

Colorado Smelter
Community Advisory Group (CAG)
March 10, 2015
Intro to the Remedial Investigation (RI)



EPA

United States
Environmental Protection
Agency

Major Phases in Remedial Process

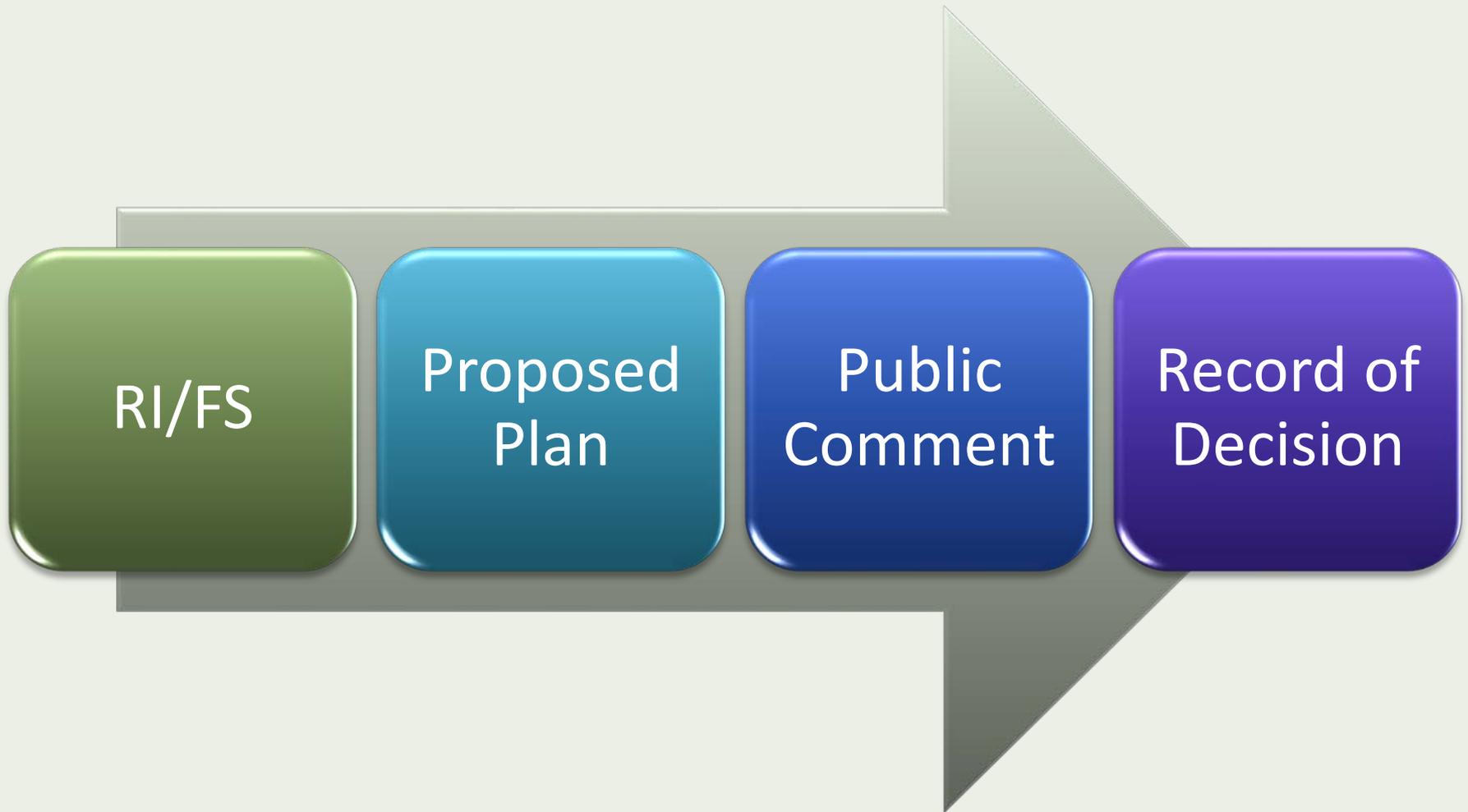
◆ The National Contingency Plan (NCP) defines five major phases in the remedial process

- » RI/FS (Remedial Investigation/Feasibility Study)
- » Selection of remedy (Record of Decision – ROD)
- » Remedial Design
- » Remedial Action
- » Operation & Maintenance (O&M)
and site close out



Liner installation

Remedy Selection Process



Overview of the RI/FS Process

- ◆ Remedial Investigation/Feasibility Study (RI/FS) supports selection of the remedy
- ◆ RI characterizes the site
- ◆ FS develops and analyzes remedial action alternatives



On-site stakeholder discussions

Purpose of Remedial Investigation

- ◆ **“The purpose of the remedial investigation (RI) is to collect data necessary to adequately characterize the site for the purpose of evaluating effective remedial alternatives.”
(NCP Section 300.430[d][1])**

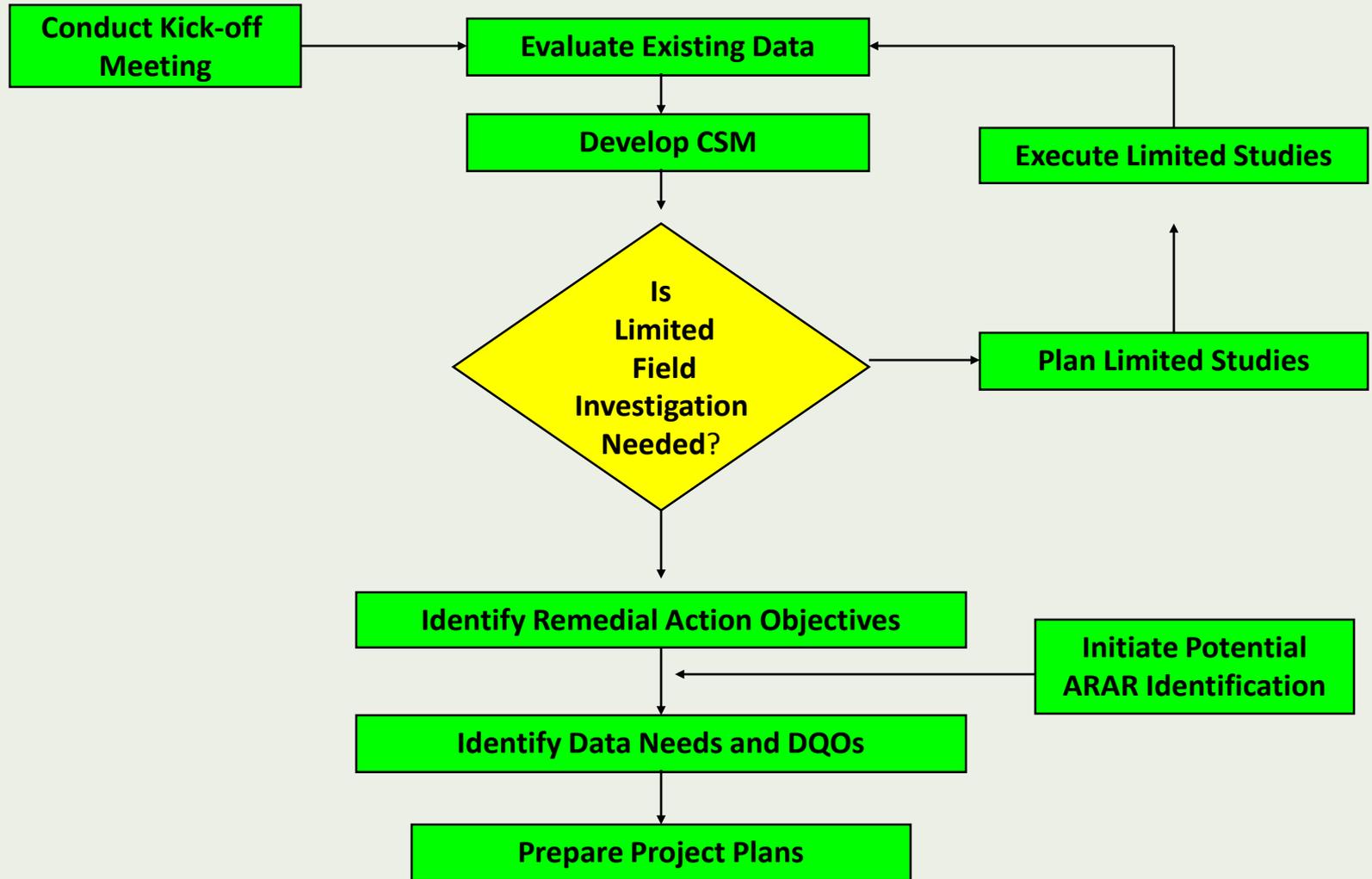
Remedial Investigation (RI)



Scoping the RI/FS

- ◆ **Goal of RI/FS is to support the ROD**
- ◆ **RI/FS process begins with scoping**
- ◆ **Key activities:**
 - » Form a site team and conduct kickoff meeting
 - » Collect and evaluate existing data
 - » Develop a Conceptual Site Model (CSM)
 - » Determine if limited field investigation is needed
 - » Identify Remedial Action Objectives (RAOs)
 - » Initiate potential Applicable or Relevant and Appropriate Requirements (ARAR) identification
 - » Identify data needs and Data Quality Objectives (DQOs)
 - » Prepare Project Plans

Standard RI/FS Scoping Approach

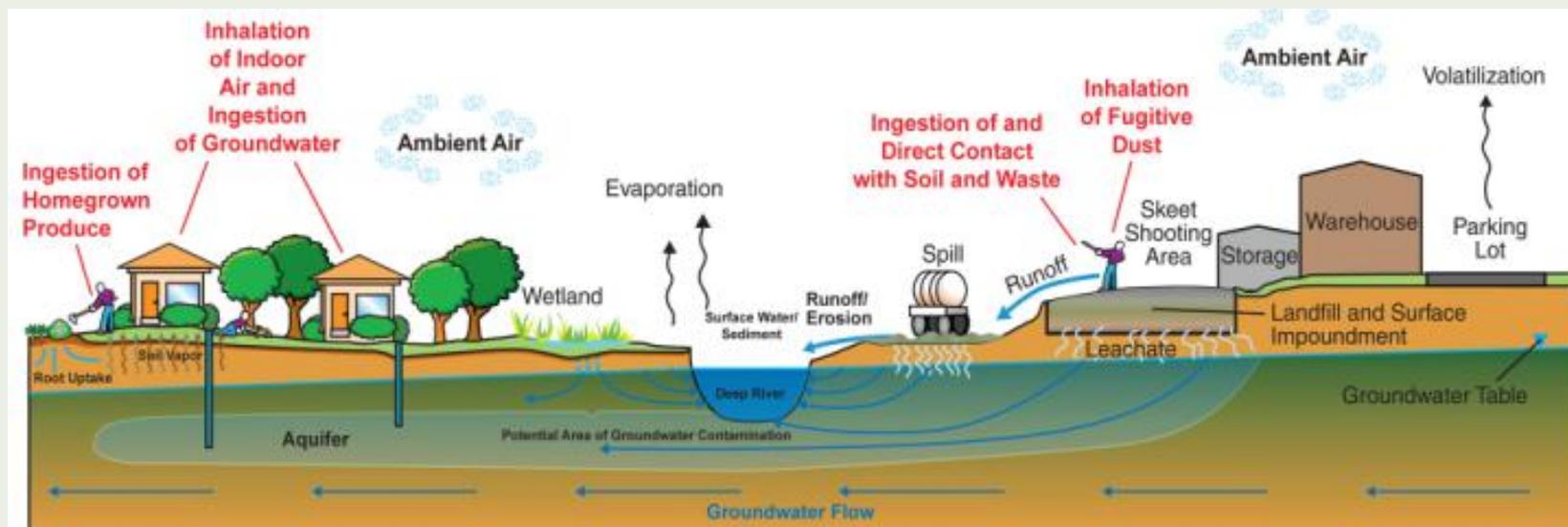


Conceptual Site Model (CSM) – What It Is

◆ CSM is your conception of the site

» It is what you think is happening and what you think needs to be done about it

◆ Ideal situation → CSM = Reality



CSM – How It's Used

◆ **The conceptual site model is used to**

- » Develop an understanding of the site
- » Identify data gaps that should be addressed and activities to be conducted to address the data gaps
- » Ensure all data collected serve a purpose and all needs for data are met

◆ **Evolves and matures throughout RI/FS**

CSM – What It Identifies

- ◆ **Potential sources of contamination**
- ◆ **Types of contamination and affected media**
- ◆ **Release mechanisms and migration pathways**
- ◆ **Actual and potential receptors**
- ◆ **Cleanup levels and ARARs to be met**
- ◆ **Future land use**
- ◆ **Stakeholder concerns**
- ◆ **Technologies and actions that may apply**

CSM – Best Advice

- ◆ Use it **continuously** as a tool to organize how you think about your site
 - » It is not a scoping step you check off and then forget about
- ◆ Data that do not fit in the CSM should be **BIG RED FLAGS** that must be examined carefully
- ◆ The CSM should be used throughout the process, including in RD/RA, O&M and close out



RI/FS Project Plans

◆ RPM oversees preparation of several work plans

- » RI/FS work plan
- » Quality Assurance Project Plan (QAPP)
 - › Sampling and Analysis Plan (SAP)
 - › Field Sampling Plan (FSP)
- » Health and Safety Plan (HASP)
- » Community Involvement Plan (CIP)



Interdependency of the RI and FS

