

**Module 01**  
**Introduction and Course Overview**



## RCRA Corrective Action Training Program: Getting to YES! *Strategies for Meeting the 2020 Vision*



This training and training documents do not create any legally binding requirements on the U.S. Environmental Protection Agency (EPA), states, or the regulated community, and do not create any right or benefit, substantive or procedural. The training and documentation are not a complete representation of the Resource Conservation and Recovery Act or of EPA's regulations and views.



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### Notes:

#### Purpose of Slide

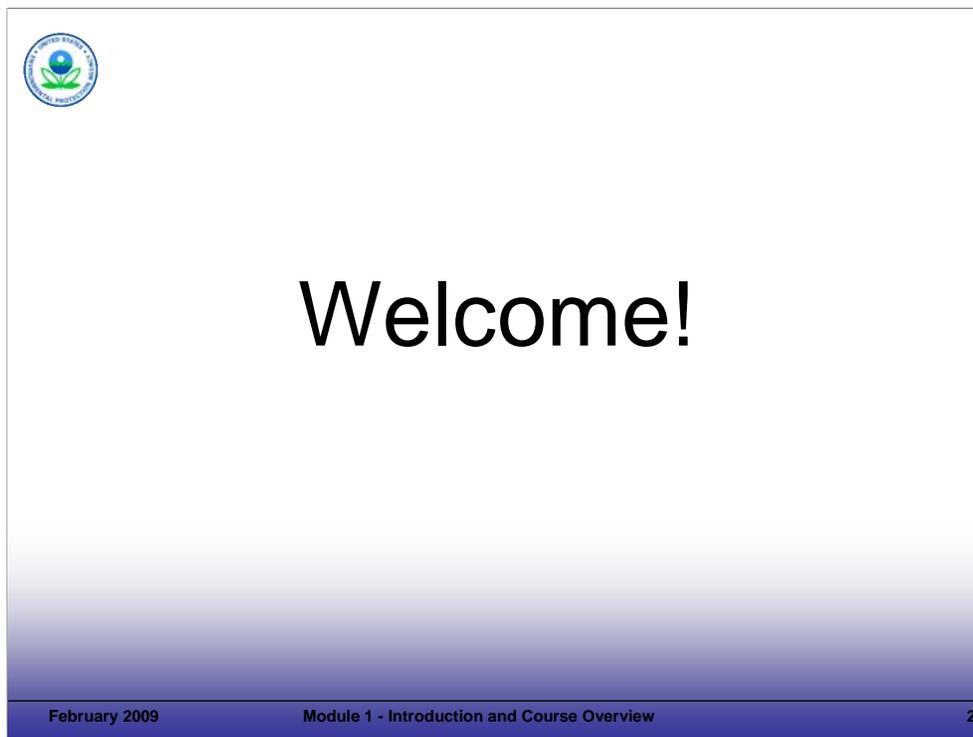
- Holder slide for opening of the training program.

#### Key Points

- Holder slide, no specific key points.

#### References

- None.



## Notes:

### Purpose of Slide

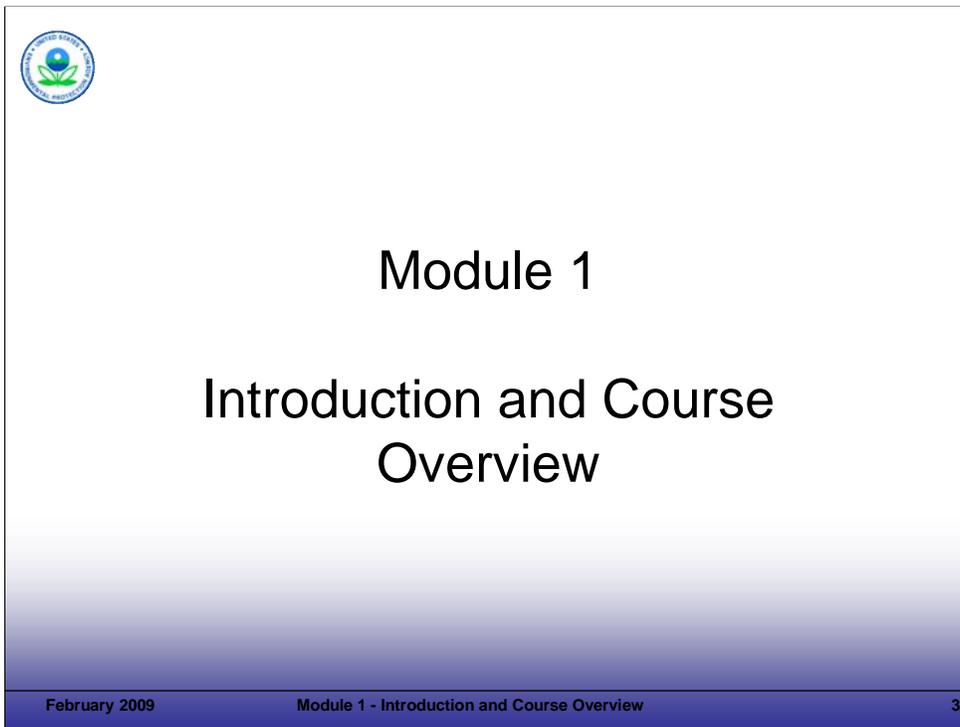
- Holder slide to welcome participants.

### Key Points

- The mission of this course is to develop and enhance the skills of qualified personnel who will implement corrective actions for their sites by the year 2020 that are protective of human health and the environment while encouraging revitalization – we will talk more about the purpose and the objectives of the course later in this module. This course is designed for experienced personnel.
- Significant preparation has gone into the course. The development of this training was managed by U.S. Environmental Protection Agency (EPA) Headquarters (HQ), with input from EPA Regional, and state representatives. State input and involvement is critical because the states will play a major role in future progress. This course will focus on supporting achievement of EPA's Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) goals and vision. We have a lot of material to cover and will do so in a focused manner.
- The training course and training documents do not create any legally binding requirements on the EPA, states, or the regulated community, and do not create any right or benefit, substantive or procedural. The training and documentation are not a complete representation of RCRA or of EPA's regulations and views.

### References

- None.



**Notes:**

Purpose of Slide

- Transition from the general welcome to first module.

Key Points

- None.

References

- None.



## Introduction and Course Overview

- ❖ Introductions
- ❖ Course mission
- ❖ Training objectives
- ❖ Training approach
- ❖ Logistics
- ❖ Road map and agenda

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### Notes:

#### Purpose of Slide

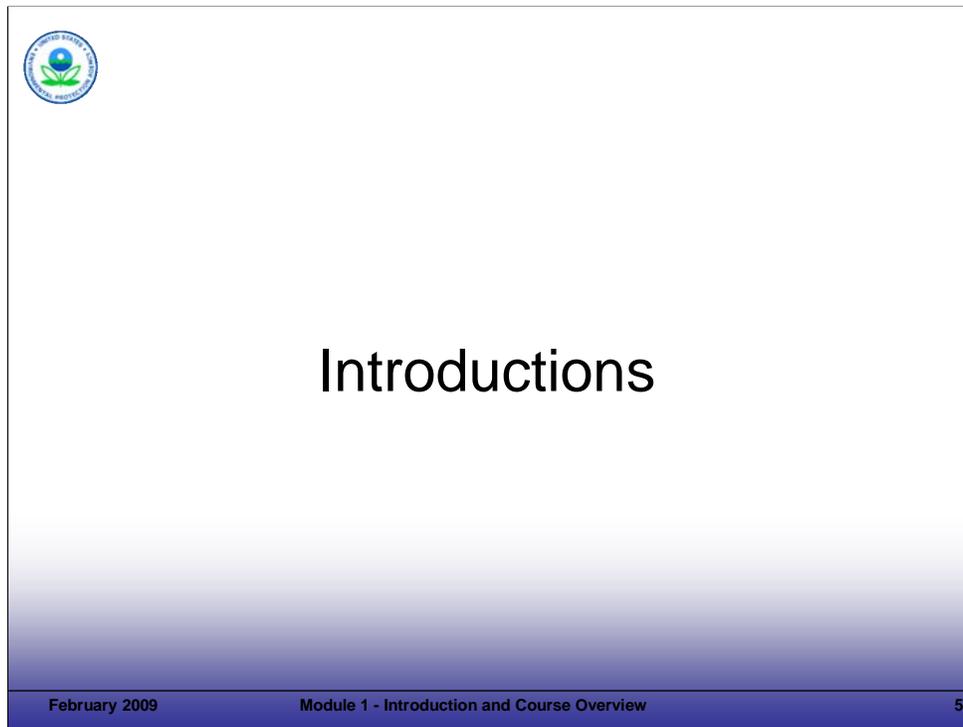
- Overview the module's content.

#### Key Points

- This introduction and course overview provides an opportunity for the class to get to know each other and understand the mission, objectives, approach, logistics, and agenda for the course.
- This module addresses introductory material, including the elements shown above.

#### References

- None.



**Notes:**

Purpose of Slide

- Holder slide for participant and instructor introductions (if instructor introductions not provided previously).

Key Points

- Introductions will be made.

References

- None.



## Course Mission Statement

- ❖ *To develop and enhance the skills of qualified personnel who will implement corrective actions for their sites by the year 2020 that are protective of human health and the environment while encouraging revitalization.*

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### Notes:

Purpose of Slide: Communicate the mission of the course.

#### Key Points

- EPA carefully considered the reason for doing this new national training program. Resources are tight and must be spent wisely. However, given the ambitious goals for RCRA CA progress, this national course was developed (1) to focus on enhancing skills, (2) to provide a forum to review and discuss means to support rapid RCRA CA progress, and (3) to highlight EPA's emphasis and resources to encourage revitalization.
- The mission statement above was developed by RCRA EPA HQ and Regional representatives, as well as state program personnel. It reflects the strong body of program experience developed over time. That experience now needs to be applied to achieve progress towards EPA's goals and vision for the RCRA CA program. This course builds on the existing body of knowledge and is designed for personnel with experience in the RCRA CA program.
- This training course builds on the strong program knowledge that has been developed over the years. It stresses practical approaches that support progress -- while achieving on-going protection of human health and the environment and long-term environmental stewardship.
- You will notice that this course includes a strong focus on revitalization. EPA is focusing on revitalization across its cleanup programs (1) as a tool to accelerate cleanups at facilities with current redevelopment interest and (2) to ensure that remedies at other facilities are selected with reasonably anticipated future uses in mind (as opposed to leaving facilities fenced and inactive).
- Revitalization is defined broadly for this course to include land reuse and redevelopment efforts including: continued use of facilities (also known as, operating facilities) and/or reuse of a property for new purposes (for example, commercial, residential, ecological, public, or industrial). The importance of revitalization is recognized throughout this training program and Module 6 provides specific information on EPA's revitalization efforts, goals, and resources.
- In addition to reviewing regulatory requirements and guidance -- the training program will also present facility considerations and perspectives. These facility considerations include things like budgeting for major environmental projects, managing cash flow, and trying to achieve cost savings and benefits. Generally, understanding the facility perspective will help you collaborate and work with facilities to achieve CA progress; however, a more enforcement-oriented approach may be necessary for those facilities that are not willing to work collaboratively.

#### References

- None.



## Training Objectives

- ❖ Enhance the existing skills and knowledge of federal, state, and other personnel to support Resource Conservation and Recovery Act (RCRA) corrective action (CA) progress
- ❖ Demonstrate and share approaches that have been successful in supporting CA efforts
- ❖ Share examples and lessons learned  
(continued)

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### Notes:

#### Purpose of Slide

- Provide the training objectives as shown on Slide 7 (this slide) and Slide 8 (next slide).

#### Key Points

- Discuss how the overarching mission of the course is now translated into specific objectives for the training program and highlight the objectives which are provided on this slide and the next.

#### References

- None.



## Training Objectives

Course participants will be able to:

- ❖ Explain the background and future of the RCRA CA Program
- ❖ Focus efforts on progress, rather than process
- ❖ Describe and apply successful approaches to achieve RCRA CA goals
- ❖ Identify and use available tools and resources to support RCRA CA progress
- ❖ Understand and document progress towards RCRA CA milestones

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### Notes:

#### Purpose of Slide

- Continue the review of training objectives.

#### Key Points

- Continue the review of training objectives.
- Remember that the course discussions and materials do not substitute for official EPA regulations, policy, and guidance or create or negate any requirements specified in those regulations, policies, or guidance.

#### References

- None.



# Training Approach

- ❖ Use an interactive approach (all have lessons and challenges to share)
- ❖ Mix lectures, discussions, exercises, and real-world examples
- ❖ Maximize shared learning
- ❖ Increase information retention (next two slides)

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## Notes:

### Purpose of Slide

- Review the training approach. This slide (Slide 9) and the following two slides (Slides 10 and 11) focus on the general approach to training and the topic-specific approach for sharing knowledge related to RCRA CA.

### Key Points

- This training course is designed in a manner that recognizes that the course is not a straight “teacher/student” situation.
- Experience shows that the best way to enhance learning and information retention is through the use of interactive approaches, lectures, discussion, and exercises.
- The emphasis on a two-way sharing of knowledge through interactive approaches recognizes that participants in this class already have training and experience to share. This experience may be in the area of RCRA CA or other related environmental management areas that can provide ideas and lessons learned to support RCRA CA progress. Whenever we can, we want to build on what is working and avoid repeating approaches that do not work well.
- The instructors have many years of field experience as regulators, industry personnel, and/or consultants -- specifically focused on RCRA CA policies and guidance, site investigation, and remediation. However, participants in the class also have a range of experience and real-world knowledge to share. In addition, class participants will know best what is happening in their own regions and states and will be able to identify current situations/issues/challenges that can be discussed during the course.
- Our goal is to create a cooperative and comfortable learning environment, which increases information retention and your ability to implement the concepts we will present.

### References

- None.



## Information Retention

Adults retain:

- ❖ 10% of what they read
- ❖ 20% of what they hear
- ❖ 30% of what they see
- ❖ 50% of what they see and hear
- ❖ 70% of what they talk over with others
- ❖ 80% of what they use and do in real life
- ❖ 95% of what they teach someone else to do

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### Notes:

#### Purpose of Slide

- This slide ties to the last bullet on the previous slide.

#### Key Points

Adults learn and retain information in a number of ways (and unfortunately, do not absorb information as well as children -- for example, this is why children are quick at learning new languages).

- This course recognizes that listening to 2.5 days of lecture and reading hundreds of slides, will not maximize learning. Therefore, the course includes discussion, exercises, and examples.
- Even with a course designed to maximize learning, we likely will not achieve full information retention. Therefore, it is critical that this training event be followed by real-world implementation of the concepts and principles discussed. This will include subsequent use of the resources and tools we provide. In addition, we hope that the course will help you develop your own network of practitioners focused on progress, with whom you can share ideas long after the course is over.
- To support networking, we are asking you to complete a sign up list with your contact information to share with the group. The list will be shared when the course is completed. In addition, the instructor names and contact information will be on that list.
- We will be asking for examples and input to improve this course over time and we are always willing to discuss RCRA CA. In addition, we encourage you to mingle with others during your time here -- grab lunch or dinner, discuss issues you are dealing with, and otherwise network to increase the sharing of ideas and knowledge.
- Ultimately, this course can only provide information, ideas, and a framework for future progress -- the hard work will be up to you when you return to your day-to-day work supporting RCRA CA efforts.

#### References

- None.



## Topic-Specific Approach

- ❖ Focus on progress for CA
- ❖ Implement 3 days of progressive training
  - Daily themes
  - Early modules provide foundation for later lessons
- ❖ Confirm learning through group discussion
- ❖ Obtain feedback to improve the course

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### Notes:

#### Purpose of Slide

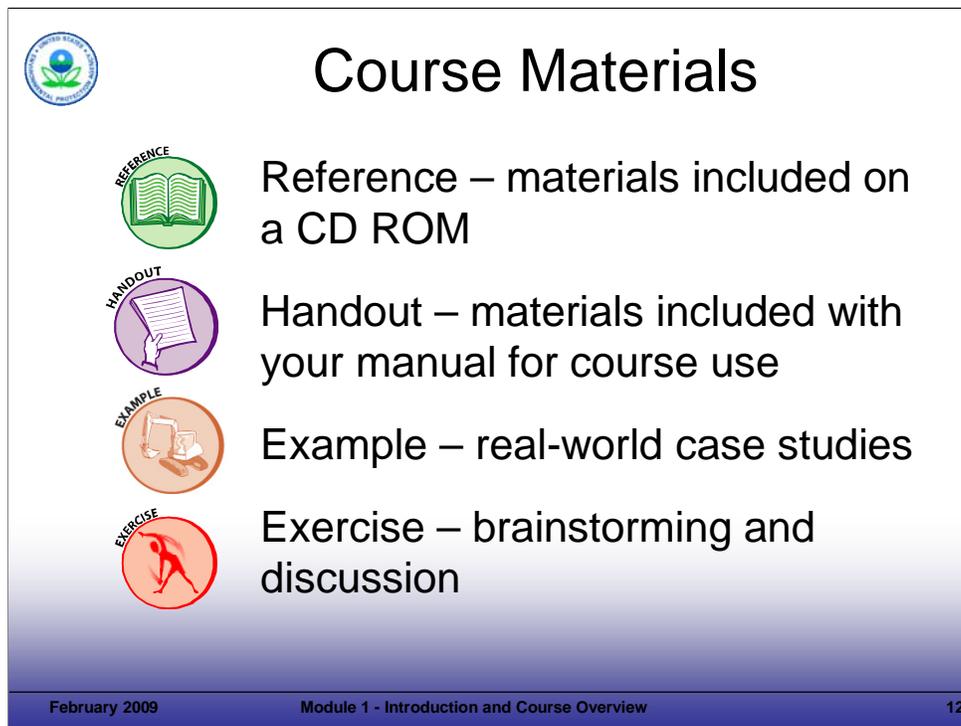
- Provide the specific approach developed to present the RCRA CA Course.

#### Key Points

- We have talked about the general course approach, which is designed to maximize information retention and sharing of knowledge.
- In structuring the specific approach to this course, we considered the large volume of material to be covered and the mission of the course.
- We then identified groupings of information to provide a clear focus, or theme, for each day.
- This approach also breaks the course into sections that are more manageable and that build on each other as the course progresses.
- Finally, we would appreciate your feedback on the course. We will provide evaluation forms at the end of the course; please keep notes as thoughts occur to you during the course. You can then talk to instructors at the end of each day or add your input to the evaluation form on Day 3.

#### References

- None.



The slide features a blue header with the RCRA logo on the left and the title "Course Materials" in the center. Below the title, four icons are listed vertically, each with a corresponding text description. The icons are: a green book labeled "REFERENCE", a purple hand holding a document labeled "HANDOUT", an orange backhoe labeled "EXAMPLE", and a red person thinking labeled "EXERCISE". The slide has a blue gradient footer containing the date "February 2009", the module title "Module 1 - Introduction and Course Overview", and the page number "12".

## Course Materials

-  Reference – materials included on a CD ROM
-  Handout – materials included with your manual for course use
-  Example – real-world case studies
-  Exercise – brainstorming and discussion

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### Notes:

#### Purpose of Slide

- Review icons that will be used during the course.

#### Key Points

- The reference icon highlights information discussed on a particular slide and included as a key reference on the CD ROM included in your participant manual. Many of these references are available through the internet. However, participants in past courses have indicated that they like to have all of the key references in one location. A list of the references is included in your manual.
- The handout icon indicates that material on the slide is supplemented by a handout included at the end of the module. Handouts provide additional detail to support a topic, exercise, or discussion. For this module, you will see that a handout of the Road Map for RCRA CA is provided.
- The backhoe icon indicates site-specific examples that illustrate the application of concepts presented in a module. Over time, we hope to collect additional real-world examples from participants and integrate them into the course.
- The exercise icon illustrates a point where an activity or question is posed to stimulate thought and discussion.

#### References

- None.



## Course Logistics

- ❖ Facilities
- ❖ Cell phones/E-mail tools
- ❖ Breaks
- ❖ Lunch
- ❖ Schedule

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### Notes:

#### Purpose of Slide

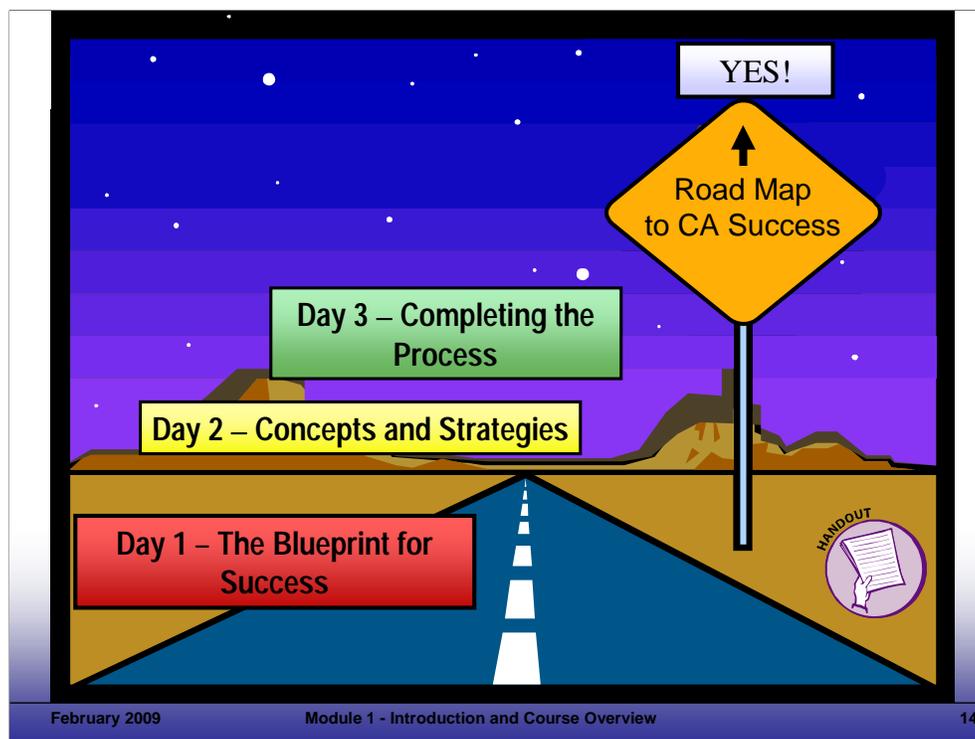
- Provide a holder to discuss logistical items for each specific delivery of the course.

#### Key Points

- The instructors will review course logistics.

#### References

- None.



## Notes:

### Purpose of Slide

- Present the road-map approach to the course. The handout for this slide is a course overview chart developed to illustrate the CA topics addressed by the course.

### Key Points

- As stated previously, we thought carefully about how to cover the wide range of materials required for this training program in a manner that is logical and manageable.
- In thinking through the material, EPA and the development team identified that RCRA CA can be thought of as progress toward specific goals; this progress relies on logical decision points, sign posts, and directions. This helped us develop a road map for the course.
- Within this framework, each day will have a theme and we will cover certain topics related to that theme. We will build on the lessons from one day as we move into the next.
- The road we are on leads to RCRA CA Success. As you can see on this slide, we are moving to a YES for key decision milestones that are being measured and for getting sites ready for anticipated uses. We will discuss the "Yes" concept in greater detail in Module 2.
- This slide shows each daily theme. The next three slides (15, 16, and 17) show the detailed agenda for each day.

### References

- None.



## Day 1 – The Blueprint for Success

- ❖ Module 1 – Introduction and Course Overview
- ❖ Module 2 – How to Achieve the 2020 Vision
- ❖ Module 3 – CA Authorities and Guidance
- ❖ Module 4 – Starting with the End in Mind: Building an Exit Strategy
- ❖ Module 5 – Achieving Success: Practical Solutions to CA Challenges
- ❖ Module 6 – CA and Facilitating Land Revitalization

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### Notes:

#### Purpose of Slide

- Overview content of Day 1.

#### Key Points

- The first day of the course focuses on (1) the Goals and Vision for CA; (2) the regulations, guidance, and policies that provide the framework for RCRA CA; (3) the importance of keeping end goals in mind through the CA process; (4) practical approaches to support CA implementation; and (5) EPA programs and resources to support revitalization and associated land revitalization indicators and performance measures.
- Day 1 presents the basic framework of CA and overviews where we are and where the program is headed.
- The course emphasis is on concepts and approaches to achieve CA progress.

#### References

- None.



## Day 2 – Concepts and Strategies

- ❖ Module 7 – Selecting and Approving a Protective Remedy
- ❖ Module 8 – Remediation Technologies
- ❖ Module 9 – Managing Remediation Waste
- ❖ Module 10 – CA Optimization Tools and Challenge Exercise

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### Notes:

#### Purpose of Slide

- Overview content of Day 2.

#### Key Points

- The second day of training builds on the first; it addresses elements that are common to RCRA CA sites and are important to implementing the CA process successfully.
- Module 7, *Achieving an Effective and Protective Remedy*, reviews factors that support the selection of a remedy. These concepts include cleanup criteria and related matters. In addition, land revitalization opportunities are relevant to remedy selection.
- Module 8, *Remediation Technologies*, provides information on a range of remediation technologies that are important to remedy implementation.
- Module 9, *Managing Remediation Waste*, reviews common issues and practical solutions related to planning and implementing the management of investigation and cleanup-related residuals at RCRA CA sites.
- Module 10, *CA Optimization Tools and Challenge Exercise*, will include a facilitated discussion of options to support CA. This will reinforce concepts presented on Days 1 and 2.

#### References

- None.



## Day 3 – Completing the Process

- ❖ Module 11 – Maintaining Effective Remedy Performance
- ❖ Module 12 – CA Complete
- ❖ Module 13 – Challenge Exercise
- ❖ Module 14 – Wrap Up

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### Notes:

#### Purpose of Slide

- Overview content of Day 3.

#### Key Points

- Module 11, Maintaining Effective Remedy Performance, considers factors that are important after the remedy is selected. These factors include implementing and maintaining engineering and institutional controls, implementing and achieving remedy operation and maintenance, focusing on remedy optimization, and monitoring and adjusting the remedy over time (if appropriate).
- Module 12, CA Complete, reviews the documentation required to show that CA is complete.
- Module 13, Challenge Exercise, allows time for participants to work in groups to review example challenges and site-specific needs. This will allow participants to share their knowledge and brainstorm regarding how some of the course principles can be applied.
- Finally, in Module 14, we will wrap up the course and get your feedback so that we can improve the course for future deliveries. Your feedback is very important to planning for future deliveries of the course.

#### References

- None.



## Summary

- ❖ EPA's goals and vision for RCRA CA are ambitious.
- ❖ This course provides guidance, tools, and approaches to assist in achieving RCRA CA results.
- ❖ The active participation of everyone present will increase the value of our time together.

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### Notes:

#### Purpose of Slide

- Review key points included in Module 1, Introduction and Course Overview.

#### Key Points

- This slide summarizes key points addressed in Module 1.

#### References

- None.



Corrective Action Universe (3,746 Facilities)

Remedy Selected and Construction Complete?

Yes

No

Document Remedy Decision and Remedy Construction CA 400 and CA 550



Operate and Maintain Remedy - Evaluate Effectiveness

CA Complete?

Yes

No

Document CA Criteria Met (CA 900) and/or CA Terminated (CA 999)

Design and Implement Remedy - Modify As Necessary

**Science**

- Site Characterization
- Risk Management

**Engineering**

- Pilot Studies
- Remedy Design and Construction
- Engineering Controls

**Policy and Field Considerations**

- Threshold and Balancing Criteria
- Facility Operations
- Location and Weather
- Institutional Controls

**Remediation Waste**

Facility under a Regulatory Mechanism?

Yes

No

Contact Facility/ Discuss Alternatives

Voluntary or Facility-Lead Agreement

Order or Permit

**Develop Long-term Exit Strategy**

Include:

- 2020 Vision for CA
- Public Participation
- Financial Assurance
- Anticipated Land Use Considerations
- Focus on Revitalization

- Day 1
- Day 2
- Day 3

# Course Overview