

Rebuilding Trust in the Science of Radiation Protection

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What is trust?

Why do we need to rebuild trust?

- **Radiation risk assessment is a complex subject**
- **Not feasible to “educate” stakeholders thoroughly**
 - **A level of trust has to be established between stakeholders and scientists**
- **Stakeholder acceptance is essential for successful recovery decisions**

Where does trust come from?

- **Sound science**
 - **State of the art methods**
 - **Intense scientific peer review**
- **Transparency**
 - **Availability and accessibility of information**
- **Responsiveness**
- **Taking actions beyond what is expected**



Participation of Stakeholders



Inhalation of resuspended plutonium contaminated soils – dominant exposure pathway



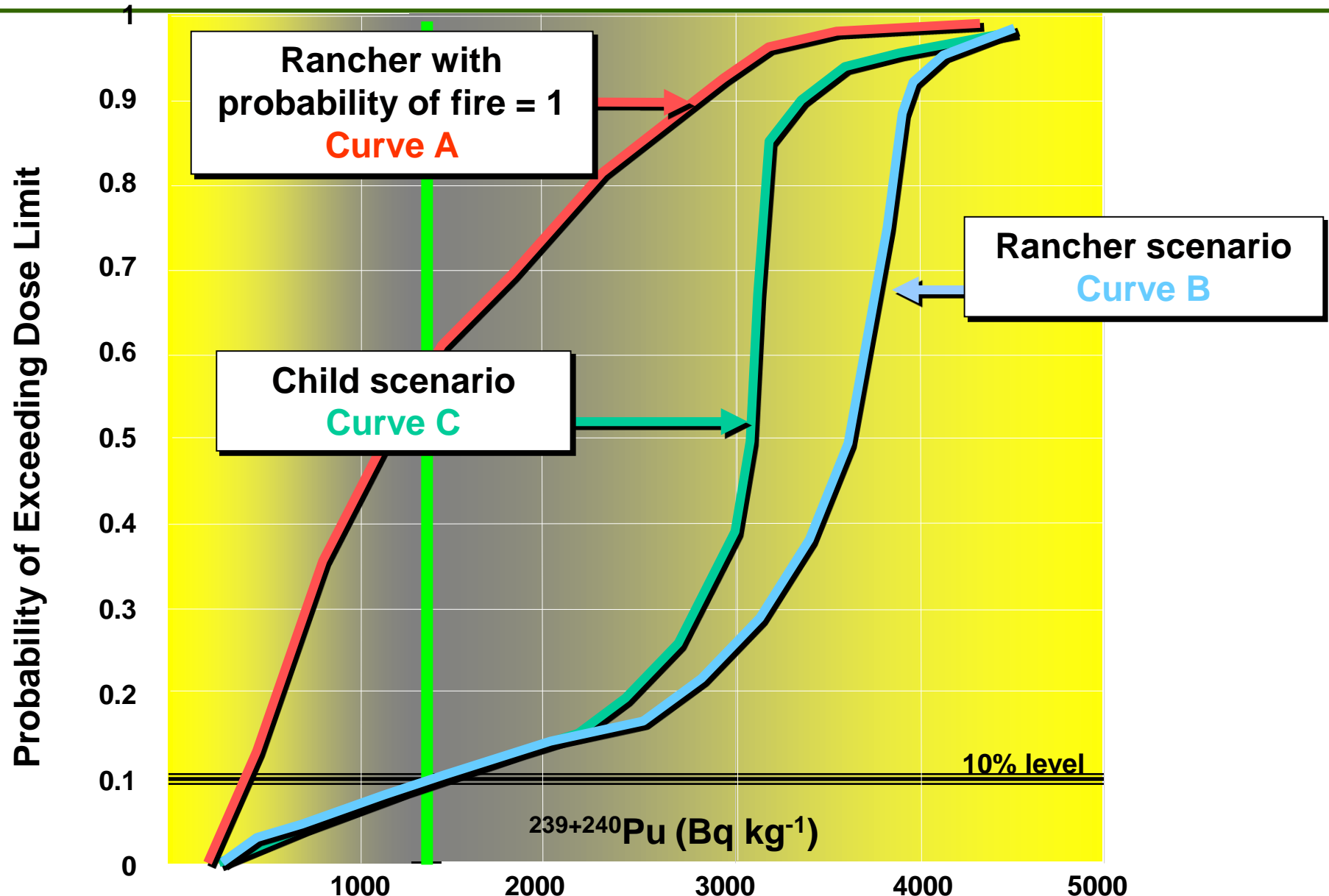
We concluded a rancher living on the land with his family is the scenario that would lead to the highest dose



A prairie fire could significantly increase the dose because of greater resuspension following the fire.



Resolution of Soil Action Level at Rocky Flats



How do we build trust?

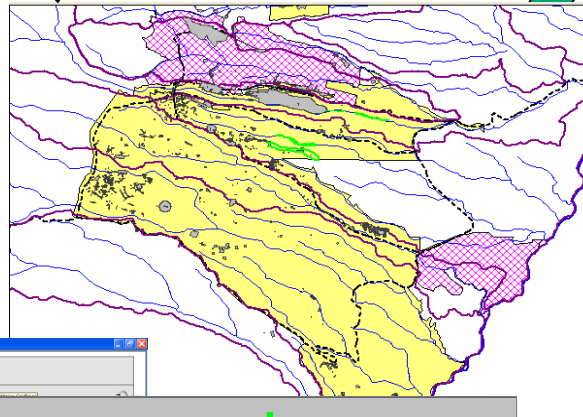
- **Consistent efficient process for compiling, accessing and analyzing environmental data**
 - **Comprehensive, geared to end use**
- **Convert data into knowledge**
 - **Flexible, rapid, current**
- **Communicate the knowledge**
 - **Transparent, understandable, cannot be delegated**

Turning Data Into Information and Knowledge

Data

Raw Input Data				
SourceID:	ULI:	USI:	URI:	SOURCE_ORG_COD
SigmaMesa	121622	203432	3E+06	ER
SigmaMesa	121622	203432	3E+06	ER
SigmaMesa	121622	203432	3E+06	ER
SigmaMesa	121622	203432	3E+06	ER
SigmaMesa	121622	203432	3E+06	ER
SigmaMesa	121622	203432	3E+06	ER

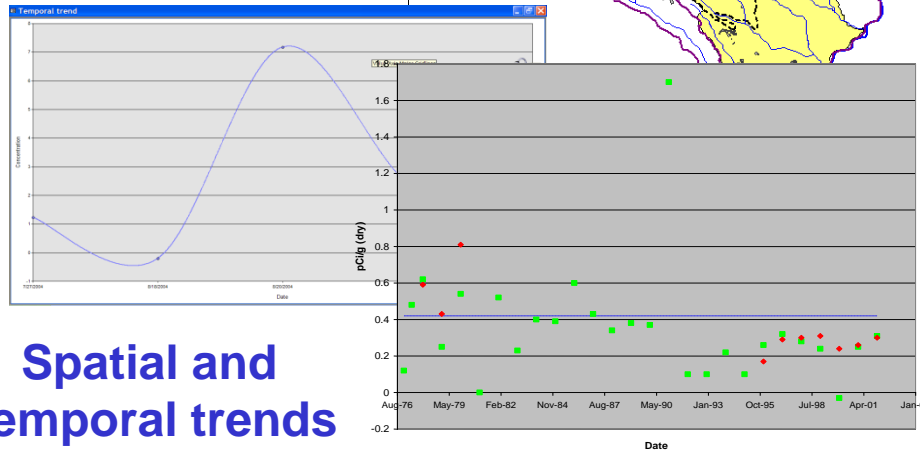
Information



Knowledge



Optimize sample locations



How do we maintain trust?

- **Establish the ability to re-evaluate decisions as new information becomes available**
- **Ensure a transparent process that allows decisions to be traced back to the information they were based upon**
- **Establish the ability to allow other factors (e.g., economic, cultural, political) to be accounted for in decision making**
- **Effectively communicate the basis for decisions**

THANK YOU

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