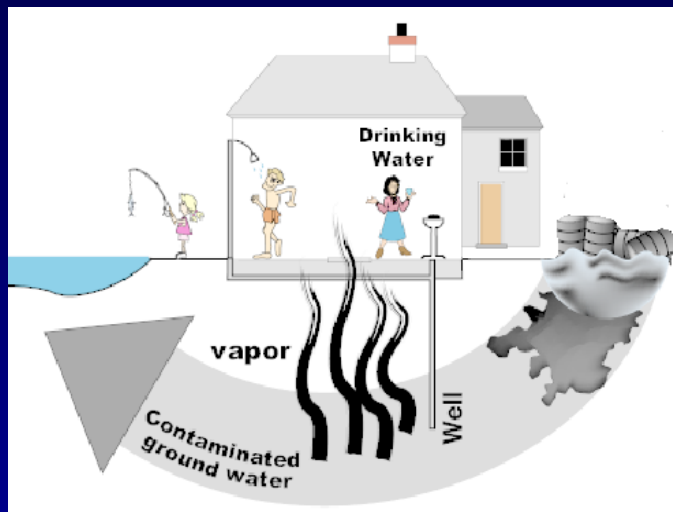


**ITRC 2002 Fall Meeting
Risk in Remediation Session, 11/7/02 (1:00-3:00)**

**Risk in Remediation –
National RCRA Corrective Action
Program Perspective**



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Hope to accomplish..

- 1. Describe role of risk from HQ RCRA cleanup perspective, and raise concept of “uncertainty management”**
- 2. Describe how R6’s Corrective Action Strategy Pilot fits with national framework**
- 3. Provide HQ update, including status of One Cleanup Program Initiative**

Risk

“A measure of the probability that damage to life, health, property, and/or the environment will occur as a result of a given hazard.”



From Terms of the Environment
([http://www.epa.gov/OCEPAt/terms.rterms.html](http://www.epa.gov/OCEPAt/terms/rterms.html))

Risk-Based Decision Making

“... should be used to ensure that corrective action activities are fully protective given reasonable exposure assumptions and consistent with the degree of threat to human health and the environment at a given facility.”


**From 1996 Advance Notice of Proposed Rulemaking
(61FR19411)
available at www.epa.gov/correctiveaction**




Risk in the “Reformed” Corrective Action Program?

- ✓ **Primary focus on defining, prioritizing and solving “problems,” rather than fulfilling perceived steps and processes!**
- ✓ **Use approach that gets results most efficiently**
- ✓ **Short-term focus on two “Environmental Indicators”**
 - **Current Human Exposures Under Control**
 - **Migration of Contaminated Groundwater Under Control**


RCRA Corrective Action Results



Final Cleanup Goals
define what it takes to implement
a successful final remedy

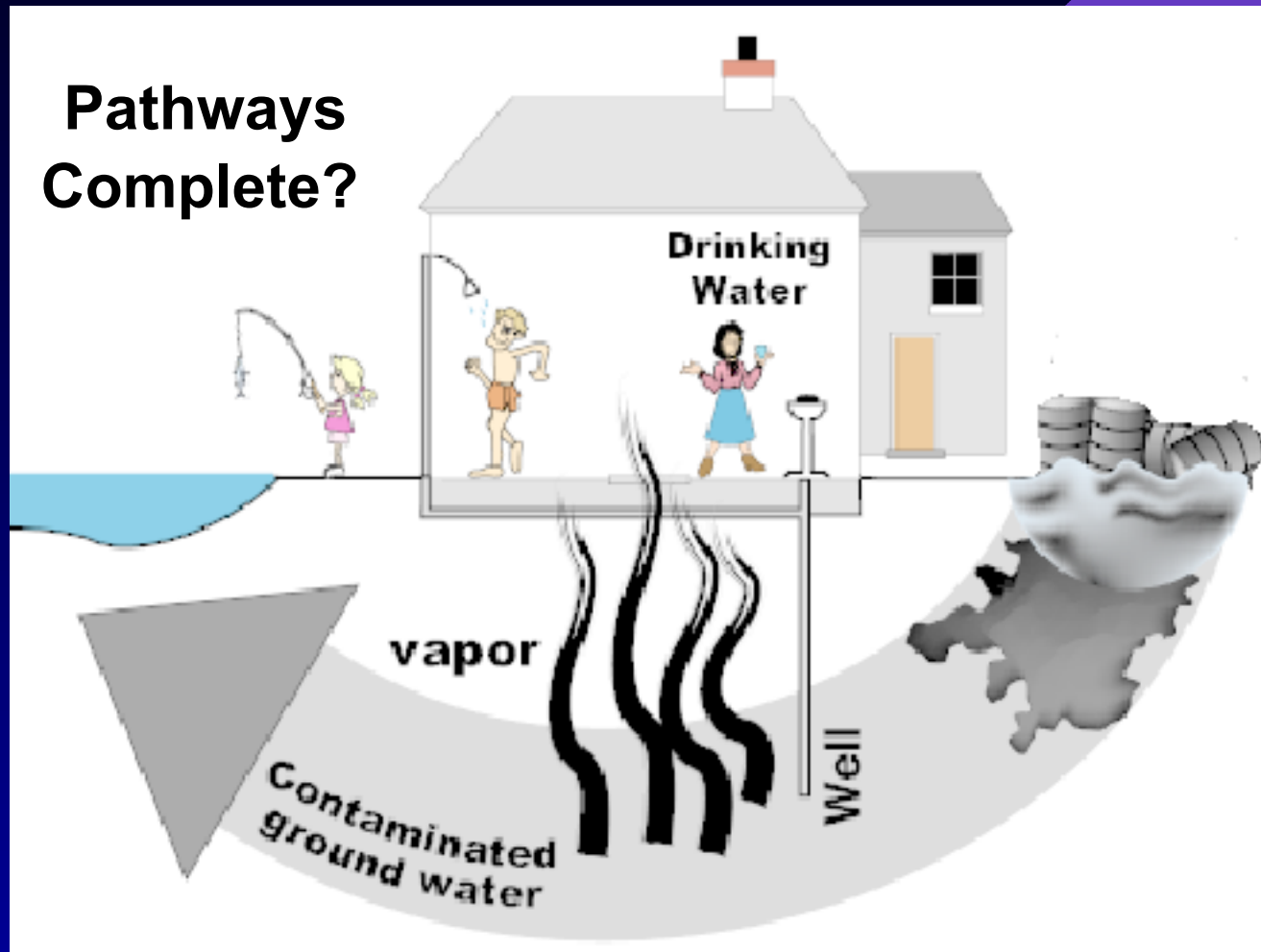


Short-Term Goals (EIs)
control risks to humans, stop
groundwater problems from
getting bigger, focus resources,
help give clearer picture of
challenges ahead



Intermediate Goals
establish achievable
milestones when moving
directly from short-term to
final goals is particularly
challenging

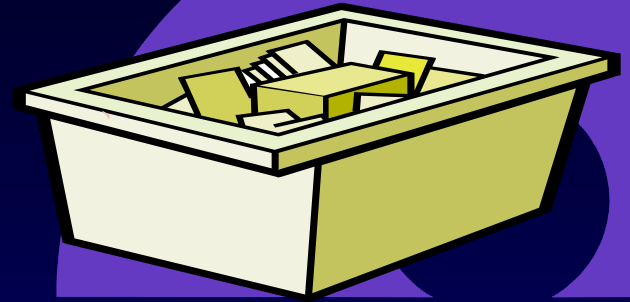
Comes down to managing lots of uncertainties...



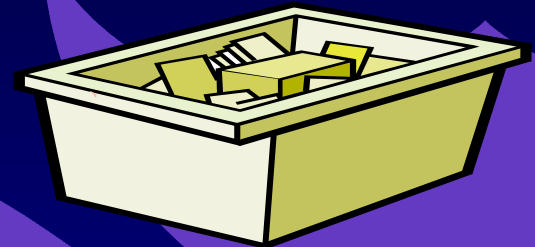
But not all uncertainties are created equal...



Uncertainties that matter right now



Uncertainties that may matter later in the project



Uncertainties that do not matter



Risk/Uncertainty management tool for the Human EI:

Summary Exposure Pathway Evaluation Table (CA725 Question 3, Page 3)

Potential Human Receptors (Under Current Conditions)

<u>“Contaminated” Media</u>	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food
Groundwater	—	—	—	—			—
Air (indoors)	—	—	—				
Soil (surface, e.g., <2 ft)	—	—	—	—	—	—	—
Surface Water	—	—			—	—	—
Sediment	—	—			—	—	—
Soil (subsurface e.g., >2 ft)				—			—
Air (outdoors)	—	—	—	—	—		

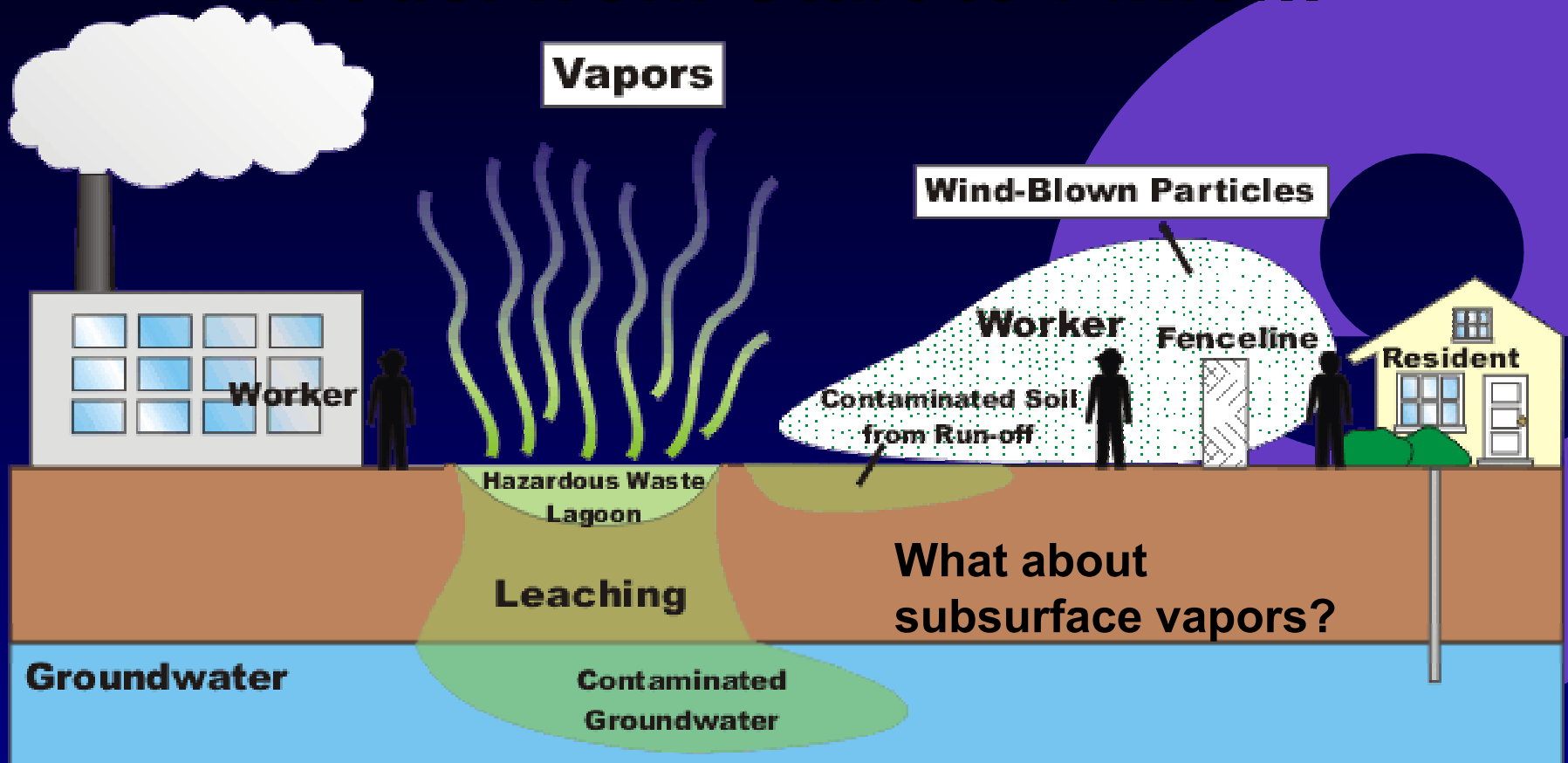
From 1999 EI guidance available at <http://www.epa.gov/epaoswer/hazwaste/ca/eis.htm>

Risk- and Results-Based Approach to Data Collection



- ✓ Focus on “necessary and sufficient” data type, quality and quantity to answer questions relevant to a particular problem

Develop and USE Conceptual Site Model from Start to Finish!



HQ perspective on R6 Corrective Action Strategy Pilot

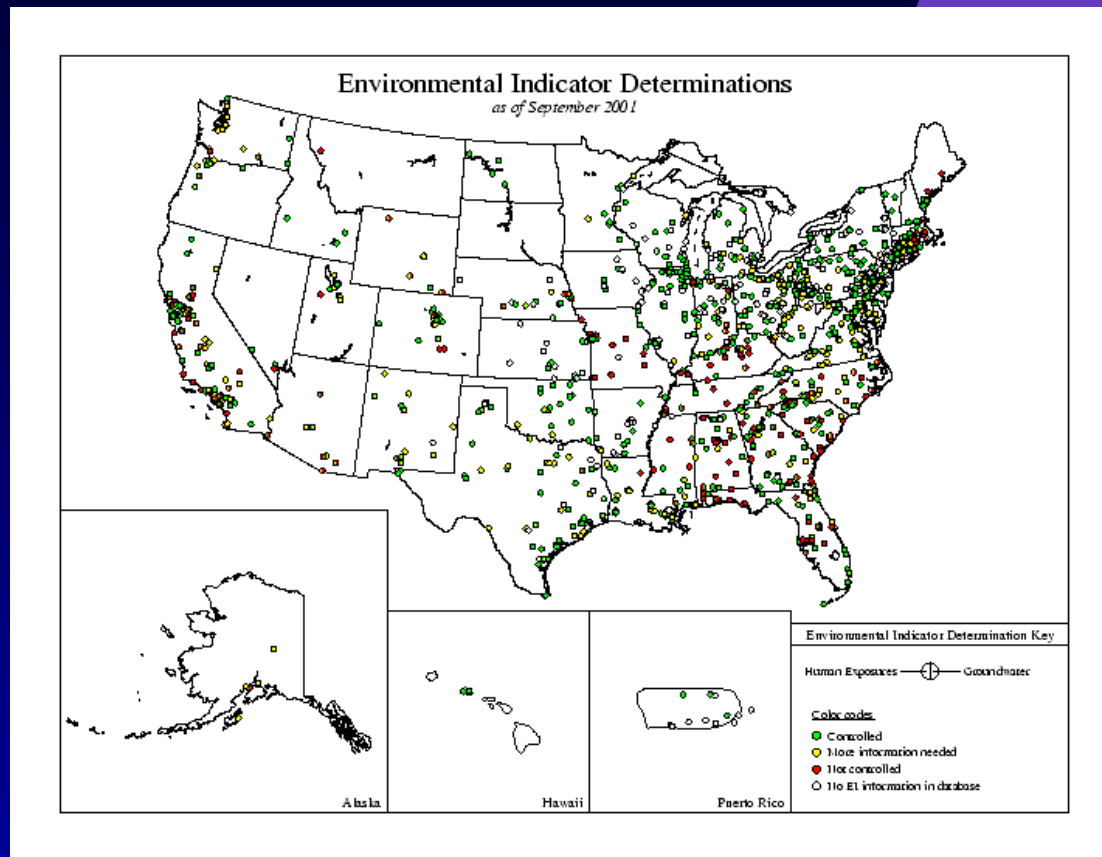
- ✓ Reviewed several drafts
- ✓ Support emphasis on risk-based prioritization and cleanups
- ✓ Support data quality objectives approach emphasis
- ✓ Support Appendices on key policy considerations, innovative characterization approaches, CSMs, etc.
- ✓ Consistent with flexible, results-based approaches we've been promoting in guidance and training!
- ✓ Support Pilots of CAS approach

HQ questions on CAS Implementation

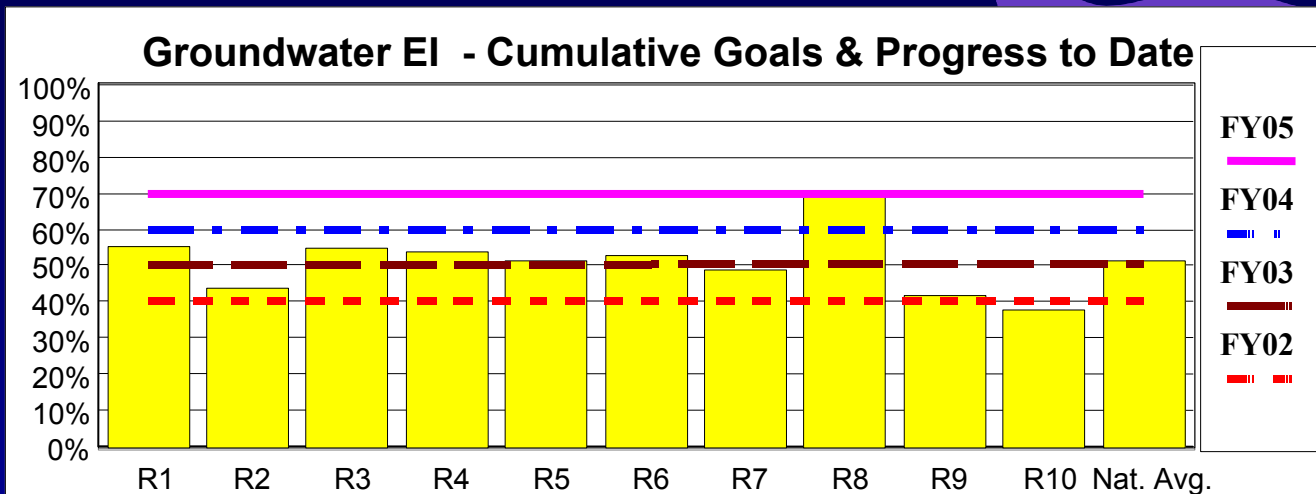
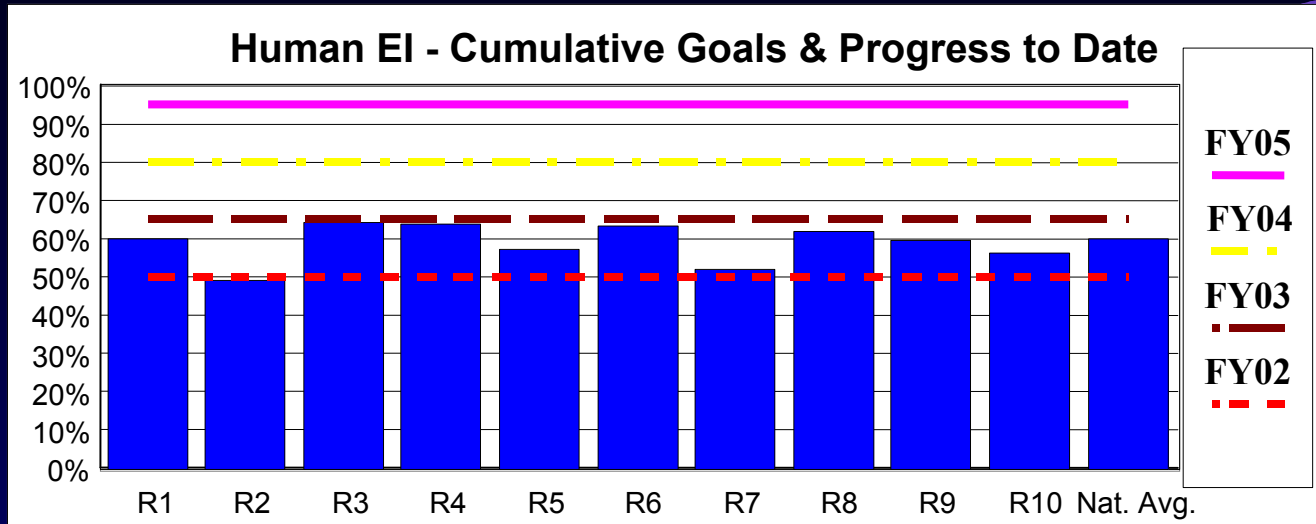
- **Short-term EI goals**
- **Groundwater use designation issues, plume migration zone concept, and cleanup goals**
- **Risk screen – actual exposures between 10^{-4} and 10^{-6} (and applicability to final remedies)**
- **Experiences with balancing between treatment, engineering controls, and institutional controls**
- **Technical impracticability**
- **Public involvement early and often**
- **Lessons learned thus far**

National Issues

- Continued emphasis on 2005 short-term EI goals for 1,714 priority baseline facilities



Status toward year 2005 goals (as of 10/31/02)



National Issues – Continued

- **Shifting more attention to final goals and “completion”**
 - Significant focus on redevelopment/revitalization
 - New completion guidance
 - New cleanup measures
- **Groundwater Issues**
 - RCRA Handbook, use/value/goals, optimization, NAPLs, etc.
- **Kicking-off “One cleanup Program Initiative”**

Summary

“EPA is committed to full and meaningful state involvement in development of implementation strategies, policy, guidance and regulations.”

**From 1996 Advance Notice of Proposed Rulemaking (61FR19411)
available at www.epa.gov/correctiveaction**

Looking forward to continued and even greater coordination between EPA and ITRC.

www.epa.gov/correctiveaction