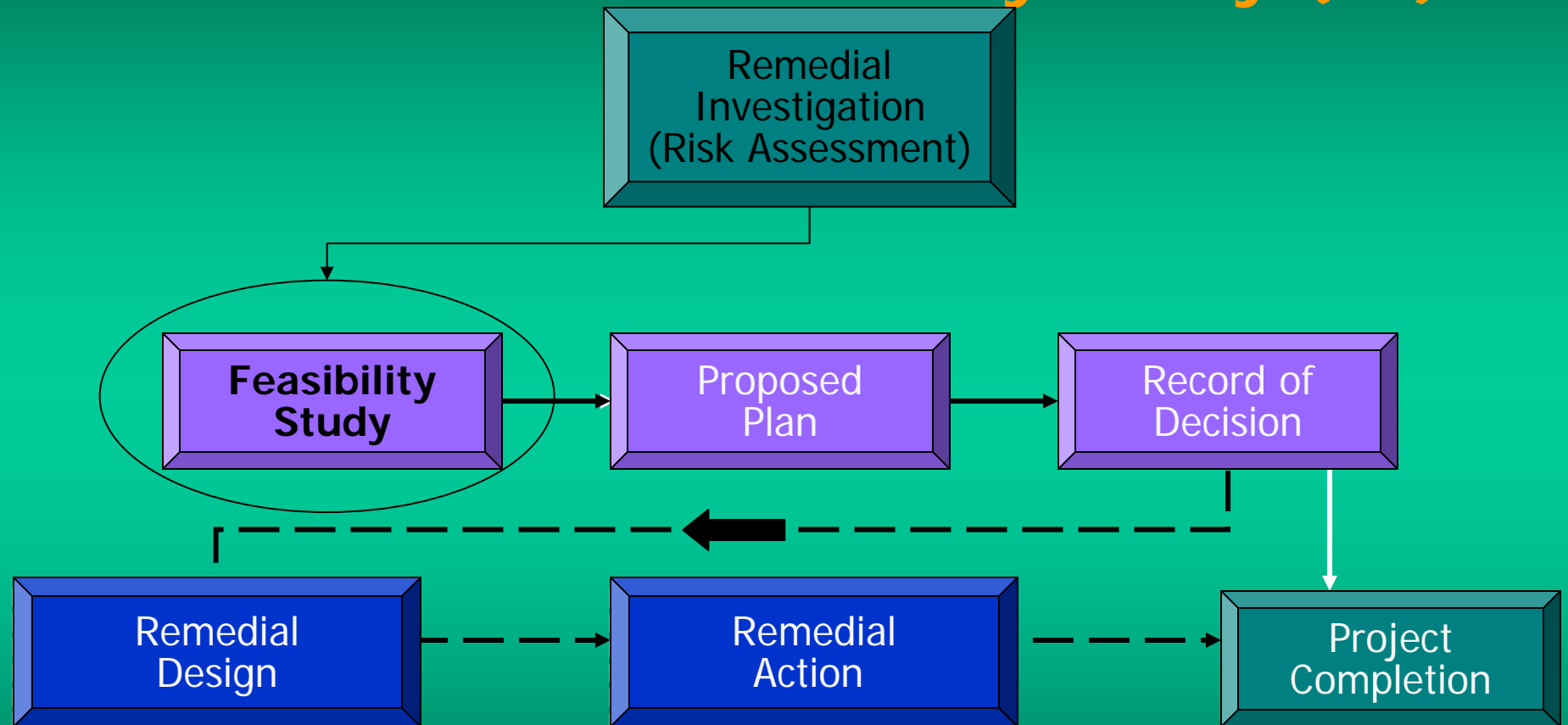


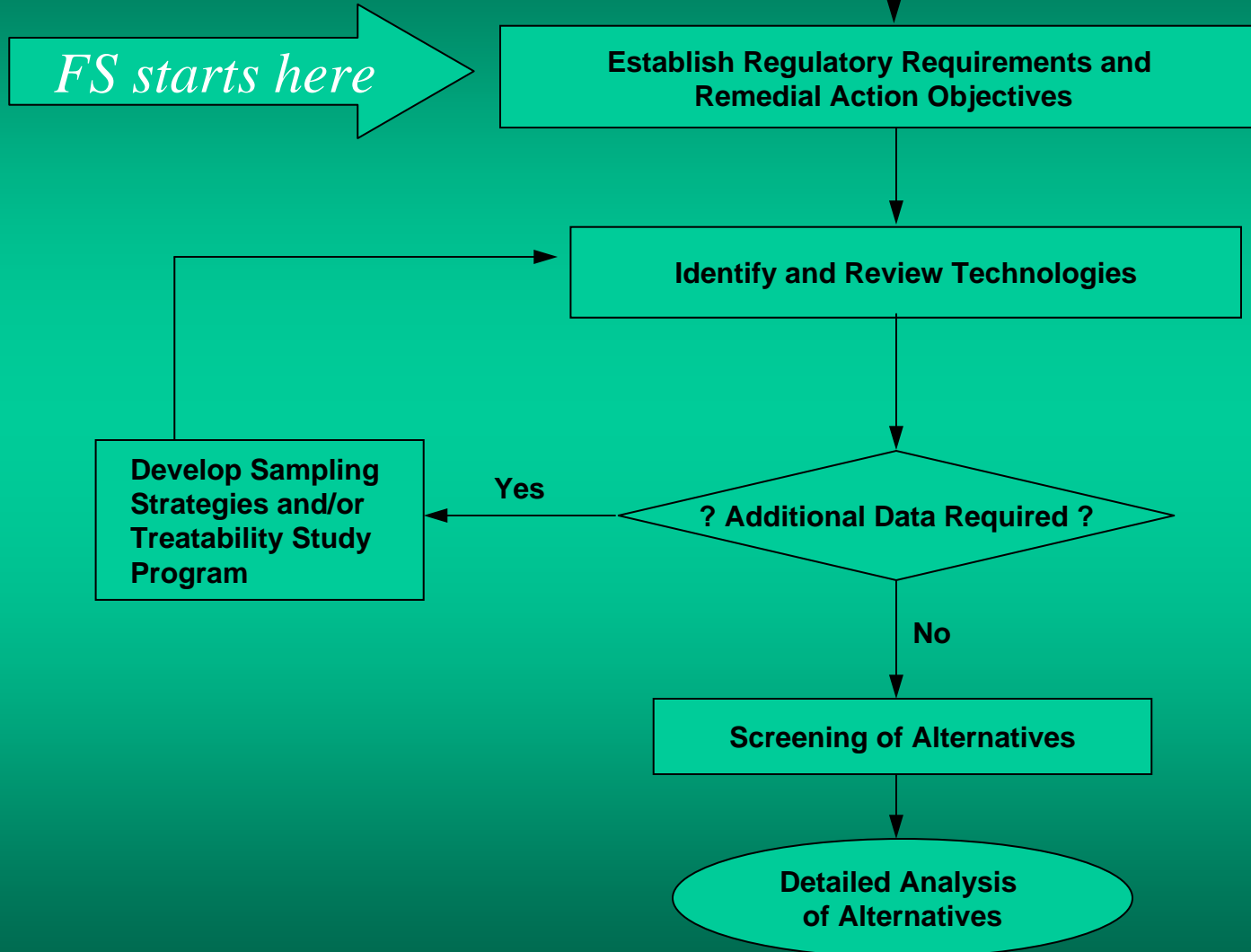
# CERCLA Process Leads to the Feasibility Study (FS)



*FS identifies and evaluates various remedial alternatives to address unacceptable risks posed by soil or groundwater contamination.*



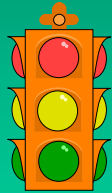
# Steps FS Process



# Criteria for Evaluation of Alternatives

## Threshold

No



Yes

## Balancing



## Modifying



Alternatives

Protective of Human Health and Environment

Compliance with ARARs

Long-term Effectiveness & Performances

Short-term Effectiveness & Environmental Impacts

Reduction in toxicity, mobility or volume

Implementable

Cost

State Acceptance

Community Acceptance



# What are ARARs?

- Applicable, OR Relevant and Appropriate Requirements

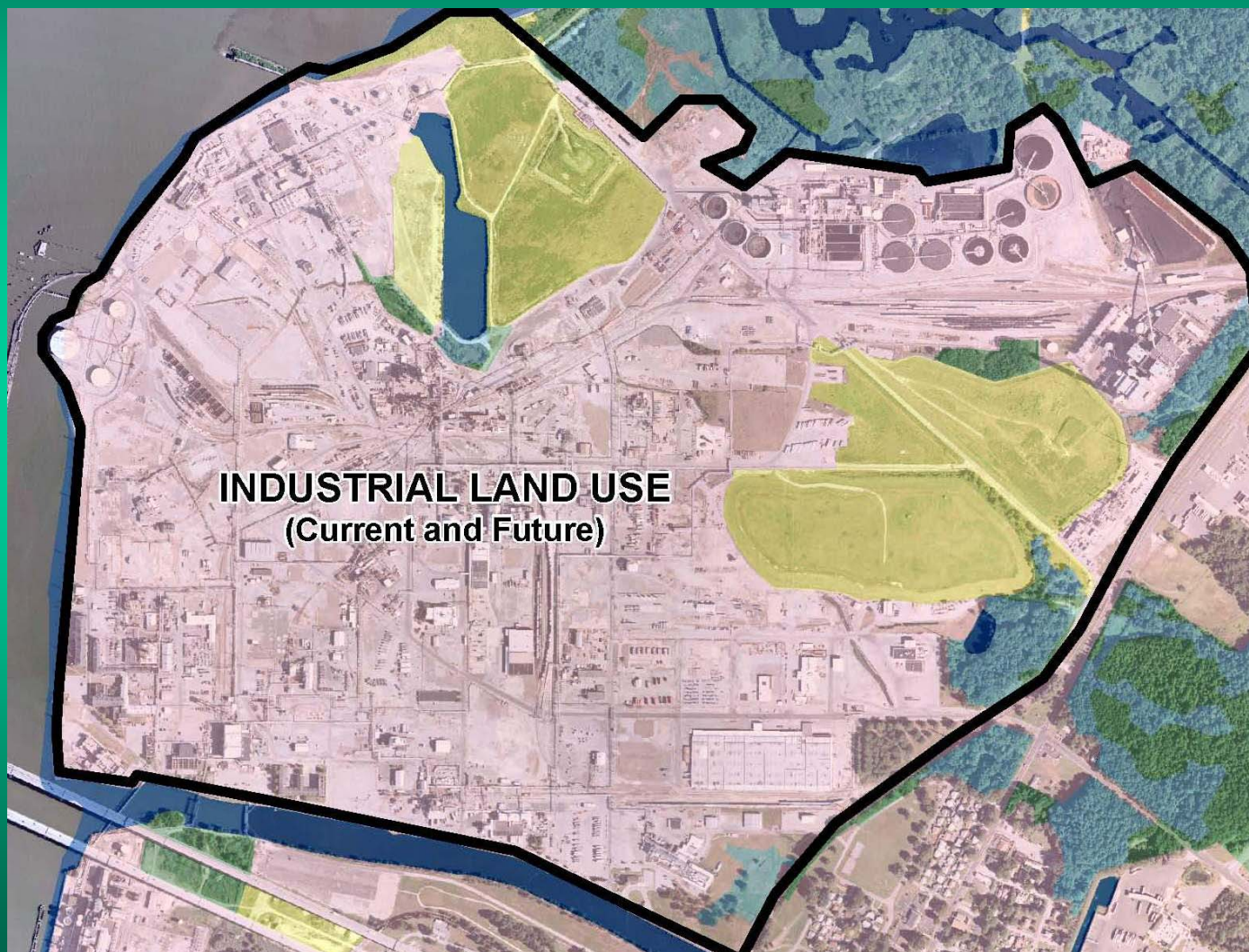
## *Examples*

- New Jersey *Standards for Radiation*
  - *15 millirem/year above background*
- New Jersey Safe Drinking Water
  - *References Federal Standards: Uranium < 30 micrograms/liter*
- Resource Conservation and Recovery Act (RCRA)
  - *Management of Excavated Soil and Waste*
- “How clean is clean”?

*Cleanup decisions need to comply with other state and federal environmental laws and regulations - CERCLA Section 121(d)*



# Exposure, Risk and Cleanup Goals Depend on Land Use



# Remedial Action Objectives

## Soil

- Comply with ARARs
- Eliminate or minimize potential human exposure
- Minimize movement of contaminants offsite

*Specific cleanup goals will be established in FS.*



# Remedial Action Objectives (cont'd)

## Groundwater

- Comply with ARARs
- Monitor, control, or actively reduce concentration of contaminants
- Prevent aqueous uranium from migration beyond site boundaries



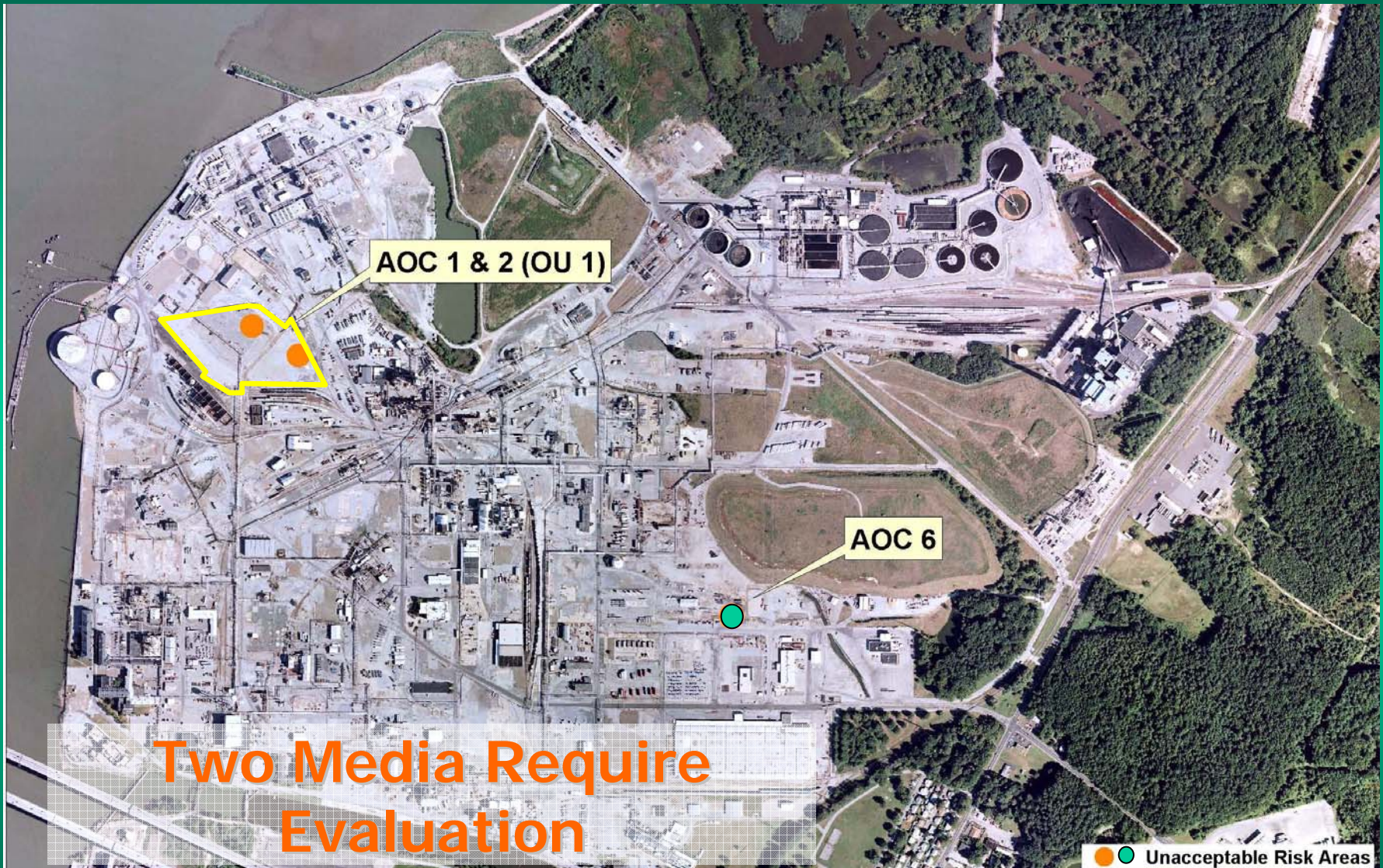
# Typical Remedial Actions

- Transportation and Off-site Disposal
- Institutional control
- Monitoring
- Containment
- Treatment





# Two Areas Require Evaluation



# Potential Options for Soil Remedies

- Land Use Controls
- Volume Reduction
- Dig & Haul
- Containment



# Potential Options for Groundwater Remedies

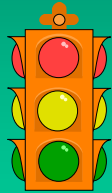
- Land Use Controls
- Treatment
- Monitored Natural Attenuation



# Criteria for Evaluation of Alternatives

## Threshold

No

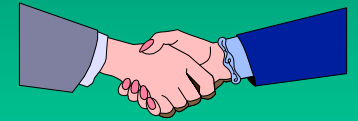


Yes

## Balancing



## Modifying



Alternatives

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Compliance with ARARs

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Cost

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Community Acceptance



# Questions?

