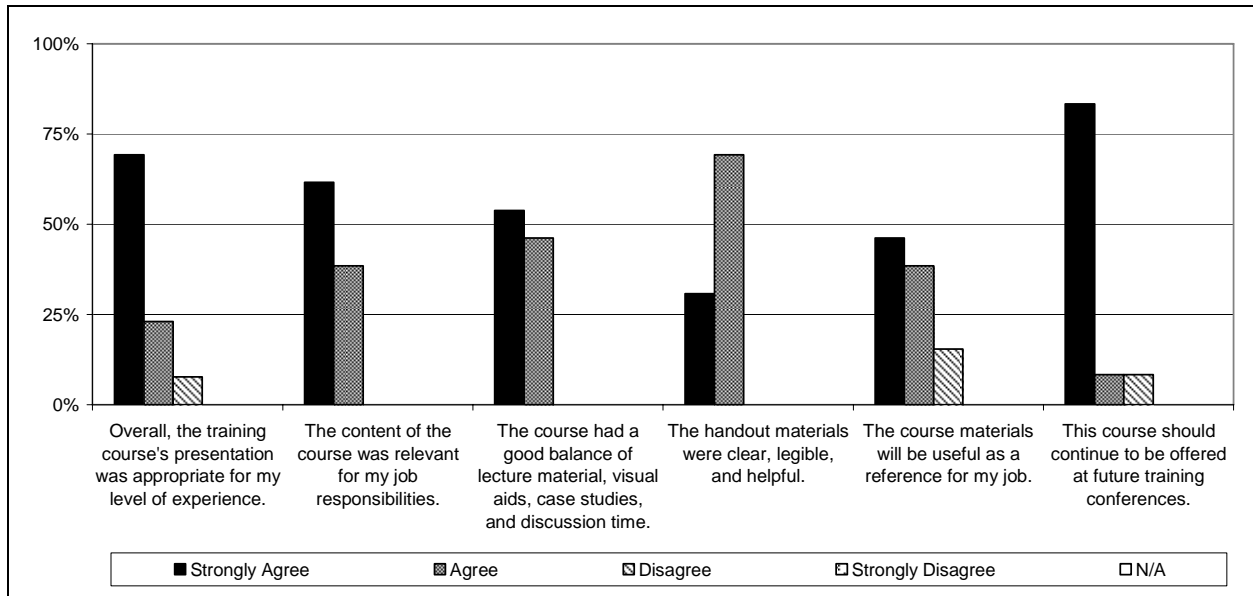
*Negotiations - You Can Do It, We Can Help* is a 3.5-hour course for RPMs covering basic negotiation styles through a series of practical exercises. Just as each of our sites are unique, so too are our negotiations. With the increased complexity of issues, policies, and stake-holders on our sites, we have all witnessed or experienced the frustration and “deal fatigue” associated with a seemingly endless negotiation. This course focuses on basic principles of negotiation and strategies for preparing for and conducting successful negotiations that will not span your government career. We also discuss basic negotiation styles and how individual attitudes and emotional responses impact the negotiation process through a series of practical, reality-based exercises.

### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
39	26	15	5*

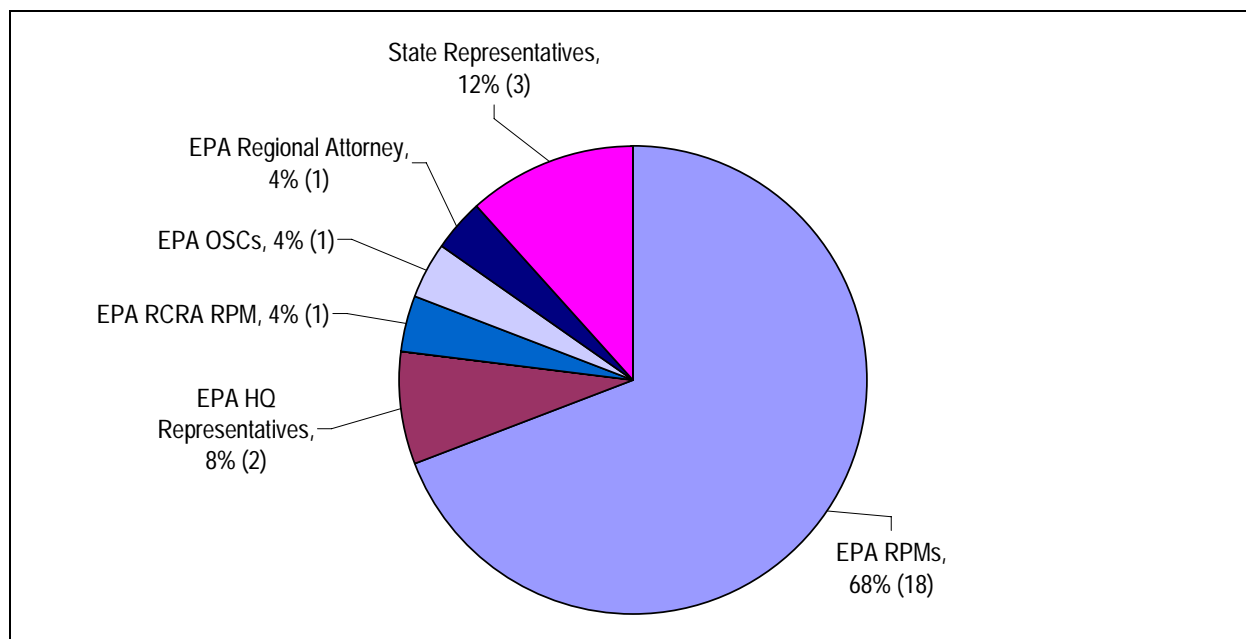
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

### Summary of Evaluation Results for Negotiations – You Can Do It, We Can Help



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 68 percent of the students.

**Students by Job Title for the Negotiations – You Can Do It, We Can Help**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

#### **Comments on relevance to job responsibilities and experience level**

- Too basic.
- The scenario was a bit simple in terms of the parties involved.
- Hearing speaker RPM's experiences/history with bits of suggestion may work well for new/green RPM, not as helpful for me. Class more like a panel than a class.

#### **Comments on course content**

Add

- More case study.

Lengthen

- More exercises with different stakeholders.

#### **Comments on instructional methods and materials**

- Great - case studies, exercises were very valuable.
- Always good to have role playing.

#### **Comments on helpfulness of handout materials**

- Role play was a little vague, but additional information was provided by facilitators.

#### **Comments on usefulness of course materials as a reference for my job**

- Dealing with a litigious PRP now - hope for AOC after remedy selection.

**Comments on offering course at future training conferences**

- Should be modified.
- More case study role playing - better defined for full day course. (*Two responses*)

**Additional comments**

- Well done.
- Great course for Thursday or any afternoon.
- Very well done - great case study and lots of fun. Thanks.
- Something is missing from the negotiating module (double-headed arrow). There are many valid styles of negotiation. It's ok to simplify it down to 2, but they should both have positive and negative attributes. The mark of a good negotiator is to be able to move up and down the spectrum as appropriate. By labeling the competitive model as all bad, the model was misleading. Use CPRC to design more advanced negotiating skills.
- You could do so much with negotiations as there are good exercises to get class engaged in what the different styles are.

## Risk Communication

Wednesday, July 9, 9:00 a.m. to 5:00 p.m.

Instructors: Vincent Covello, Center for Risk Communication  
Joi Ross, APEX Direct, Inc.

*Risk Communication* is a full-day intermediate-level course designed for RPMs. The course provides a framework and basic principles for effectively communicating risk with local residents and other stakeholders during remedial site activities. One of the most difficult tasks an RPM undertakes is to clearly communicate risks associated with activities at the site. An RPM's audience for risk communication varies from concerned citizens and elected officials to the news media and business entities, and the type of risk to be communicated varies across the wide spectrum of site remediation.

Through a combination of slide presentation, videotapes, and class exercises, participants learn the principles and rationale behind risk communication techniques and their importance. Participants also have the opportunity to examine the critical role of key messages and, through interactive examples, learn how to develop key messages for use in a variety of situations. The course also includes scenario exercises and role-playing during which RPMs spend time applying the principles of risk communication to specific situations. Scenarios were developed specifically for this course and are based on information from actual projects that involved situations RPMs encounter regularly.

By taking the course, participants will:

- Learn how to effectively prepare for interactions with the public and the media and avoid miscommunications and pitfalls.
- Explore the principles and rationale behind risk communication techniques and gain a better understanding of their importance.

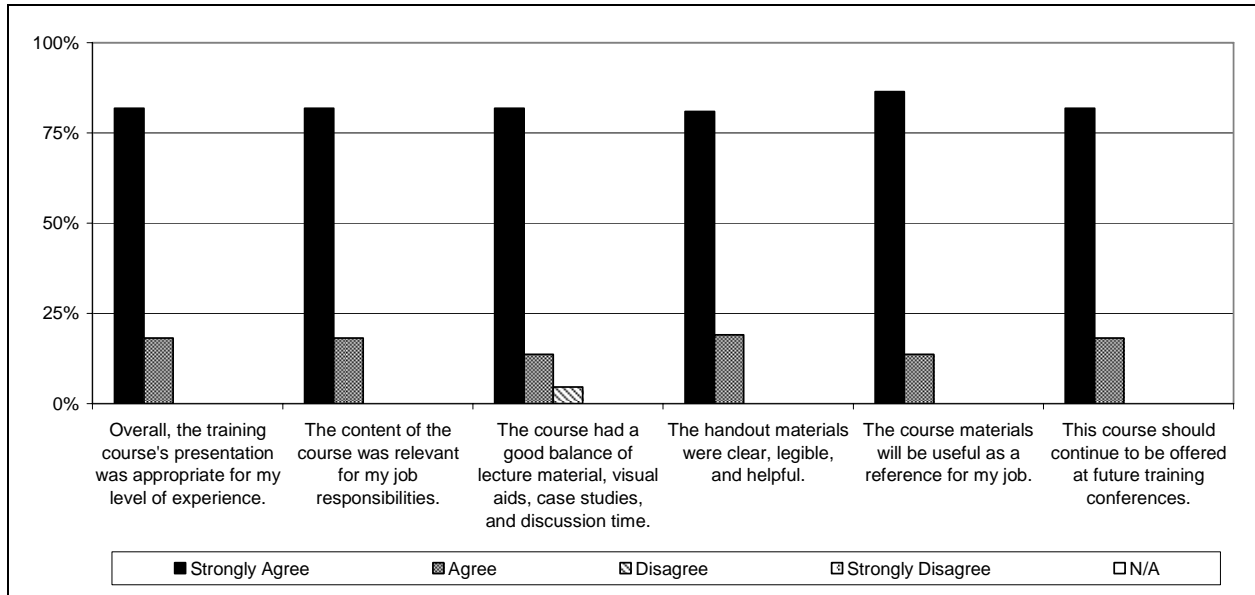
Examine the critical role of key messages and, through interactive examples, learn how to develop key messages for use in situations that involve communication with the public or media.

### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
40	35	22	5*

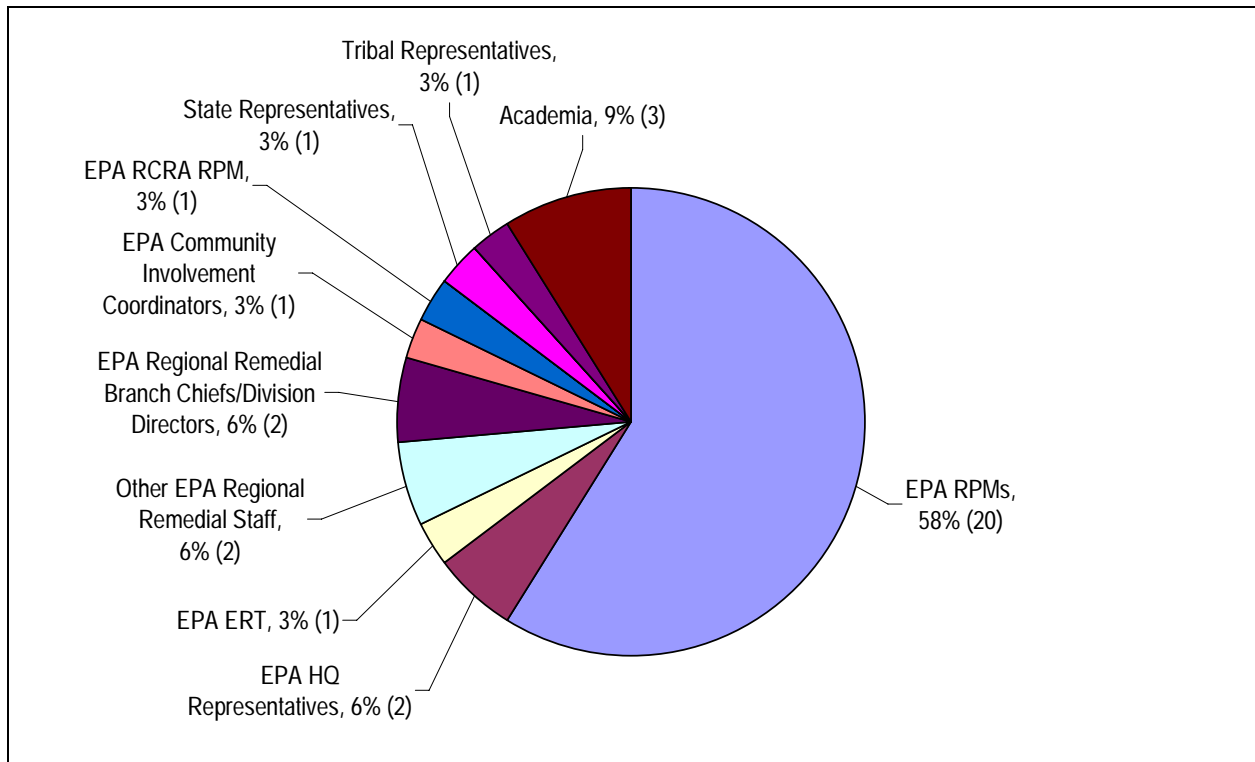
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

**Summary of Evaluation Results for Risk Communication**



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 58 percent of the students.

**Students by Job Title for the Risk Communication**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

**Comments on relevance to job responsibilities and experience level**

- Discuss how to translate science effectively.
- Great information; great delivery methods.
- Everyone has to communicate as part of his/her job.

**Comments on course content**

Add

- More real time examples.

Lengthen

- Science translation.
- Could be a 2 - 3 day course!

Omit

- World Trade Center material is too emotionally charged.
- The number of discussions because enough time was not allotted.

**Comments on instructional methods and materials**

- Great delivery methods.
- Too much discussion on instructor's life, not enough time on exercises. (*Two responses*)

**Comments on helpfulness of handout materials**

- Very good and useful.
- CD will be good and templates.

**Comments on usefulness of course materials as a reference for my job**

- The stakeholders' questions will be very helpful.

**Comments on offering course at future training conferences**

- Great class - very helpful.
- Need to hear these messages often; practice makes perfect.
- However, more time should be spent on exercises, problem meetings.

**Comments on course name and abstract expectations**

- More or less, I learned a new communication framework, but not necessarily the how.
- The course was more interesting than the title made it sound like it would be.
- More than expected. (*Two responses*)
- Most of the content was communication, not risk communication. Risk communication would focus on how to describe cancer risks, non cancer risks, etc.

**Comments on recommending course to colleagues**

- Fun and good model.
- Gives clear answers and examples of what to do.
- As a communication course - good tools are presented.
- Highly recommend to senior as well as junior RPMs.

**Comments on overall pace of the course**

- I would have loved to see more videos - more time was needed.
- The beginning of the course started out slow and picked up toward the end.
- Lots of material presented in a short amount of time.
- Didn't want to miss so rushed back from breaks and lunch.

**Additional comments**

- Keep this class on the NARPM agenda.
- Great course. Good for both beginners and seasoned staff.
- Outstanding! (*Three responses*)
- Would've liked to see the Donald Rumsfeld interview where it wasn't cut back. I was curious as to what he actually said versus what was portrayed by media.
- Suggest modifying the title to "Risk Communication to the Community/Receptor".
- This was a top notch course that is different than the other risk communication course taught at EPA. This one was more detailed and focuses on new developments and knowledge in the specialty of risk communication.
- I very much appreciated the time and expertise of our distinguished trainer. Thanks so much for being with us.

## **RPM Case Studies**

Monday, July 7, 1:30 p.m. to 5:00 p.m.

Instructors: Bill Adams, U.S. EPA Region 10  
Laura Buelow, U.S. EPA Region 10  
Craig Cameron, U.S. EPA Region 10  
Anne Dailey, U.S. EPA Region 10  
Dennis Faulk, U.S. EPA Region 10  
Larry Gadbois, U.S. EPA Region 10  
Marc Stifelman, U.S. EPA Region 10

*RPM Case Studies*, a 3.5-hour course, describes sites where RPMs have worked. Remedial projects include, but are not limited to, mine and mill cleanups, wetland restoration project, Hanford Superfund site and radiation issues, and coordinating remedial investigations with Tribes and other countries. Presentations are fast-paced and incorporate audience interaction. This course is of great value to new RPMs as well as those with substantial experience.

### **Bunker Hill / Coeur d'Alene Basin Superfund Site - Establish Safe Waterfowl Feeding Habitat through a Conservation Easement**

Migrating waterfowl winging their way across Idaho's Panhandle will have a safe new place to rest and feed, thanks to a newly forged Conservation Easement Agreement in the Coeur d'Alene Basin. The Agreement was developed by the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), Ducks Unlimited, Inc. and a willing private property owner. This Easement Agreement uses an innovative approach and is an integral part of the comprehensive mine waste cleanup underway in the Basin. In an unusual partnership, federal, state, tribal, a non-profit wetland conservation organization and private parties have come together to launch a cost-effective project to reduce waterfowl mortality in the Lower Coeur d'Alene Basin.

More than a century of mining and ore-processing activities upstream in the historic Silver Valley have contaminated the Coeur d'Alene River and its floodplain with sediment containing high concentrations of lead and other metals. More than 18,000 acres of wetland have lead concentrations above levels toxic to waterfowl. As a result waterfowl frequently ingest lead-contaminated sediment and suffer serious toxic effects or die. The problem has become so pervasive, an annual "die-off" of waterfowl has occurred in the area for decades. This project is an important first step in addressing contaminated wildlife feeding areas within the Coeur d'Alene Basin. In their recent final report on the Bunker Hill Superfund Site, the National Research Council encouraged EPA's efforts to secure agricultural lands, converting them to high-quality feeding grounds and reestablishing wetland in these areas is a laudable effort (NRC 2005).

The Agreement was established within the framework of the EPA's 2002 Bunker Hill Record of Decision, which charts the course of mine waste cleanup in the Coeur d'Alene Basin over the next 30 years. The EPA, FWS, and USACE are conducting a Superfund cleanup action on the easement area, converting the existing agricultural land to clean wetland waterfowl feeding habitat. The FWS will be conducting a wetland restoration project at this site in the coming years. By returning the area to a more natural state, the partnership predicts it will become an attractive feeding alternative and provide safer habitat for both resident and migratory waterfowl.

## **Hanford Nuclear Reservation**

### *Hanford Topic #1*

#### **Human Health Risk Assessment for the Columbia River Component**

This part of the presentation provides the necessary back ground on the Hanford Nuclear Reservation and the NPL sites within the reservation. Sampling efforts for the Columbia River component of the River Corridor Baseline Risk Assessment presents and includes a deep core sediment sampling behind McNary and Bonneville dams. Risk coordination with tribal and stakeholder groups is discussed.

### *Hanford Topic #2*

#### **Carbon Tetrachloride Vadose Zone and Ground Water Contamination and Response Actions in Hanford's Central Plateau**

This part of the presentation explores the issues surrounding extensive carbon tetrachloride contamination of soil and ground water that resulted from plutonium finishing processes and waste disposal. The focus of the talk is on early interim actions and describes the DNAPL characterization activities and plans for comprehensive source and ground water response actions.

#### **Upper Columbia River RI/FS Site Over View and Tribal Exposure Assessment Survey: Addressing Consumption, Use, and Behaviors with Potential for Exposure**

This presentation provides an overview of the Upper Columbia River Site with an emphasis on the recent settlement and the planned Tribal Exposure Survey for the Confederated Tribes of the Colville Indian Reservation (CCT). The CCT value natural resources which have been contaminated by pollution in the Upper Columbia River (extending 150 river miles from the U.S./Canadian Border to the Grand Coulee Dam in Northeastern Washington State). Specific dietary, and other resource uses/practices and the precise nature and extent of contamination have not yet been defined. The survey instrument measures current food consumption rates and other uses/practices to inform exposure assessment. The survey informs the types and locations of sample collection, laboratory analysis, and inclusion in the human health risk assessment as part of an ongoing RI/FS being prepared by EPA and Teck Cominco, Inc.

The survey has two objectives:

- Quantify consumption and use of local resources (e.g., foods, herbs, medicines, and materials used in production of clothing, ornaments, and infrastructure) that have the potential to influence exposure to chemical contaminants associated with the Upper Columbia River site (UCR site)
- Record data on foods and other consumed materials in a database of nutritional characteristics (e.g., caloric and essential nutrient content) of these foods or materials

Survey interviews would be conducted by trained members of CCT to facilitate access and acceptance by the community. The survey will use validated assessment methods, commonly used by epidemiologists. This may include the U.S. Department of Agriculture's Automated Multiple-Pass Method (AM/PM) or the Nutrition Data System for Research (NDS-R). CCT confidentially will be balanced with EPA information requirements. For example, individual survey records would not be released, but summary statistics (e.g., mean, median, and various percentiles) of the sample population would be needed. Results of the survey will support exposure assessment, risk assessment, risk management, and risk communication activities at the UCR site to inform and promote healthy dietary and lifestyle choices for members of the CCT.

### Lessons Learned from Mine Cleanups in the Coeur d’Alene Basin, Idaho

Mining within the Coeur d’Alene Basin began more than 100 years ago. The Basin has been one of the leading silver, lead, and zinc-producing areas in the work, with production of approximately 1.2 million ounces of silver, 8 million tons of lead and 3.2 million tons of zinc. The Bureau of Land Management has identified nearly 900 mining or milling-related features in the region surrounding the South Fork of the Coeur d’Alene River. Mining-related activities generated tailings, waste rock, concentrates, and smelter emissions. In addition, the water that drains from many abandoned adits contains elevated levels of metals. The EPA has identified three operable units in the Coeur d’Alene Basin which include actions to address the impacts from the mining, milling, and processing activities.

In combination with other actions in the basin EPA has begun to address the mine and mill sites in the Upper Basin. At this time the work has focused on sites which present a risk to human health, primarily from recreational use. While the focus of cleanup of these sites is on human health the designs and actions also addresses ecological risk associated with water quality impacts.

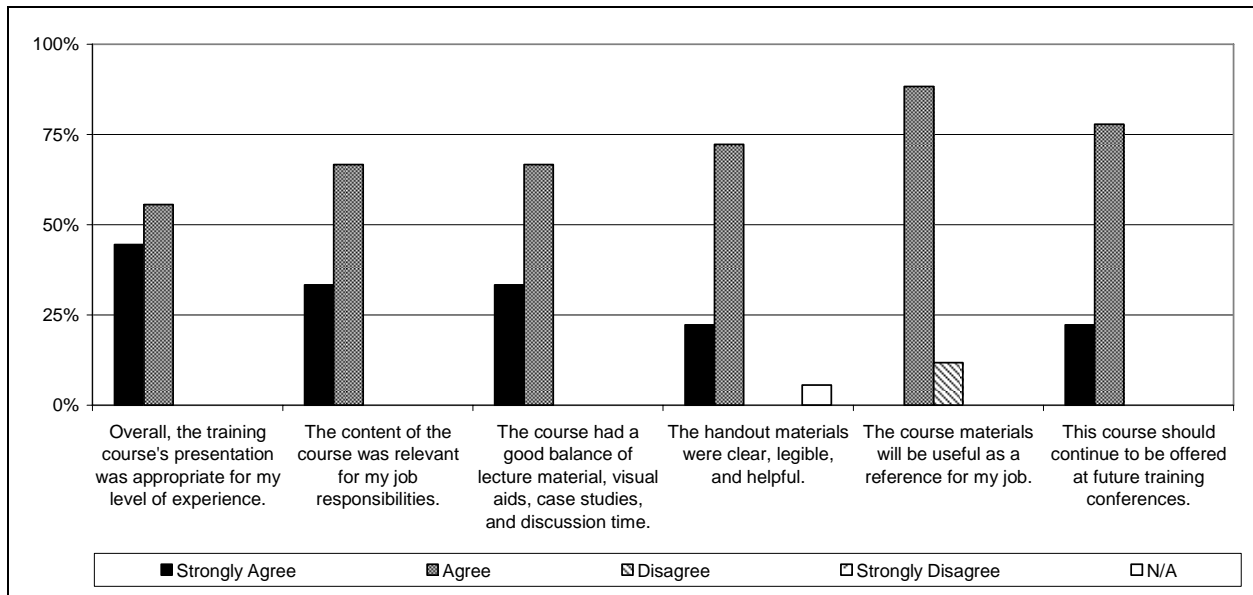
This presentation focuses on mine cleanups completed to date in the Coeur d’Alene basin. An overview of the sites, pre-design data collection, designs, and remedial construction will be provided. Lessons learned focuses on the following topics: process to prioritize and select the initial sites for work from the hundreds in the basin, overall contracting and funding strategy for remedial designs and construction, coordination with multiple stakeholders and multiple landowners, and issues associated with long-term operation and monitoring and effectiveness monitoring.

#### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
34	32	18	4*

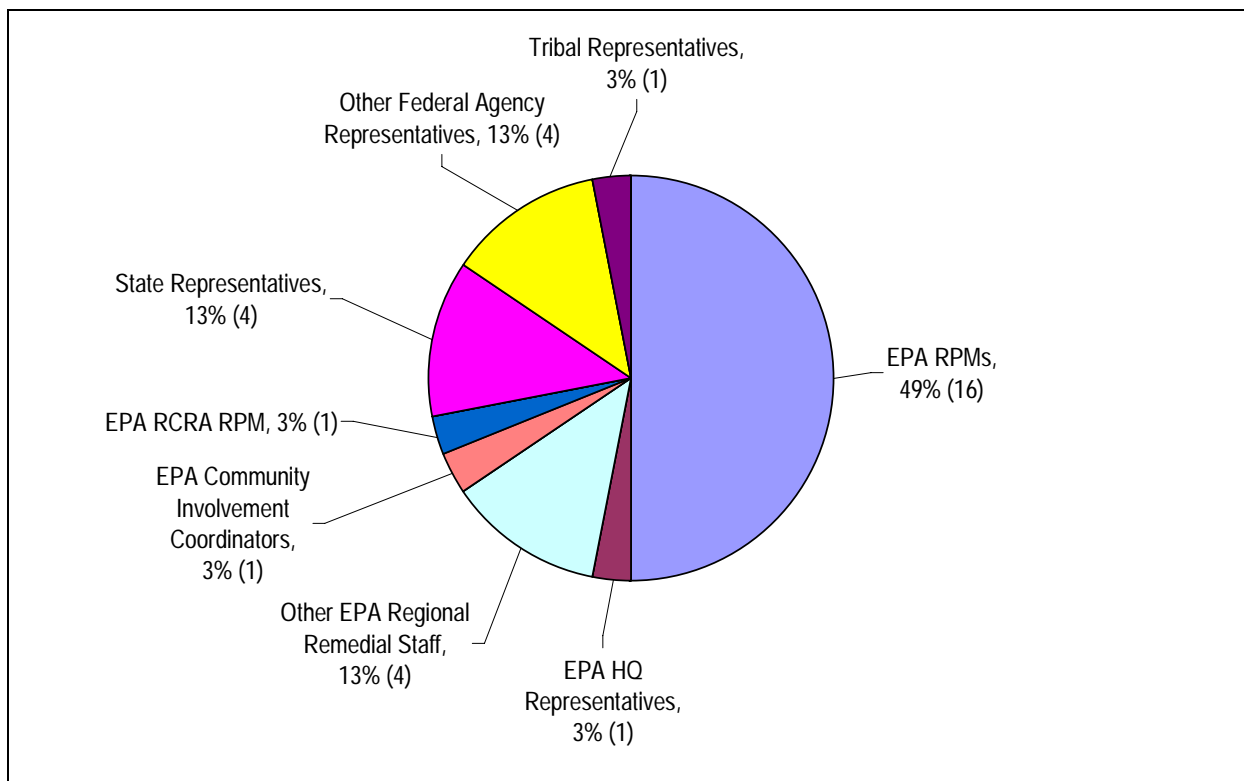
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#### Summary of Evaluation Results for RPM Case Studies



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 49 percent of the students.

**Students by Job Title for the RPM Case Studies**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

**Comments on relevance to job responsibilities and experience level**

- Good technical/program level content.
- Great.

**Comments on course content**

Add

- Mixed waste project.

Lengthen

- Areas of effort to get public support.

**Comments on instructional methods and materials**

- Excellent questions and discussion.
- Might've structured discussion with more interactive Q&A.

**Comments on helpfulness of course materials as a reference for my job**

- Good Summaries – brief.
- Helpful for the presentation - some pages are good references.

**Comments on offering course at future training conferences**

- The case studies were very specific to Region 10 - large mining sites are not very common throughout the country - but very interesting and good take-away messages were presented.
- Yes, due to the large number of complex mining and water body sites.

**Comments on course name and abstract expectations**

- It was better than I expected - emphasized some non-standard issues.
- Great to hear about other RPM studies and how they approach cleanup.
- Good exposure to problem solving techniques.

**Comments on recommending course to colleagues**

- Good overview. Helps managers plan for site actions and RA implementation.

**Comments on overall pace of the course**

- Ample time for presentation of complicated sites. The presenters were excellent!!

**Additional comments**

- It is important to share experiences and lessons learned across the country - maybe continue each year with a theme - this year seemed to focus on mining and large Federal Facilities Sites. Maybe next year introduce ground water site experiences.
- I liked the emphasis on megasites - those are the ones that everyone is having trouble with.

## The Rapid Assessment Tools<sup>3</sup>

Instructors: John Bing-Canar, U.S. EPA Region 5  
Abbey Brake, U.S. EPA Region 5

*The Rapid Assessment Tools*, a four-hour course, incorporates lecture, case studies, and a hands-on, in-field practicum to enable project managers and others who plan, direct, or implement in-field sampling to better understand and utilize rapid assessment tools (RAT). RAT was developed to improve site assessment by providing real-time continuous data collection and to provide in-field spatial data analysis and two-dimensional visualization. The tools combine integrated data retrieval, global positioning system (GPS), geographic information systems (GIS), mapping, and analysis through an elementary but powerful and robust interface that requires no post-processing of GPS and GIS data. RAT includes modules for spatial data retrieval, data collection and storage, sample designs, data contouring, real-time data visualization, and non-GPS trend monitoring. All data produced from the system can be exported and used in most other GIS mapping applications and database packages for more complex modeling. In addition, all screen outputs can be printed or saved to a standard output file type. This system is unique because it has been developed in-house by EPA, is stand-alone, and requires no software licensing or purchasing. RAT also allows for mapping and recording continuous streams of external data merged with GPS locations. The data streams are processed internally and saved directly to a database-compatible format; additionally, they can be used in many other modeling applications.

Training course participants achieve the following objectives:

- Understand how RAT aids in real-time data collection.
- Learn the basics of how RAT has been used at various Superfund remedial sites.
- Gain hands-on experience using RAT with GPS for:
  - Sample design generation and navigation
  - Single-point and multiple-point data collection
  - Real-time field sampling with integration equipment, including Niton and InnovX X-ray fluorescence devices (XRF), Ludlum radiation monitors, and a variety of air monitors
  - Data collection with manual data entry for devices without a digital output.
  - Data contouring
  - Data delivery by FTP and data export to GIS packages.

The target audience for this course is project managers and others who plan, direct, or implement in-field sampling using real-time data collection.

**Tuesday, July 8, 9:00 a.m. to 12:30 p.m.**

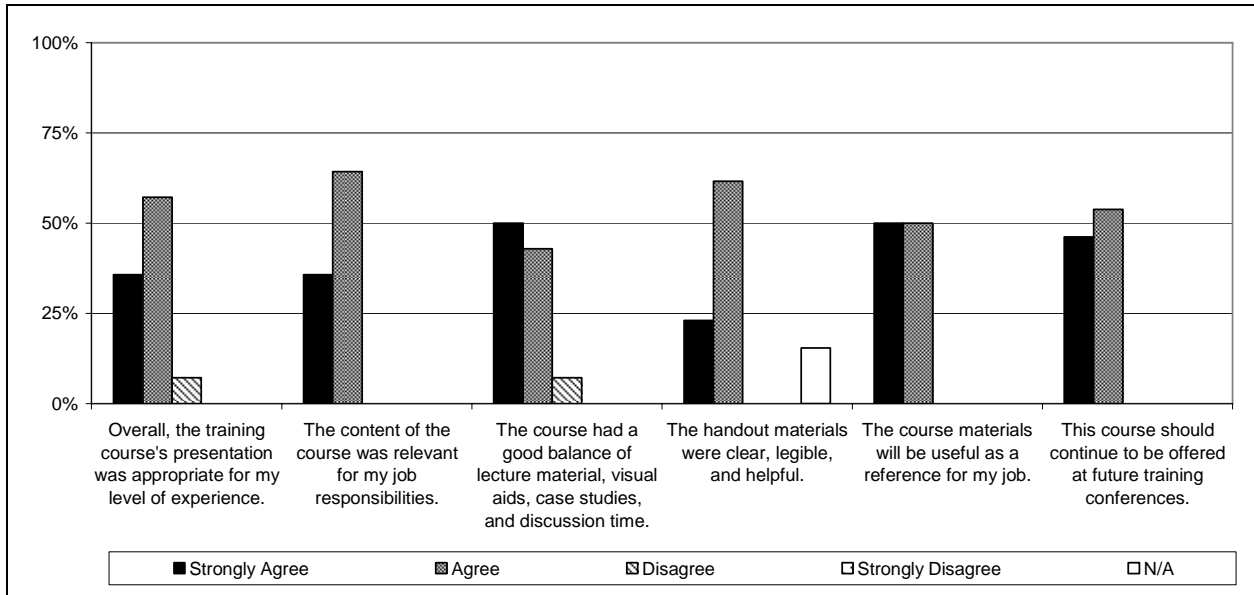
### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
30	19	14	4*

\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

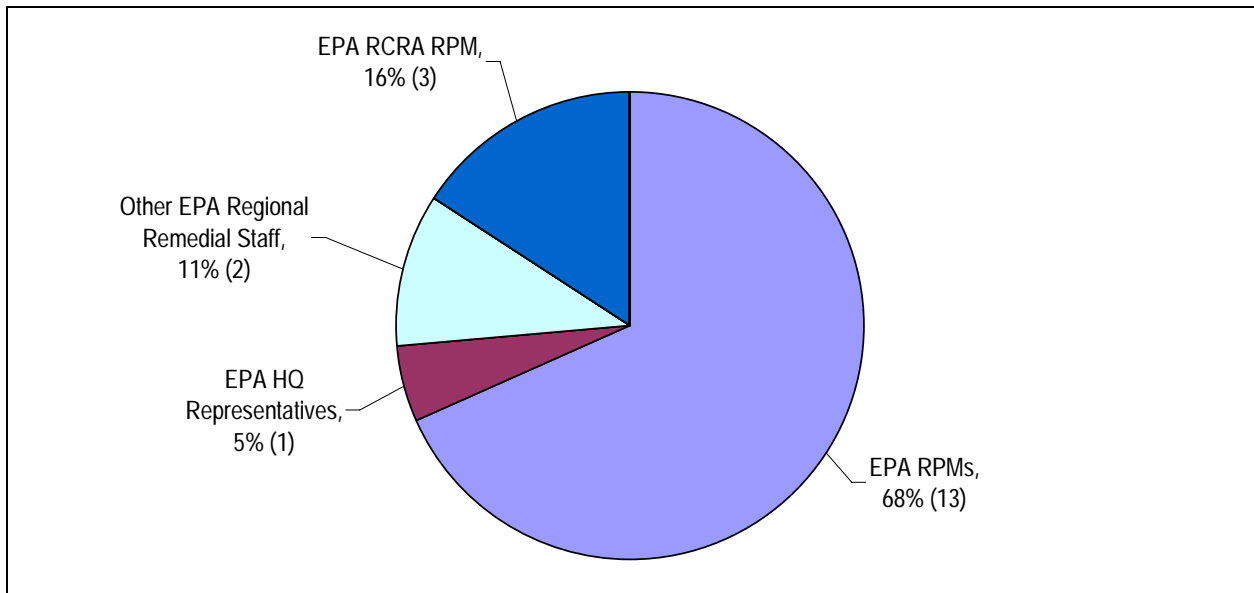
<sup>3</sup> This course was offered twice.

**Summary of Evaluation Results for The Rapid Assessment Tools**



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 68 percent of the students.

**Students by Job Title for The Rapid Assessment Tools**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

**Comments on relevance to job responsibilities and experience level**

- Good general overview of tool.
- Good to know it exists.

### Comments on course content

#### Add

- Indoor Air.
- Tutorial on how to download images.
- Look at Golden Software to export data.
- Water Quality.

#### Lengthen

- Demonstrations of software/equipment.
- RAT case studies.
- More hands on.

#### Shorten

- Case studies. (*Three responses*)
- For my needs, probably just need around a 2 hour overview.
- RAT overview/software walk-through.

#### Omit

- Software walk-through is not necessary for most RPMs. If some are interested they can contact the instructors. (*Two responses*)
- Probably don't need so many (if any) case studies.

### Comments on instructional methods and materials

- Great exercises, case studies, and Q&A.
- Good demo.

### Comments on helpfulness of handout materials

- CD provided and fact sheet.
- Will download slides from NARPM Web site.
- Didn't really need extra paper with agenda unit.

### Comments on offering course at future training conferences

- Seemed to be more useful to some attendees than for me.
- We need balance to technical sessions.

### Comments on course name and abstract expectations

- This is really an integration program for field instruments.
- Very Informative.

### Comments on recommending course to colleagues

- Probably would steer them directly to instructors for direct conversation.
- This program has a lot of potential as it can expand to include additional instruments and data interpretation.

### Comments on overall pace of the course

- While interaction with the audience can be effective, it can also create distraction and side track the course. (*Two responses*)
- I like the added statistics.
- A little slow in the beginning.

### Additional comments

- This was a great description of great tools. NARPM is a good start, but more PR is needed. By looking at the case studies, it seems that the only folks using RAT are in Region 5. Hopefully, the rest of the country will soon be using it too!
- I suggest Q/A at the end of each subject and limit it to 5 minutes.

- Instructors' enthusiasm and knowledge for RAT was much appreciated.
- Should meet/coordinate with ORIA to see if they can enhance their data collect program.

**Participants interested in developing and/or instructing future offerings of this course**

- Brad Bradley (bradley.brad@epa.gov)
- Erna Waterman (waterman.erna@epa.gov)

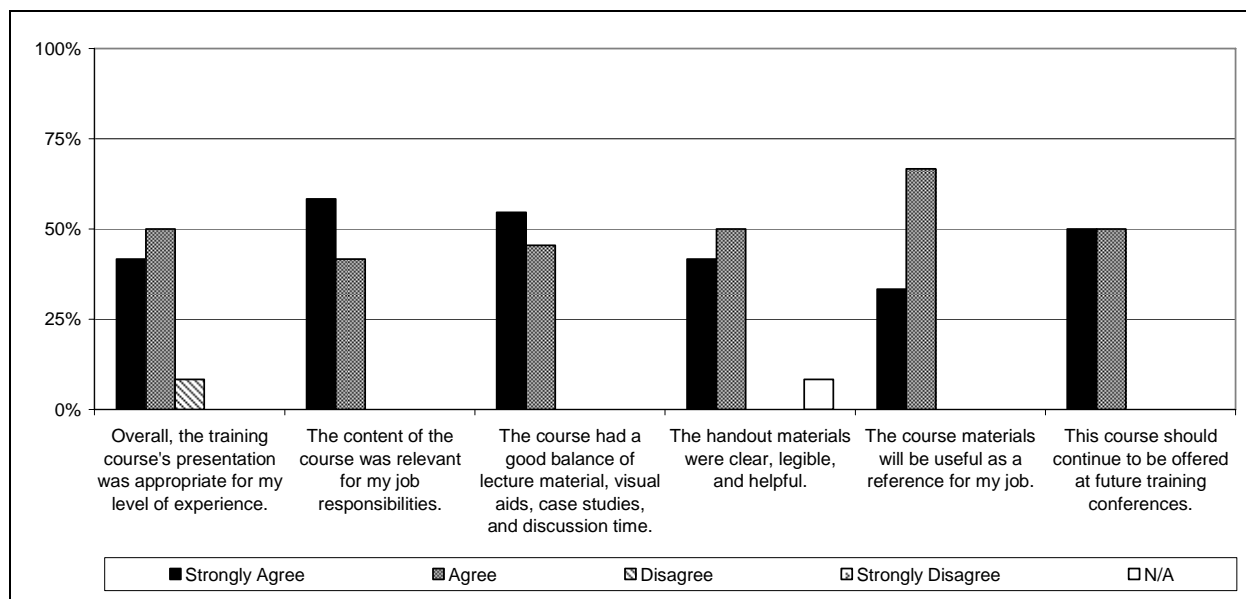
**Tuesday, July 8, 1:30 p.m. to 5:00 p.m.**

**Participation and Average Grade**

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
29	26	12	4*

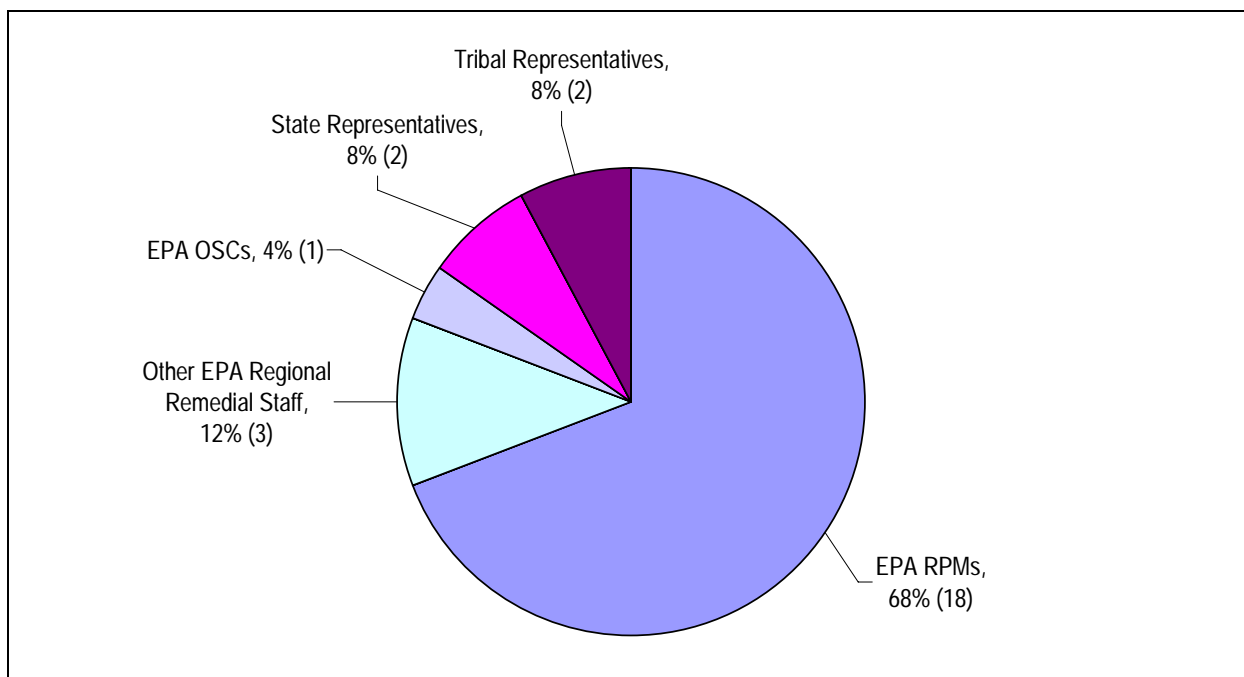
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

**Summary of Evaluation Results for The Rapid Assessment Tools**



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 68 percent of the students.

**Students by Job Title for The Rapid Assessment Tools**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

**Comments on relevance to job responsibilities and experience level**

- I'm pretty new and was unfamiliar with some of the external devices referenced but it probably shouldn't be geared towards new people anyway.
- Would be more relevant if I did more field work.

**Comments on course content**

Lengthen

- Application of the RAT outdoors.

Shorten

- Site examples although first 2 or 3 were interesting.

**Comments on instructional methods and materials**

- Ran a little long.
- Very good actual use of the equipment.

**Comments on helpfulness of handout materials**

- Would be useful if presentation were made available.

**Comments on offering course at future training conferences**

- Yes but it should be presented mainly to field personnel.

**Comments on course name and abstract expectations**

- I had something different in mind, but the abstract fits the course.
- I thought that it was an overview of different techniques.

**Comments on recommending course to colleagues**

- Especially for sites.
- I will recommend the software to RPMs but not the course.
- I would recommend this course to RPMs who had an interest in managing field-collected data.

**Comments on overall pace of the course**

- The pace was good overall but too many site examples.
- Fewer case studies.

**Additional comments**

- Very practical, useful tool with real world.
- Great class - enjoyed learning new stuff about field equipment.
- The Region 5 RPMs should have been part of the presentation to explain various sites and purpose of investigation.

## Well Performance Problems due to Biofouling

Thursday, July 10, 9:00 a.m. to 12:30 p.m.

Instructors: George Alford, ARCC Inc.  
D. Roy Culimore, Droycon Bioconcepts Inc.  
Richard Willey, U.S. EPA Region 1

*Well Performance Problems Due to Biofouling* is a four-hour course for RPMs and site managers that will stress the need for a preventive maintenance monitoring program for contaminated ground water sites. Preventative maintenance is necessary in order to identify incipient problems in well performance generally and to minimize adverse cost and regulatory consequences. The movement of ground water and transport of contamination is not just a function of hydraulics and geology. Within the subsurface, a variety of ecological environments are found; the ecology at a contaminated ground water site can either facilitate natural attenuation of contaminants or inhibit remedial progress of engineering actions.

Biofouling problems can pose a significant challenge to successful operation of extraction, injection, and monitoring well systems. At some sites it has caused the abandonment of the selected remedy. Because it contributes to declining well performance, practitioners should have some understanding of preventive maintenance monitoring, problem diagnosis, well rehabilitation and long term management issues related to biofouling.

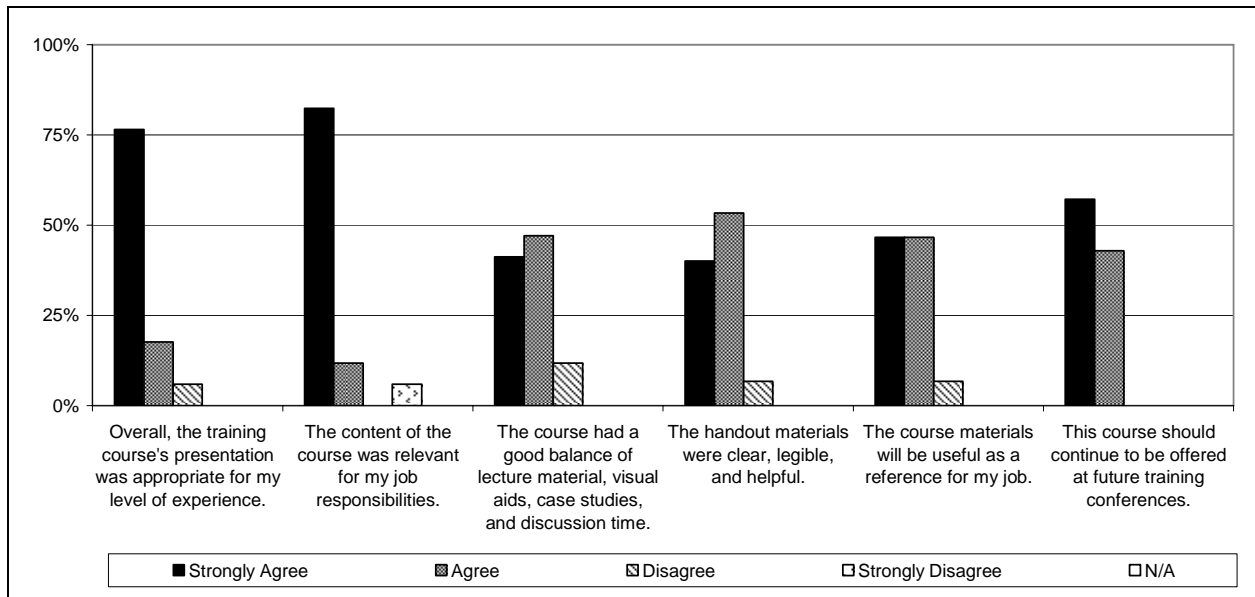
The training course examines causes of biofouling; discuss procedures to diagnose and rehabilitate impacted wells; and recommend ways to prevent or to manage the problem long term. A key element of this training is an interactive session, during which the participants are encouraged to describe biofouling problems at their sites and ask questions of the instructors.

### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
28	30	17	4*

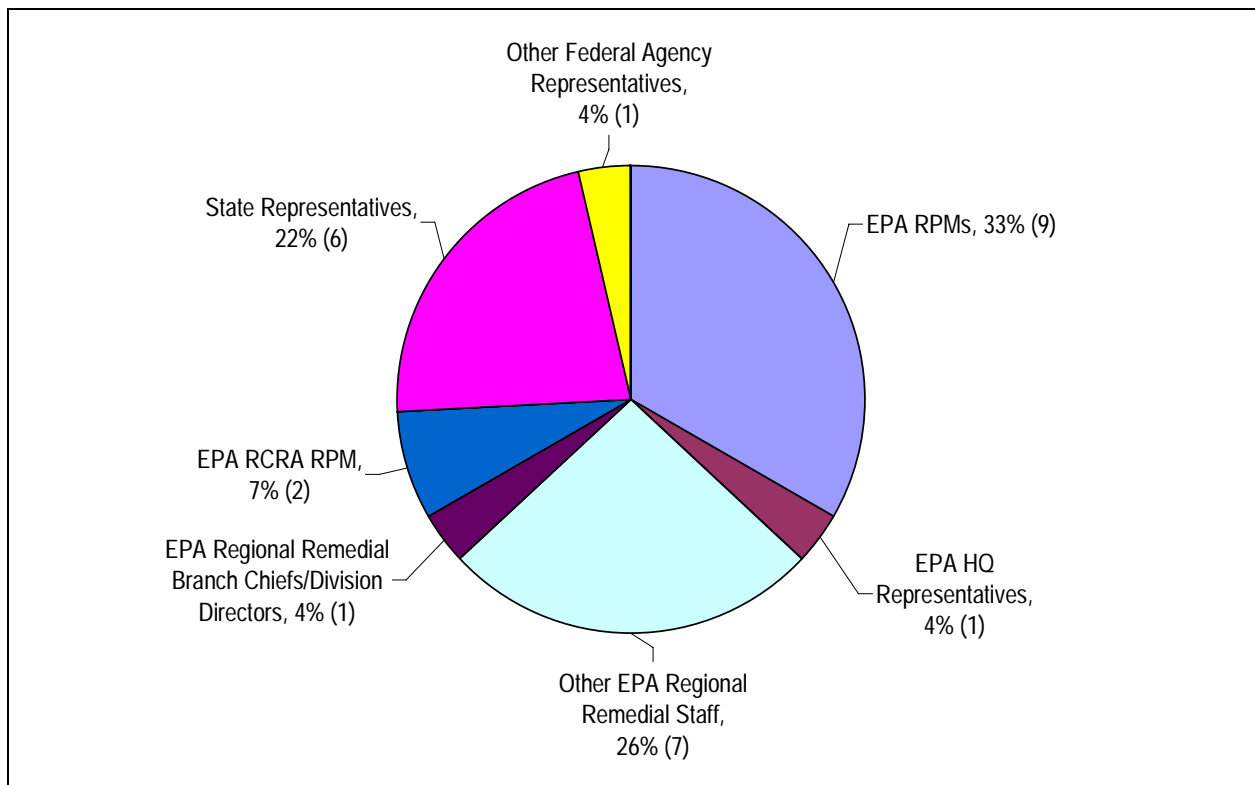
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

**Summary of Evaluation Results for Well Performance Problems due to Biofouling**



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 33 percent of the students.

**Students by Job Title for the Well Performance Problems due to Biofouling**



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

**Comments on relevance to job responsibilities and experience level**

- I am a beginner with respect to this topic; I needed more fundamental information. *(Two responses)*

**Comments on course content**

Add

- Design of O&M plans to address this issue.

Lengthen

- More introduction to microbiology
- Basics covered by slides.

Omit

- Some of the discussion pertaining to sites not in the slides.

**Comments on instructional methods and materials**

- Needed to see slides; too many case studies discussed so that we did not see slides.

**Comments on helpfulness of handout materials**

- Slides were too basic; need more details to get speakers message across.

**Comments on offering course at future training conferences**

- But eliminate the sales pitch! *(Two responses)*
- Speakers need to stay focused and limit the number of questions until course message has been adequately presented. *(Three responses)*
- But need to focus on basics rather than multiple site examples.

**Comments on course name and abstract expectations**

- Good basic information of real-world stuff.
- Beyond what I expected - very informative.
- Maybe change to "How to Prevent Biofouling from Ruining Your Monitoring Network?"

**Comments on overall pace of the course**

- Should allow more time (1-day training). *(Six responses)*

**Additional comments**

- Well-presented, useful information. NARPM needs more courses providing basic ideas.
- This course went way too fast; the material was important and ended up being rushed.
- Excellent! *(Two responses)*
- This was one of the BEST sessions at NARPM. Excellent session and very enlightening. This topic is something we usually don't give enough consideration to when considering diminishing well and remedy performance. This is clearly an issue for consideration during remedy design, performance, and O&M! Loved revisiting my microbiology. Great speaker as well. Kept audience enthralled in topic. Need more RPMs to attend this session across the agency.

## Working Redevelopment and Reuse Into The Superfund Process

Tuesday, July 8, 1:30 p.m. to 5:00 p.m.

Instructors: Bill Denman, U.S. EPA Region 4  
 Matthew Sander, U.S. EPA OSRE  
 Karen Singer, U.S. EPA Region 4

*Working Redevelopment and Reuse into the Superfund Process*, a four-hour course, shows how RPMs can best incorporate redevelopment and reuse into the Superfund process. Learn how to work efficiently with communities, states, PRPs and other stakeholders to promote the redevelopment and reuse of Superfund sites. The course examines:

- How it started and what the current thinking is
- How reuse fits into each step of the process
- Overcoming barriers to reuse

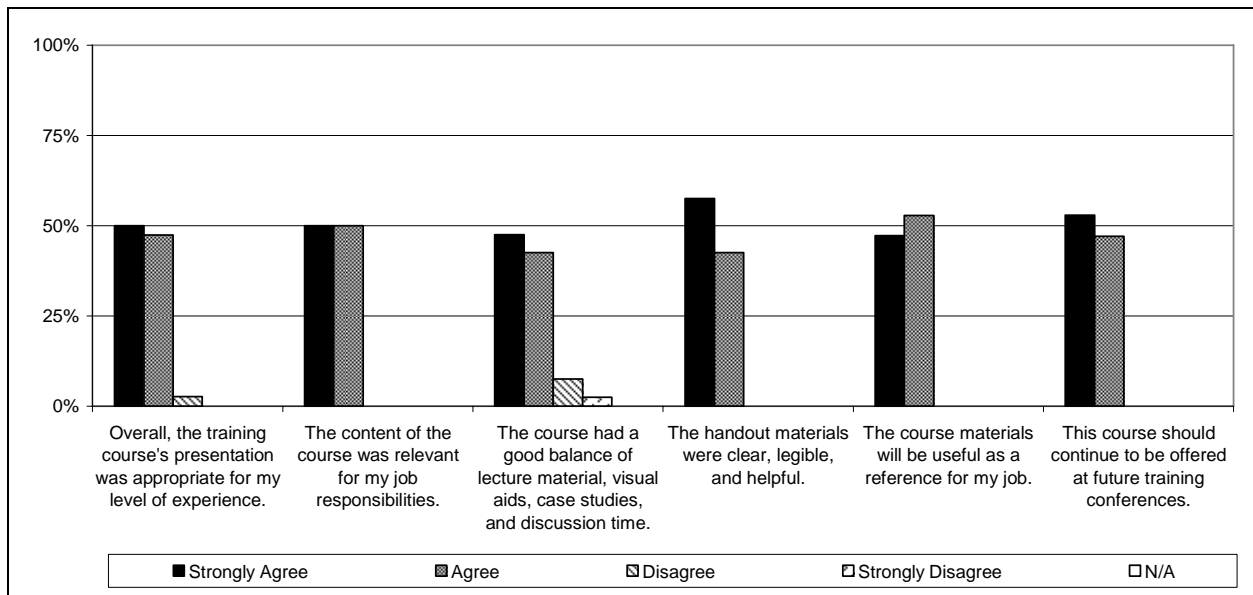
Participants learn about various issues related to redevelopment and reuse through group discussions and exercises, such as consideration of reuse in designing a remedy, the reuse limitations a remedy may present, and benefits of redevelopment for PRPs.

### Participation and Average Grade

No. of Preregistrants	No. of Students Who Signed Course Roster	No. of Evaluation Forms Submitted	Average Grade
92	91	41	4*

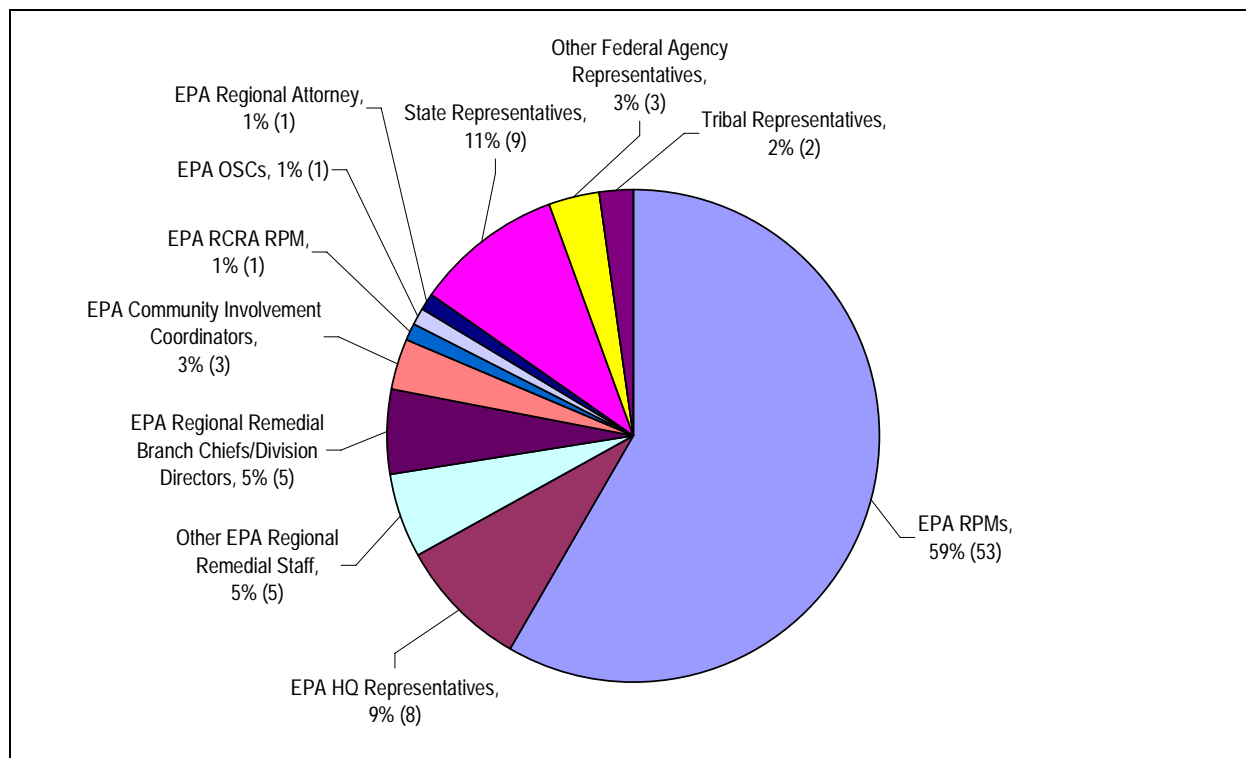
\* The grade displayed is the average of the grades identified on the evaluation forms based on a 5-point scale. The average is calculated by rounding the raw average to the nearest integer (for example, 3.6 rounds to 4).

### Summary of Evaluation Results for Working Redevelopment and Reuse Into The Superfund Process



The following pie chart illustrates the percentages of students for the course by job title. EPA RPMs represented 59 percent of the students.

### Students by Job Title for the Working Redevelopment and Reuse Into The Superfund Process



Summarized below are the written comments provided on the evaluation forms. Similar observations have been combined and paraphrased. Comments submitted by a single individual are recorded below.

#### Comments on relevance to job responsibilities and experience level

- Everyone was on the same level (or so it seemed to me).
- An emphasis on the RPM role in redevelopment/reuse might be more useful - too much Brownfield and legal.
- Land use is key to keep in mind - re-use the space so it's not wasted and so it can be of use to the community.

#### Comments on course content

##### Add

- Add other regions examples - thanks for leading the way Region 4!
- More background info on what RPMs need to know - what guidance is available, and how our management gets involved to make these decisions.
- Add more examples of reuse - when it's good, when it doesn't make sense.
- For RPM responsibilities - highlight what/how we do these.

##### Lengthen

- Maybe include training on some of the tools.
- There were lots of questions - more time should be devoted to this.
- Community Involvement Coordinator's role.

Shorten

- Section on 10 comments.
- Buying a site - we really don't get involved in this process. We don't do PP calls but provide information to prospective purchasers for them to formulate their plans - we then use results in our documents.

Omit

- Mock meeting/panel.
- History of how guidance was developed and how much HQ likes it.

**Comments on instructional methods and materials**

- RPM was good about answering questions - but I would have liked more discussion. (*Four responses*)
- Excellent job with trivia, model phone call, Q&A, and overall demonstration of appropriate leadership. (*Five responses*)
- Very good session - clearly much time and effort went into preparing this - excellent work!
- A little too much lecture but a good panel case study simulation.
- The role playing was a little too long.
- The mock phone call was really helpful.
- Too much Region 4 emphasis - should use examples from other regions to show categories and variations - there are many.

**Comments on helpfulness of handout materials**

- Nicely bound and color-coated; shiny/glossy booklet as future reference.
- Great presentation - strong presenters and interesting information.
- Very useful.
- To save resources we might not have needed so many printed materials.
- Good idea revitalizing contaminated site handbook.
- CD is a really nice touch.

**Comments on usefulness of course materials as a reference for my job**

- Good to know how to go about re-using land.

**Comments on offering course at future training conferences**

- I have many concerns about this subject. I think that there are so many site-specific considerations with each example; it's difficult to present information to address the questions.
- Very much a Brownfields emphasis course - it would be helpful to hear suggestions on things like someone wants a comfort letter on my site, here's what is necessary for me to prepare.
- Especially given the heavy and engaged dialogue.
- It is information that all RPMs should be aware of and utilize.
- Not sure of the need each year.
- Should offer to state bar associations.
- Change format; allow for more information discussion.

**Comments on course name and abstract expectations**

- More practical knowledge on how to incorporate reuse into site work. Lecture only mentioned topics but did not provide specifics on how reuse would impact ROD writing/risk assessment revisions, etc. Not sure how PPI call is different from RPM providing information to development over phone - seems that we need information from them (map, etc.) before we can provide any answer.

- This course was a good overview on reuse guidance and BFPP, but didn't really address prejudice integration in the process.
- Better than expected (reasonably anticipated).

#### **Comments on recommending course to colleagues**

- If it was less of a lecture and more of a discussion format.
- Great course.
- Provides excellent handouts/manuals.

#### **Comments on overall pace of the course**

- Good pace.
- Tried to cover way too much.
- The presenters allowed too many questions. The pace was very slow.
- Took time to answer and discuss several audience concerns
- Recommend less time on the upfront stuff, get rid of the trivia, spend more time on questions and examples.

#### **Additional comments**

- We got side-tracked too long on ICs. The slide font was a little small. By remaining seated, the panel developed into a one-sided talk with that side of the room.
- Excellent topic.
- For the role play, all these details needn't have been included - simplify the site remedy background and get to the important points of the discussion - which is what you're trying to demonstrate. Speaker should use the microphone in the large rooms. No need to read slides to us; more open discussions and back and forth between RPMs and experiences all over the country (not just Region 4) would be an enhancement. The new guidance looks excellent.
- Yeah for trivia!
- Speakers should reference IC training to RPMs.
- Add more case studies highlighting different types of sites; industrial to residential, industrial to commercial, industrial to recreational.
- Engaging and caused a lot of questions to arise for consideration. Interesting case studies. Would have benefited from some more discussion time at the end - or some sort of panel/discussion session on issues related to reuse/redevelopment. The primary of these being how reuse really can be considered within the 9 criteria analysis, if at all.
- The concept of performance based environmental management (PBEM) should be discussed. Land use is one of five components discussed.
- Seems like a commercial for reuse - not really that practical for RPMs. Separate into reuse information session and deal with specific problems RPMs deal with in site management. Conversation got sidetracked by IC discussion - not really the topic of training. Perhaps separate concept into reuse at Brownfields site (where developers may be more available) and reuse at Superfund sites. A comfort letter for reuse of a Superfund site would not protect BFPP if they impacted site remedy - they would have to fix.
- This was a very thoughtfully developed session.
- Well done.
- The mock PPI call was very good. Appreciated going through Top 10 questions to ask. Presentations generated a good discussion on BFPP provisions. Thank you for not dragging us through yet another case study exercise.

#### **Participants interested in developing and/or instructing future offerings of this course**

- Mary Peterson (peterson.mary@epa.gov)
- Stephen Hoffman (hoffman.stephen@epa.gov)
- Pamela Baxter (baxter.pamela@epa.gov)