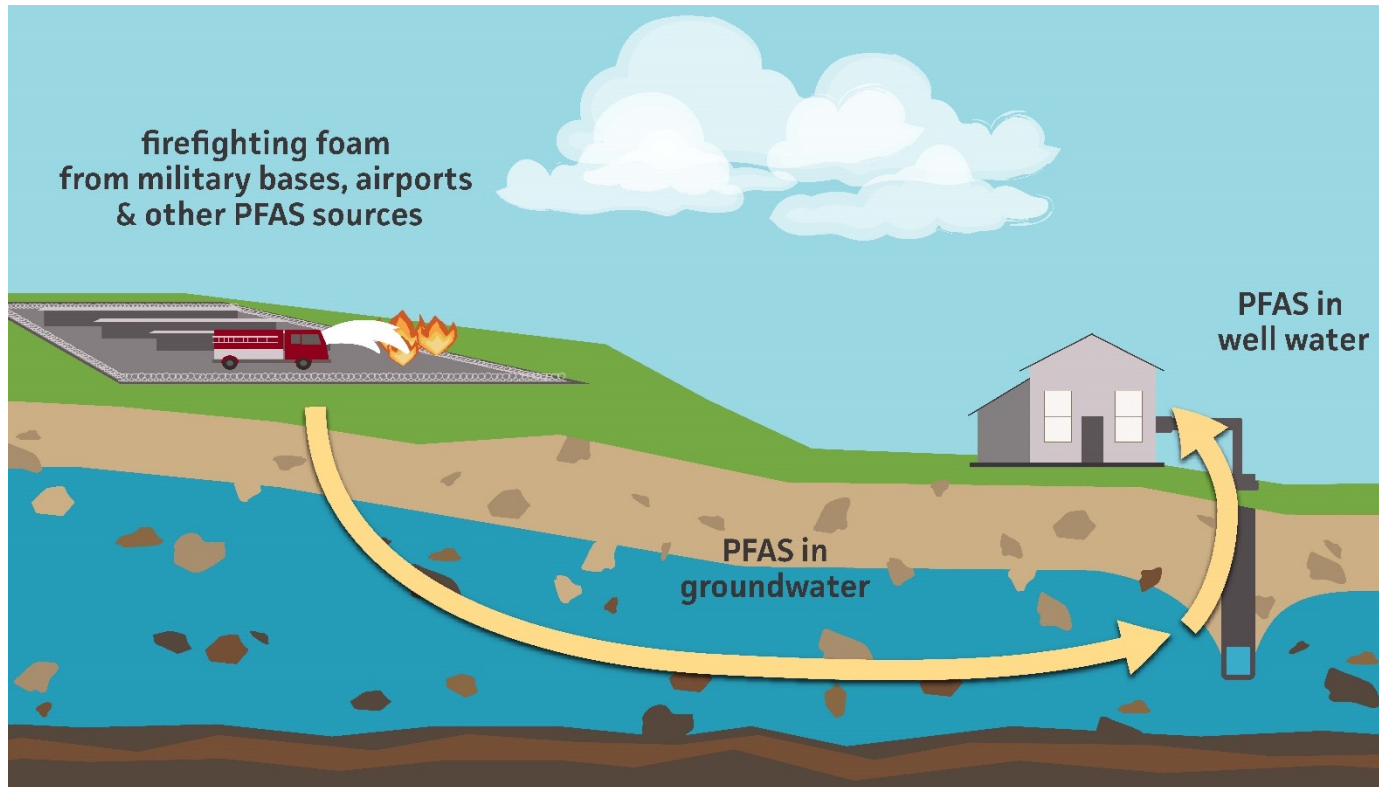




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# CERCLA Cleanup Process Overview



Russell Howard  
MN Department of Military Affairs



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- ❑ **St. Cloud MN Army National Guard (ARNG) Army Aviation Support Facility (AASF)**
  - ❑ **80,000 sq. ft. hangar**
  - ❑ **1,300 gallon Aqueous Fire Fighting Foam (AFFF) fire suppression system (Jet-X high expansion foam)**





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**St. Cloud AASF  
June 2013**



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**St. Cloud AASF  
June 2013**



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**St. Cloud AASF  
June 2013**



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**St. Cloud AASF  
June 2013**



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**St. Cloud AASF  
June 2013**

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## **Comprehensive Environmental Response, Compensation, & Liability Act (CERCLA)**

- ❑ Enacted 1980 and amended in 1996 (42 U.S.C. §9601 et seq.)
- ❑ Superfund Act
- ❑ Enables EPA to cleanup orphan sites
- ❑ Cleanup enforcement through orders, consent decrees, and settlements
- ❑ Can recoup cleanup costs from financially viable individuals and companies
- ❑ Provides science based cleanup approach
- ❑ Prior to CERCLA multiple well documented environmental disasters occurred





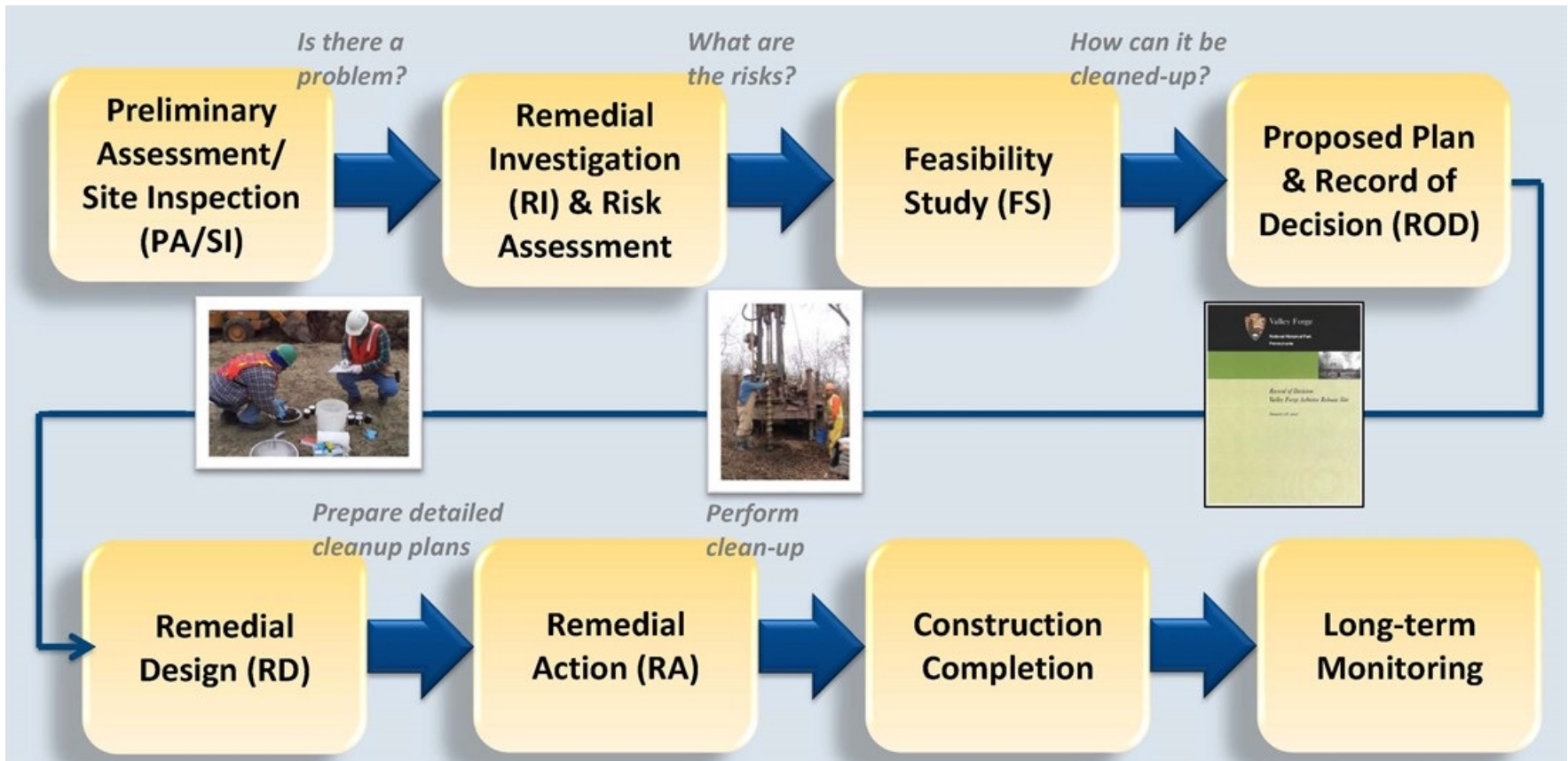
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**Love Canal**



# CERCLA Process





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## ❑ Stakeholder Involvement

- ❑ Who should be involved?
- ❑ Stakeholders should be involved in the planning and reporting process

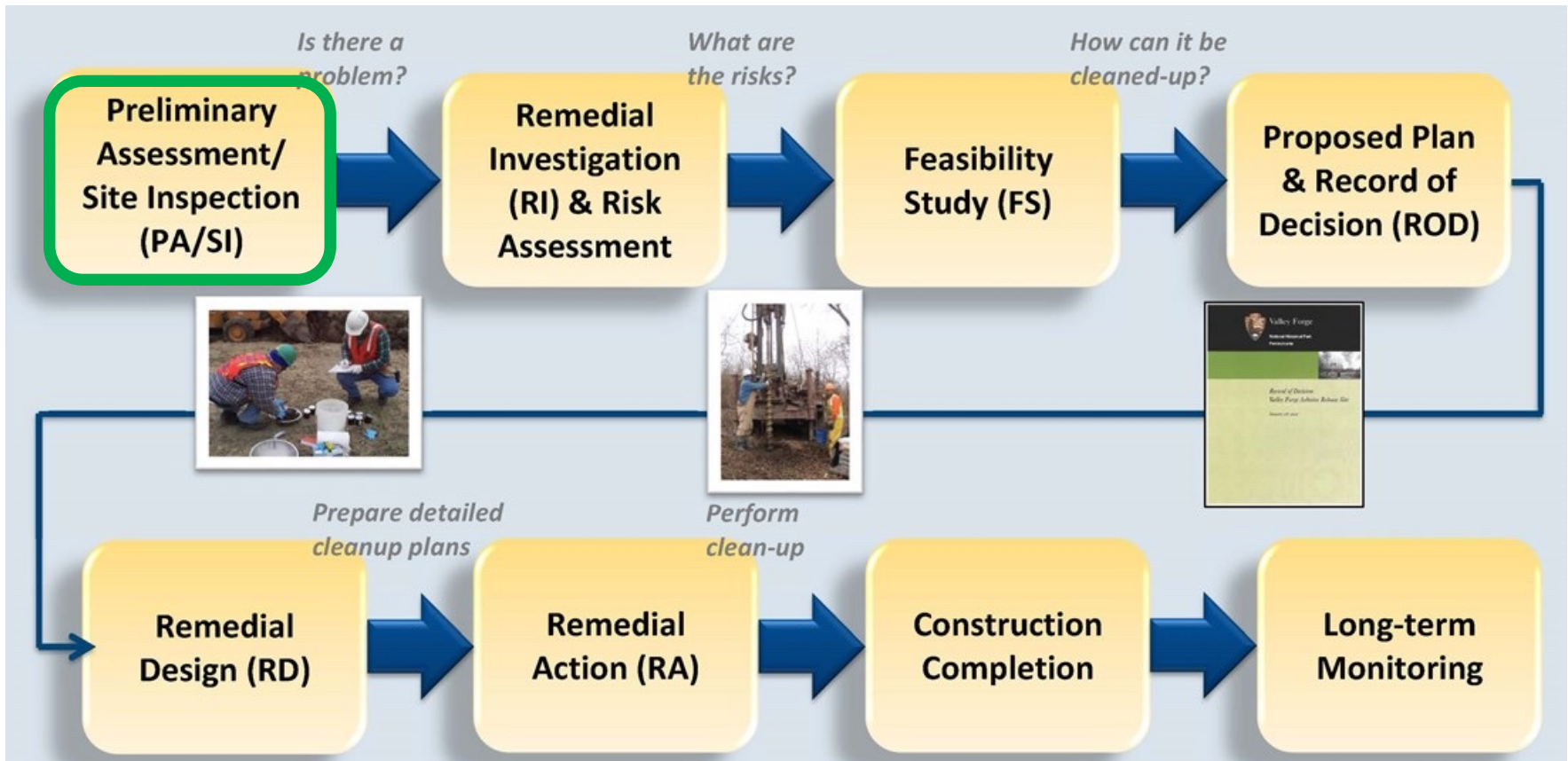
## ❑ Data Presentation

- ❑ US Core Army Core of Engineers Technical Planning Process (TPP)
  - ❑ [https://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM\\_200-1-2.pdf](https://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM_200-1-2.pdf)
- ❑ US EPA Quality Assurance Project Plan (QAPP)
  - ❑ <https://www.epa.gov/sites/default/files/2015-05/documents/assess4.pdf>





# CERCLA Process



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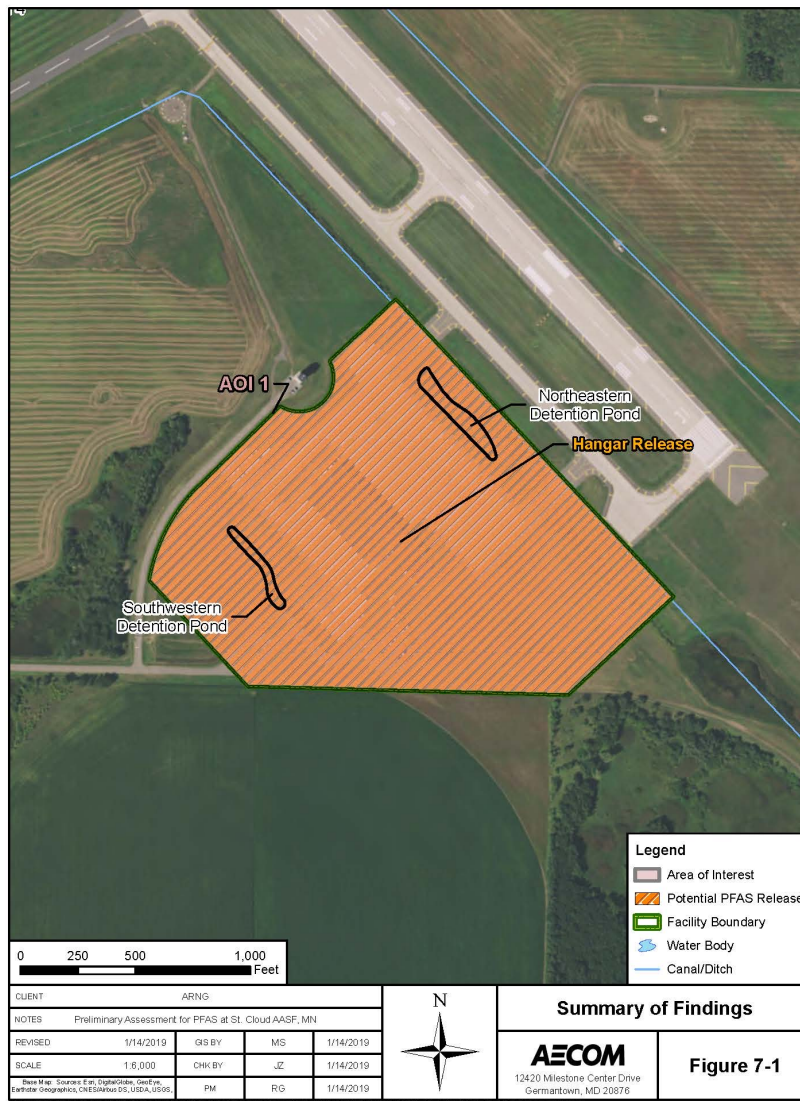
## Preliminary Assessments & Site Investigations

- ❑ **Preliminary Assessments (PA)**
  - ❑ Identify and document potential environmental releases
    - ❑ Historical Document Reviews
    - ❑ Interviews
    - ❑ Site Reconnaissance
  
- ❑ **Site Investigation (SI)**
  - ❑ Five Goals:
    - ❑ Develop information to potentially eliminate a release from further consideration;
    - ❑ Determine the potential need for a removal action;
      - ❑ Time-critical response
    - ❑ Collect or develop data to evaluate a potential release;
    - ❑ Collect data to better characterize the release for a more effective initiation of the Remedial Investigation (RI)
    - ❑ Collect data to determine whether the release is more than likely the result of activities associated with property owner and/or tenant.



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# Preliminary Assessment





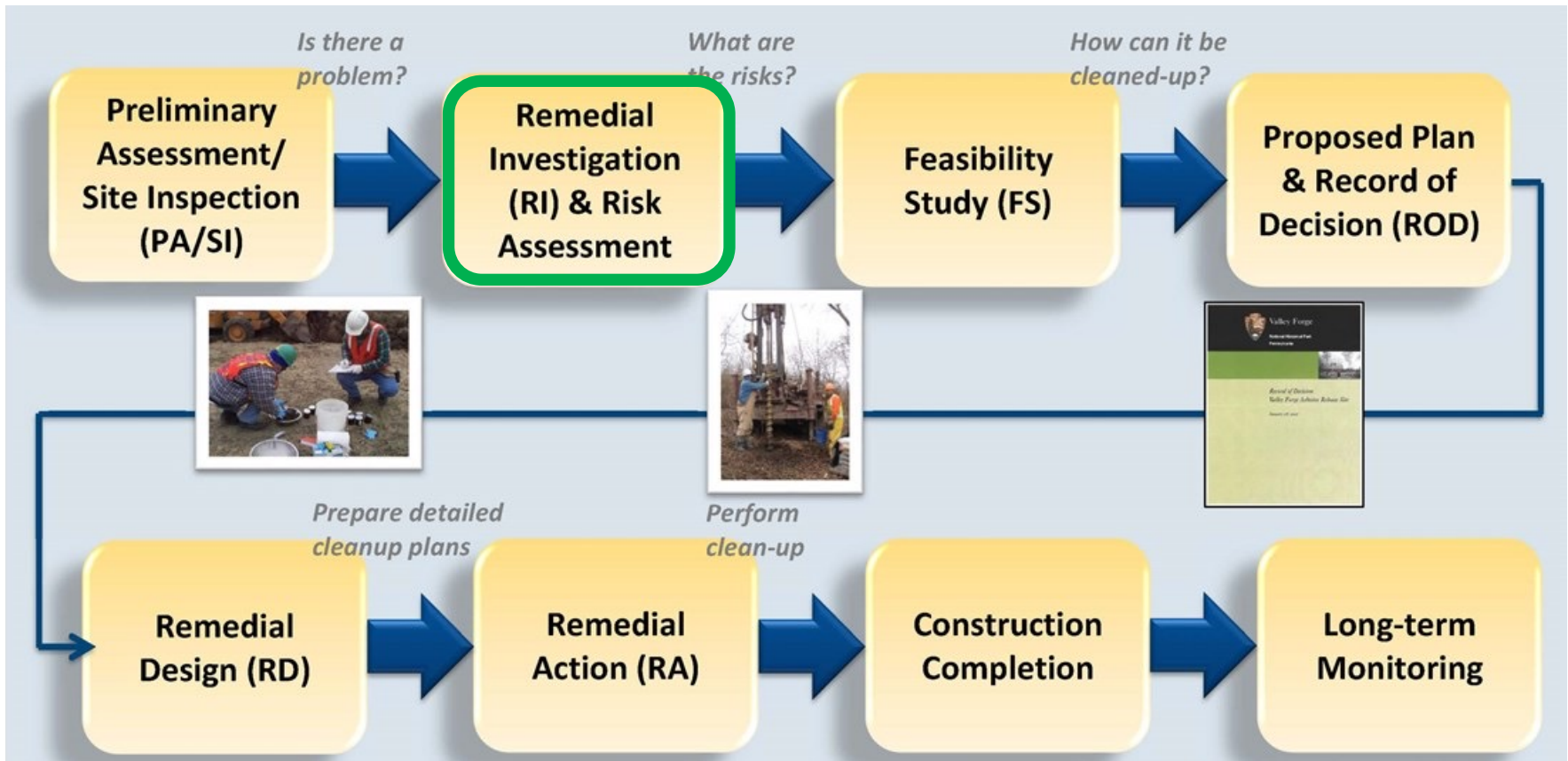
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# Site Investigation





# CERCLA Process





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## Remedial Investigations & Risk Assessments

- ❑ Remedial Investigation (RI)
  - ❑ Determine extent of contamination
    - ❑ Extensive surface and subsurface investigation
    - ❑ Delineate CoC contamination plumes
  - ❑ Risk Assessments
    - ❑ Ecological Risk Assessments
    - ❑ Human Health Risk Assessments





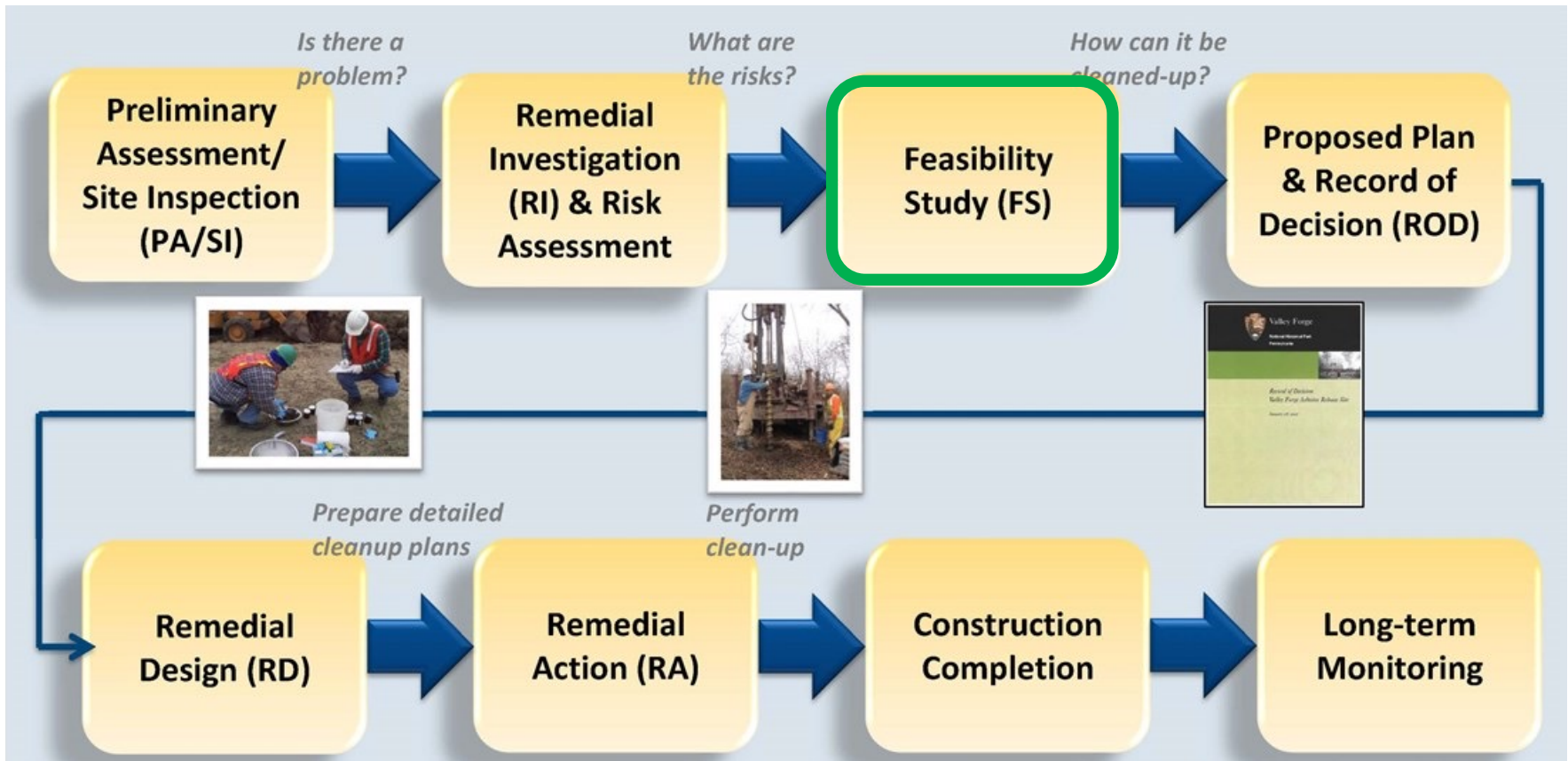
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# Remedial Investigation





# CERCLA Process

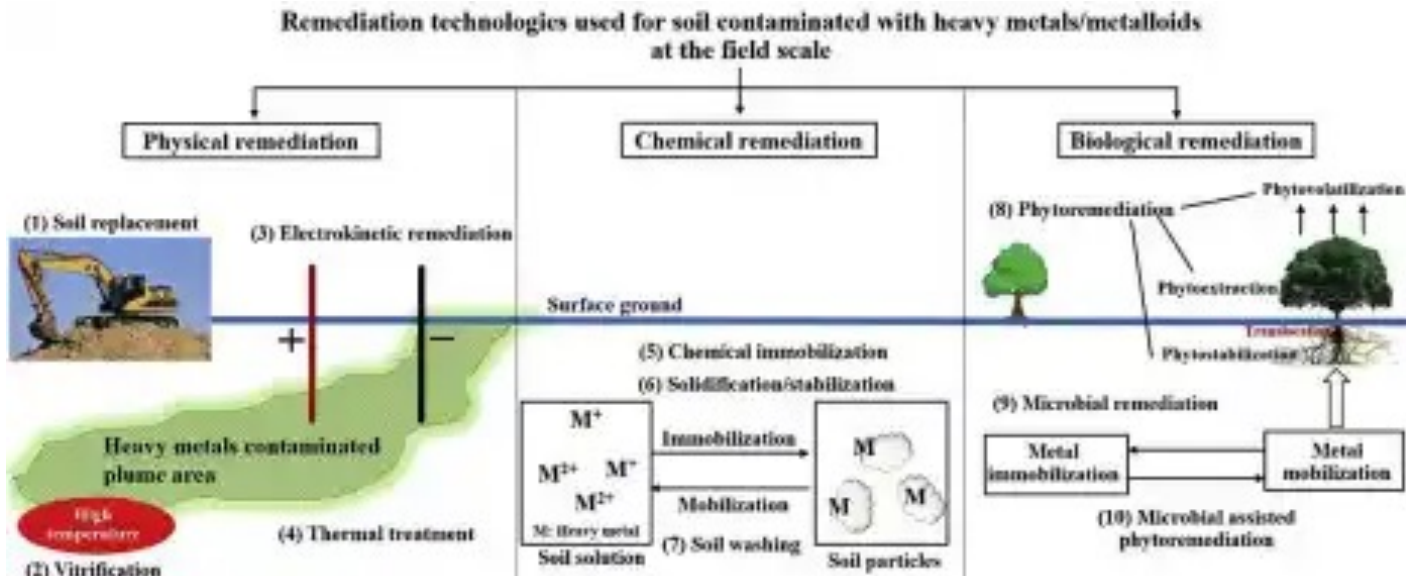




# Feasibility Studies

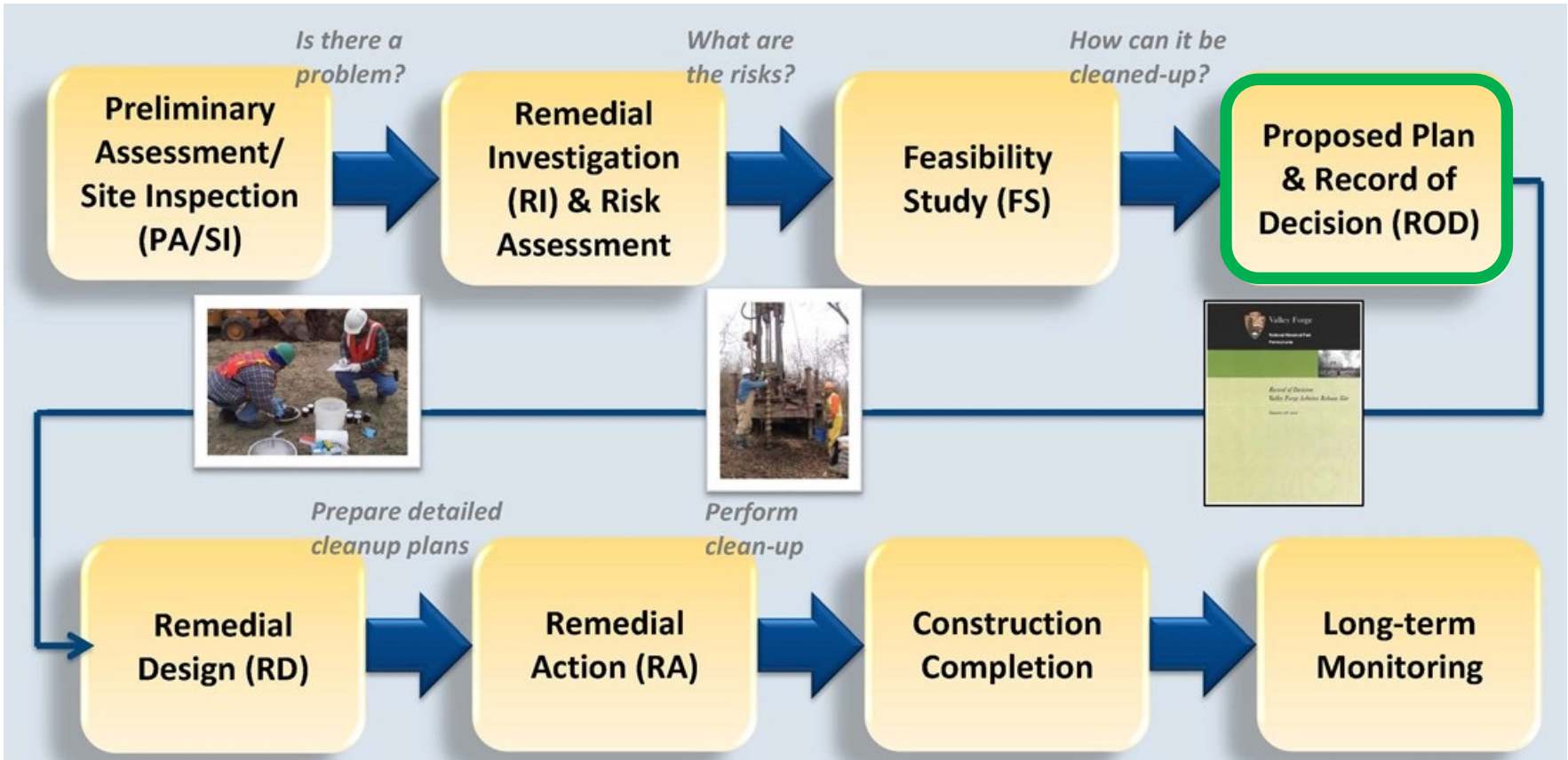
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- ❑ Feasibility Studies
  - ❑ Develop and screen different remedial activities
    - ❑ Include alternatives
      - ❑ Pump and Treat
      - ❑ Bacteria Injections
      - ❑ Groundwater Filtration Systems
      - ❑ Excavation
    - ❑ Cost analysis
    - ❑ Timeline





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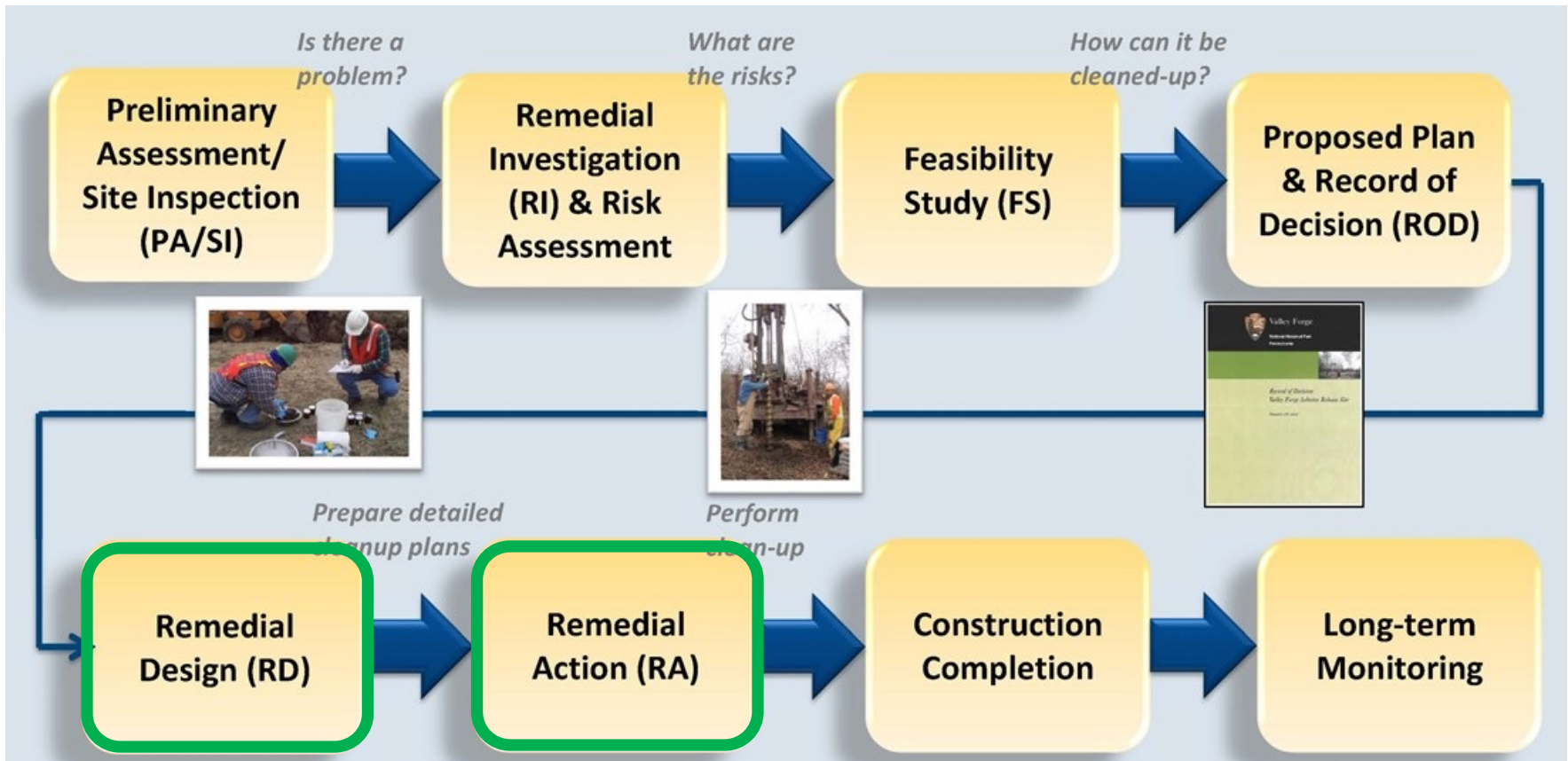
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## Proposed Plan & Record of Decision

- ❑ **Proposed Plan**
  - ❑ Present preferred alternative to public
  - ❑ 30-day public comment period
  - ❑ Public meetings
- ❑ **Record of Decision (RoD)**
  - ❑ Technical parameters of remediation
  - ❑ Describes how remedy protects human health and environment
  - ❑ Includes treatment, engineering and institutional controls, and cleanup levels



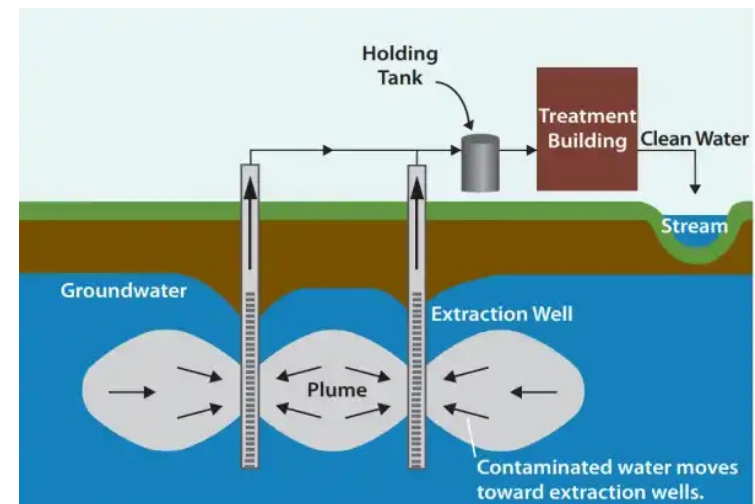
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## Remedial Design & Remedial Action

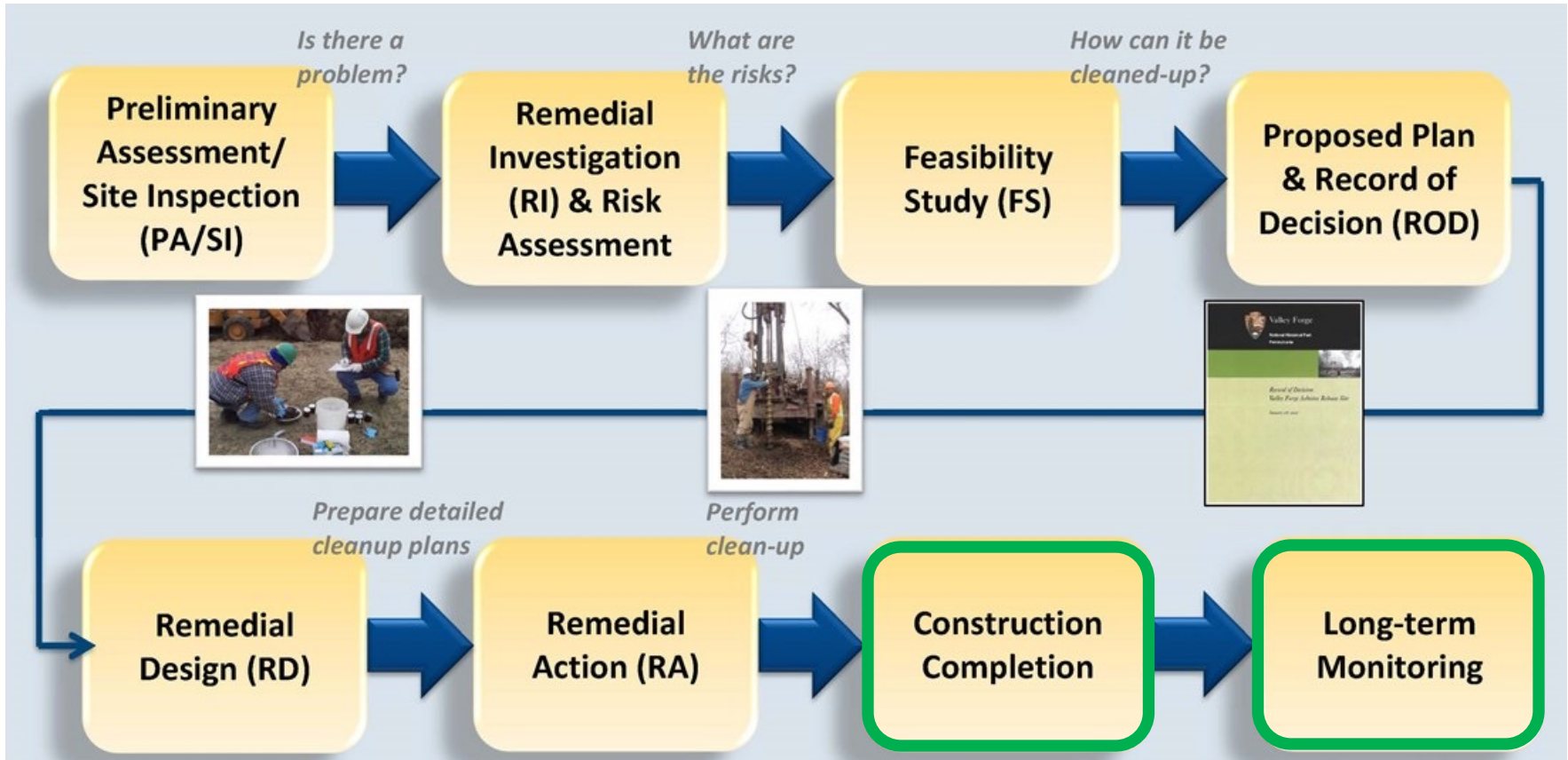
- ❑ **Remedial Design (RD)**
  - ❑ Engineering design phase
    - ❑ Develop technical drawings and specifications
    - ❑ Provides framework for transition into next phase
- ❑ **Remedial Action (RA)**
  - ❑ Implementation phase of site cleanup
  - ❑ Includes Construction Completion and Operational & Functional phases







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## Construction Completion & Post Construction Completion Activities

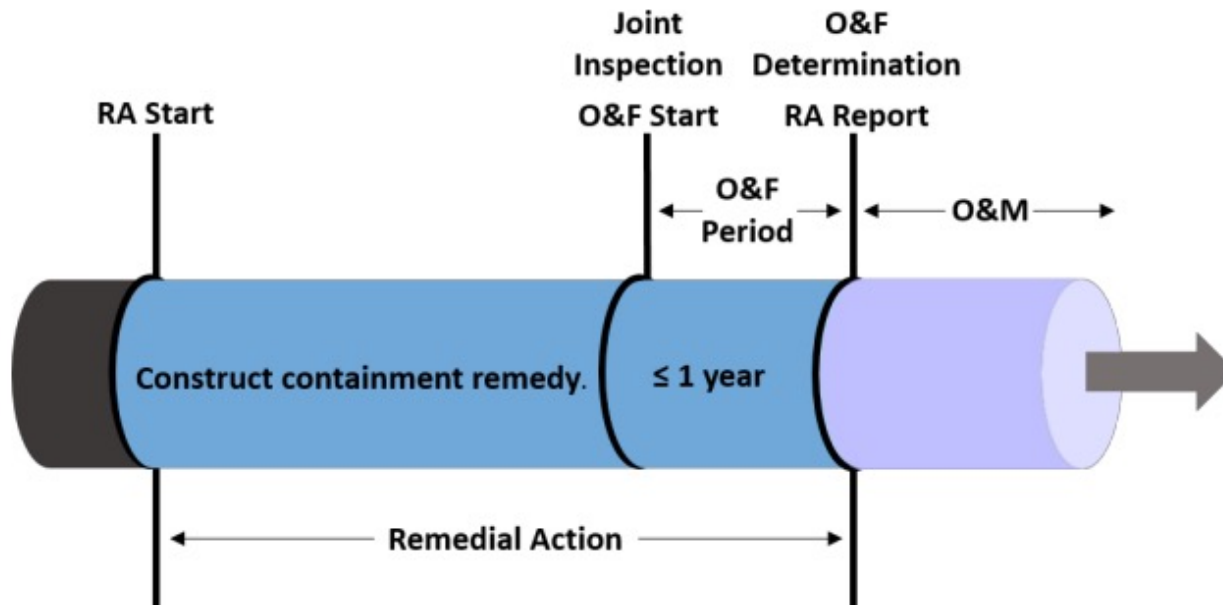
- ❑ **Construction Completion**
  - ❑ Physical construction of remediation systems is complete, and remediation is ready to begin.
- ❑ **Post Construction Completion (PCC) Activities**
  - ❑ **Operational and Functional (O&F)**
    - ❑ A remedy becomes O&F either one year after construction is complete, or when the remedy is functioning properly and is performing as designed, whichever is earlier.
  - ❑ **Operation and Maintenance (O&M)**
    - ❑ Enter O&M Phase after O&F Determination Report
    - ❑ O&M managed by responsible parties, states or other federal agencies
  - ❑ **Five Year Reviews**
  - ❑ **Annual Reporting & Progress Reports**



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# Construction Completion & Post Construction Completion Activities

Exhibit 2 – Example of Source or Groundwater Containment Remedy Timeline  
(Adapted from EPA, 2011a)





## Completion of Remediation

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- ❑ **Completion Criteria**
  - ❑ EPA, in conjunction with the state, has determined that responsible or other parties have implemented all appropriate response action required.
  - ❑ Close-out Report
  - ❑ Approval of close-out by state regulatory agencies and EPA



## NGB PFAS CERCLA Reports

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- ❑ <https://www.nationalguard.mil/Environmental/PFAS/>



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**Questions?**