OVERVIEW OF THE RCRA CORRECTIVE ACTION PROCESS

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Topics This Presentation Will Cover

- Overview of RCRA and HSWA
- Pathways to Corrective Action
- EPA's Traditional Corrective Action Process
- The Corrective Action Strategy (CAS)
- The Future of Corrective Action

Note: This presentation covers facilities that have submitted a Part A, Part B Permit Applications under LAC 33:V. RCRA interim status facilities may also be subject to corrective action.

OVERVIEW OF RCRA AND HSWA

Overview of RCRA

Background

- The Resource Conservation and Recovery Act (RCRA) was promulgated in 1976 to amend the Solid Waste Disposal Act of 1965
- Gave the US EPA regulatory authority over hazardous waste

Primary Goals of RCRA Program

- Protect human health and the environment from hazardous waste disposal
- Reduce the amount of hazardous waste generated
- Manage hazardous waste in an environmentally sound manner
- Conserve energy and natural resources

RCRA is known for “Cradle to Grave” responsibility for hazardous waste because it established regulations managing the generation, transportation, treatment, storage, and disposal of hazardous waste.

Overview of HSWA

Hazardous and Solid Waste Amendments (HSWA)

- Promulgated in 1984 to amend RCRA
- Addressed the management of hazardous waste as well as a release of hazardous constituents into the environment
- Expanded the scope and requirements of RCRA allowing the EPA and authorized state agencies to enforce corrective action
- HSWA corrective action provisions concern facilities applying for a RCRA permit

Subpart S, Regulations

- EPA partially withdrew the 1990 Subpart S proposal
- Provisions finalized and remain in effect
  - Definition of 'facility'
  - Responsibility for corrective action when ownership is transferred
  - Regulations for corrective action management units (CAMUs)

Pathways to Corrective Action

Corrective action is triggered by:

- Hazardous waste Part A, Part B Permit Application
- Release of hazardous waste

Corrective action can be imposed through:

- Permits
  - Louisiana, and the other states in EPA's Region 6, are authorized to issue permits under the RCRA corrective action program
  - Permits must contain corrective action provisions as well as financial assurances for conducting corrective action
- Enforceable documents (e.g., Administrative Order)
  - Issued by EPA or the State
- Voluntary corrective action
  - Most Region 6 states have a voluntary corrective action program

Relevant Terms

Areas of Concern (AOCs):

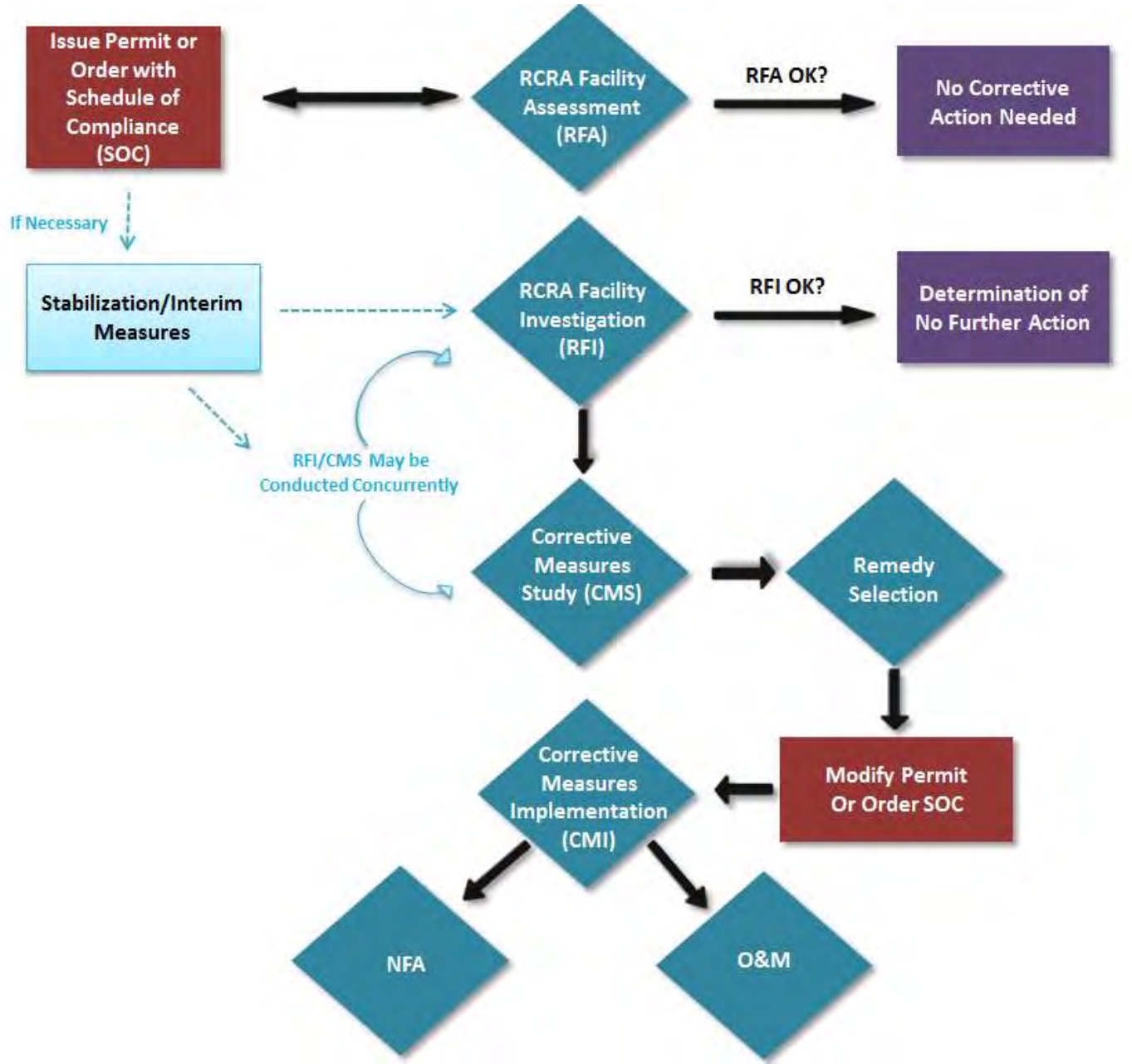
- A one-time release of hazardous constituents, not the management of hazardous waste
- Agency has a larger burden of proof for AOCs than SWMUs
- Examples: contaminated soils from a spill, one-time release of product during transport, contaminated soil/groundwater from a vessel leak

Solid Waste Management Units (SWMUs):

- Management of hazardous waste
- Known hazardous waste unit or a routine and systematic release from a hazardous waste unit
- Examples: pit, storage pad, burial area, lagoon

EPA’S CORRECTIVE ACTION PROCESS

EPA's Traditional Corrective Action Process



Overview of CAS

- Alternative RCRA program to the traditional EPA RCRA program
- In 1998, Region 6 developed CAS as guidance for the corrective action process based on ANPR principles
- Modified and implemented by LDEQ in 2006 to clarify, facilitate, and expedite the corrective action process
- LDEQ credits facilities for corrective action completed through the traditional process when they convert to CAS

CAS was developed to:

- Move away from process-driven corrective action
- Streamline administrative procedures while protecting human health and the environment and maintaining public participation

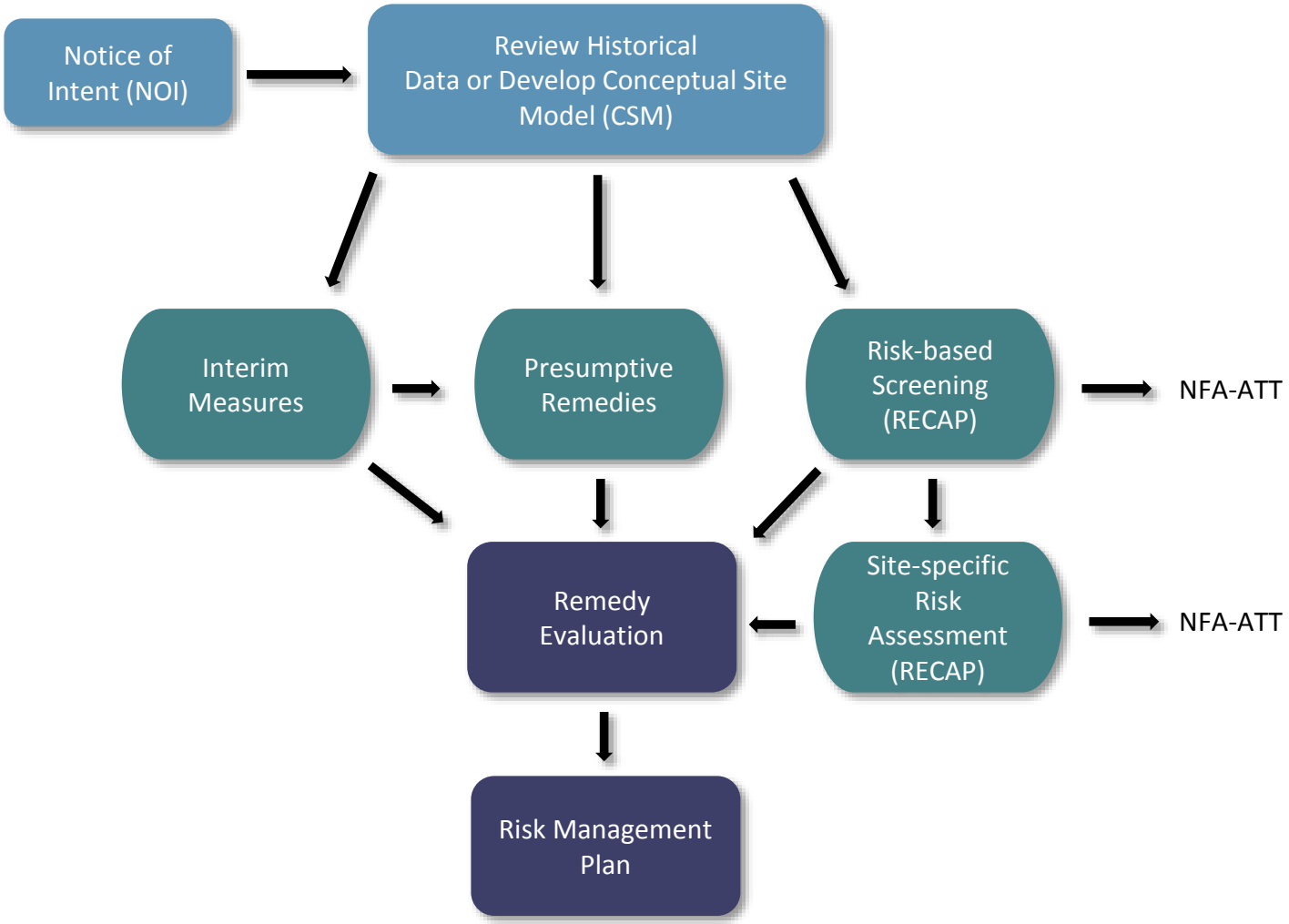
Use of LDEQ's RECAP Under RCRA Corrective Action

- The Risk Evaluation/Corrective Action Program (RECAP) establishes the LDEQ's minimum remediation standards for present and past uncontrolled constituent releases

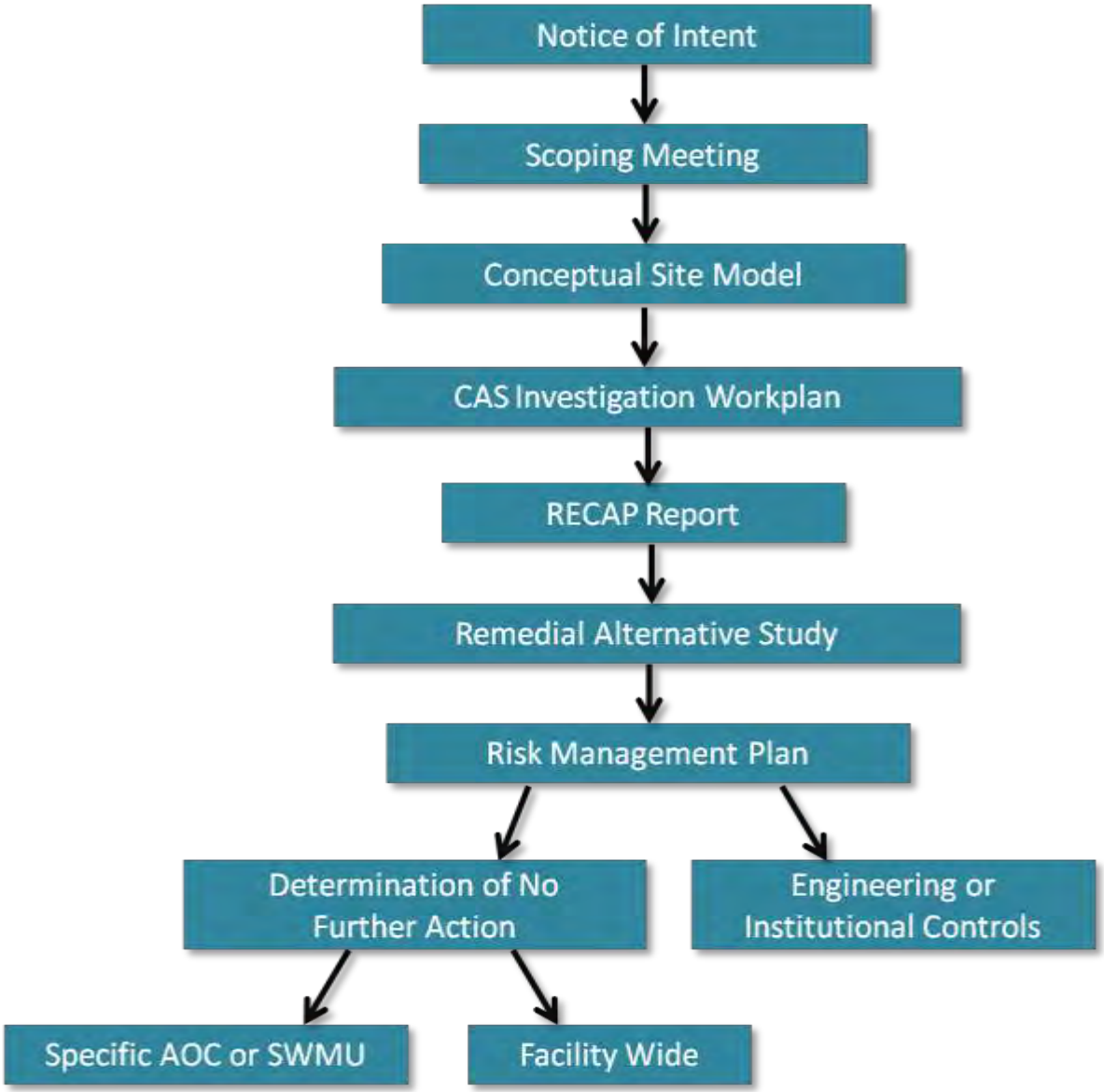
- Louisiana uses RECAP within the CAS Process for screening and media-specific, risk-based cleanup standards that are designed to protect human health and the environment

- RECAP removes much of the subjectivity from selecting clean up goals for RCRA Corrective Action

CAS Process Conceptual Interpretation



CAS Process Linear Interpretation



Completion of the CAS Process

According to EPA, corrective action is complete when:

- Determination of No Further Action At This Time (NFA-ATT)
  - Specific SWMUs/AOCs
    - A facility submits an NFA-ATT request when it can demonstrate that a SWMU/AOC is remediated to RECAP standards
  - Facility-wide
    - A facility submits an NFA-ATT request when it completes all activities in the Risk Management Plan and can demonstrate that all SWMUs/AOCs are remediated to RECAP standards
- For hazardous waste left in place, implemented engineering and/or institutional controls provide higher protection than protective levels

Financial Assurance

Although EPA requires financial assurance for HSWA corrective action, there are no specific submittal or timing requirements for corrective action cost estimates.

- Conditions for financial assurance are site specific and determined by the administrative authority
- Financial assurance must be part of an enforceable document
- Financial assurance:
  - May be required as part of remedy selection
  - Should be in place before construction of final remedy
  - May be required earlier depending on other factors (e.g., nature of the corrective action)
  - Should be required when significant engineering controls or construction costs are involved with the final remedy

Challenges During the Corrective Action Process

- Ownership changes and property sales
- Completing investigatory requirements at complex operating facilities
- Funds or resources to complete the corrective action process
- Remedy selection for facilities with extensive technical challenges

THE FUTURE OF CORRECTIVE ACTION

The Future of Corrective Action

Beyond RCRA: Waste Material Management in the Year 2020

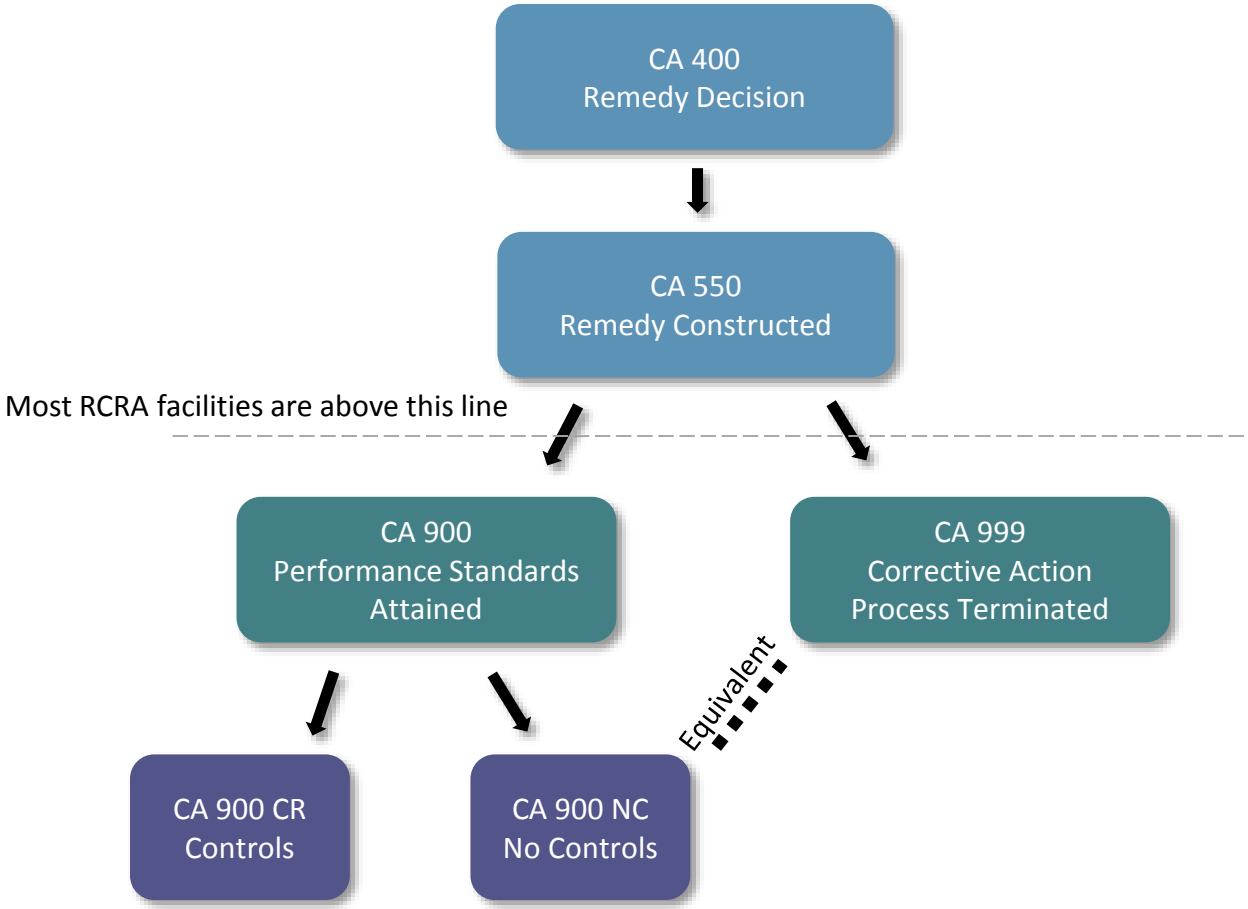
- Better known as EPA's "2020 Vision"
- Developed in 2002 by the EPA and state agencies to encourage dialogue on the future of the RCRA program
- Main goals:
    - Reduce waste and increase the sustainable use of resources
    - Prevent exposures to humans and ecosystems from the use of hazardous chemicals
    - Manage wastes and clean up chemical releases in a safe, environmentally sound manner

The Future of Corrective Action

- Tracking the 2020 Vision through baselines
- Environmental indicators and goals implemented to satisfy GPRA
    - Final Remedy Decisions (CA 400)
    - Final Remedies Constructed (CA 550)
    - Current Human Exposure Under Control (CA 725)
    - Migration of Contaminated Groundwater Under Control (CA 750)
    - Performance Standards Attained (CA 900)
    - Corrective Action Process Terminated (CA 999)

Louisiana		2010 Corrective Action Baseline (64 facilities)	2011 Corrective Action Baseline (64 facilities)	2012 Corrective Action Baseline (64 facilities)	2020 Corrective Action Goals (64 facilities)
Environmental Indicator and Goals	**Event Code**	**Reached**	**Reached**	**Reached**	**Goal**
Final Remedy Decisions	CA 400	38%	47%	52%	---
Final Remedies Constructed	CA 550	30%	38%	41%	95%
Human Exposures	CA 725	78%	81%	92%	95%
Migration of Contaminated Groundwater	CA 750	72%	75%	86%	95%

Environmental Indicators



Controls - Engineering or institutional controls used to maintain a RCRA site to satisfy the goal of protection of human health and the environment

Corrective Action Statistics

Percentage of facilities using:

- Innovative site characterization – 30%
- Phased approach – 70%
- Facility-specific based cleanup action levels – 15%
- Natural attenuation as one part of the remedial alternative – 20%

Locations of the groundwater point of compliance at RCRA facilities:

- Facility boundary – 55%
- Unit boundary – 20%

Source: EPA's *Study of the Implementation of the RCRA Corrective Action Program* (Sept 2000)

The Future of Corrective Action

HSWA Corrective Action

- RCRA facilities that were easily remedied are gone
- Investigation and remedy selection remain at a number of RCRA sites
  - How many will be completed by 2020?
- After final remedy, long-term stewardship may apply at many RCRA sites
  - Engineering/institutional controls will require continuous monitoring, maintenance, and possible future modifications

Questions

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Additional Information: RCRA Corrective Action: Case Studies Report, April 2013
http://webcache.googleusercontent.com/search?q=cache:QkMaQG9XNRMJ:www.epa.gov/reg3wcmd/pdf/RCRACorrectiveActionCaseStudiesReport-April2013.pdf+&cd=1&hl=en&ct=clnk&gl=us