

US EPA ARCHIVE DOCUMENT

SESSION 1

Shifting Thinking from the 2005 Goals to the 2008 Goals and Remedy Selection

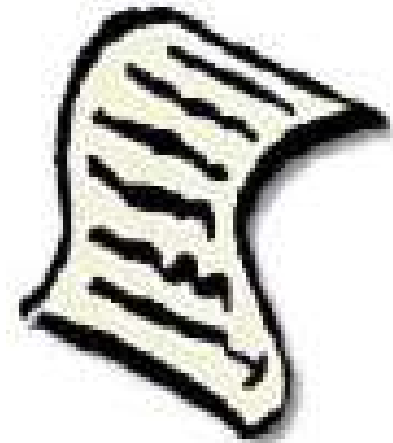
2005 ENVIRONMENTAL INDICATOR GOALS REVIEW



Agenda: 2005 Environmental Indicators (EI) Goals Review

- ▶ Brief Review of the 2005 EIs
 - CA725
 - CA750

- ▶ What Should Have Been Accomplished So Far?

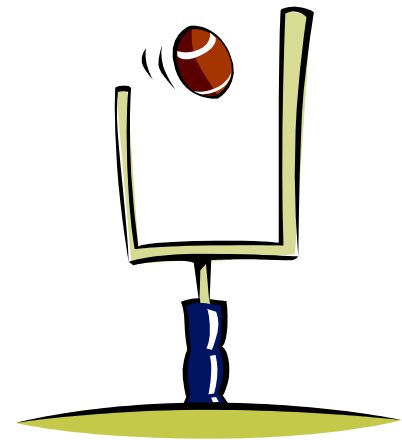


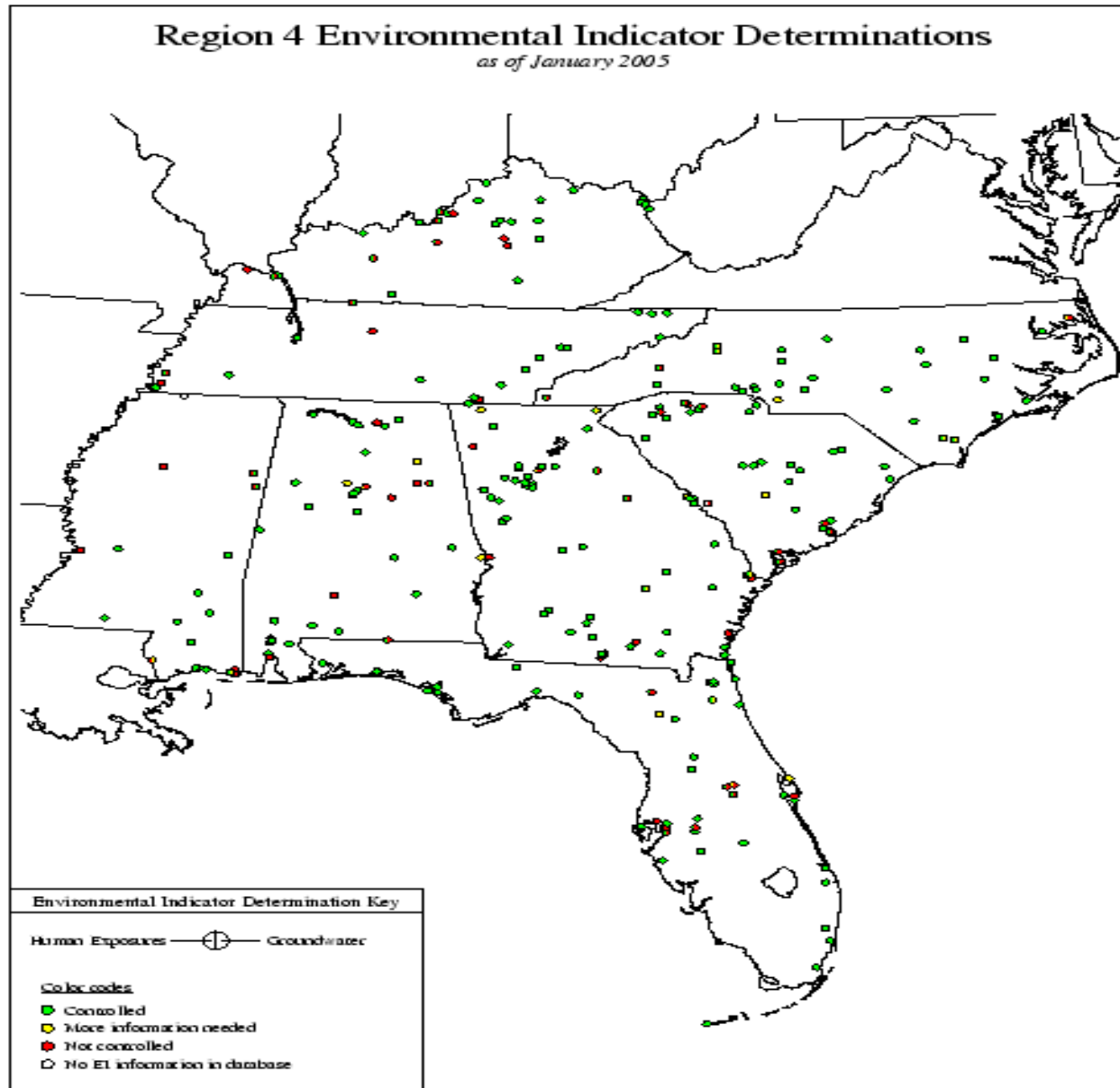
EIs Developed to Measure Cleanup Progress

- ▶ Purpose
 - Government Performance and Results Act (GPRA)
 - Assist sites through RCRA corrective action process, focus on results

- ▶ Goal
 - Near-term objectives to measure performance of RCRA corrective action program
 - Results are presented to Congress and will be available to the public

- ▶ GPRA Baseline for 2005
 - 287 high priority facilities in Region 4





2005 EIs Defined

- ▶ CA725 – Are Current Human Exposures Under Control?
 - Based on site-wide conditions and current information
 - Current land use and exposure scenarios
 - Institutional/engineering controls can be utilized to mitigate exposure
 - No ecological receptors evaluated; focused on human health

- ▶ CA750 – Is Migration of Contaminated Groundwater Under Control?
 - Based on site-wide conditions and current information
 - Current extent of groundwater contamination
 - Groundwater contaminant concentrations must be stable
 - No significant surface water impacts from groundwater discharge

| |
|---------------------|
| <u>Status Codes</u> |
| YE |
| NO |
| IN |

CA725 – What Should Have Been Accomplished So Far?

- ▶ Sampling to initially characterize all impacted media
 - Not necessarily full characterization
 - Sufficient to understand release and identify representative concentrations
 - If applicable, identify any off-site releases
- ▶ Understanding of current land and groundwater use
- ▶ Understanding of potential human receptors associated with site
- ▶ Evaluation of potential exposure pathways and scenarios



CA725 – What Should Have Been Accomplished So Far?

- ▶ Comparison of contaminant concentrations with screening criteria
- ▶ Determine that exposure pathways to impacted media are incomplete, or
- ▶ Document factors that prevent unacceptable exposures
 - Institutional controls (e.g., local groundwater use restrictions)
 - Engineering controls (e.g., ground cover or fencing)

Exposures to human receptors are currently within acceptable limits or are effectively mitigated



CA750 – What Should Have Been Accomplished So Far?

- ▶ Sampling to characterize groundwater contamination
 - Vertical and horizontal characterization of groundwater
 - General understanding of geologic and hydrologic setting at site

- ▶ Appropriate monitoring well network in place
 - Sufficient number of monitoring wells to capture plume dimensions
 - Concentrations in downgradient wells less than screening values

- ▶ Multiple rounds of sampling data
 - Usually at least two
 - Concentrations in perimeter wells decreasing or stable



CA750 – What Should Have Been Accomplished So Far?

- ▶ Plan for future monitoring of contaminant plume
- ▶ Evaluation of the impact of groundwater discharge to surface water
 - Only if applicable given hydrogeology of site
 - May require surface water and/or sediment sampling
 - May require mixing zone determination
 - Demonstrate that any discharge is insignificant or currently acceptable

Physical migration of groundwater plume is stable and is not adversely impacting surface water



Other Accomplishments

- ▶ Interim Measures initiated and/or implemented?
 - Hot spot removal
 - Groundwater extraction and treatment systems installed
 - Fences or impermeable covers installed
 - Soil vapor extraction systems installed

- ▶ Institutional controls identified and/or implemented?
 - Deed restrictions or restrictive covenants
 - Prohibit future residential use
 - Prohibit soil excavation at depths greater than five feet
 - Prohibit domestic groundwater well installation
 - Informational devices



Guidance/References

- ▶ www.epa.gov/epaoswer/hazwaste/ca/eis.htm
- ▶ U.S. Environmental Protection Agency. Results-Based Approaches to Corrective Action. July 26, 2000.
- ▶ U.S. Environmental Protection Agency. RCRA Cleanup Reforms, Faster, Focused, More Flexible Cleanups. July 1999. (EPA 530-F-99-018).

