Performance Assessments

Stakeholder Briefing

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Division of Radiation Control

What is Performance Assessment (PA)?

- Performance assessment is a tool that can be used for understanding how the natural and engineered features of a site retain radioactive materials.

- Thoroughly examines:
  - what can happen,
  - how likely it is, and
  - what can result.
How is a PA conducted?

- Collect data
- Develop conceptual models
- Develop and test computer codes
- Analyze results

A team of experts typically repeats these steps many times, refining and improving the models if needed.
How is a PA used?

- To estimate radionuclide release and transport, and potential exposure to an average member of a critical group.
- To estimate important parameters and models.
- To evaluate the effects of uncertainty and variability.
- To provide information to decision makers.
Confidence in PA Results

- Confidence building very important

- Confidence developed via:
  - Technical checking and review
  - Quality assurance
  - Hand calculations
  - Comparison to other models
  - Comparison to site observations
  - Comparison to comparable sites (e.g., analogs)
Conclusions

• Performance assessment is a widely accepted process.

• Performance assessment is intended to be an objective process for assessing risks and the associated impact of uncertainties in order to inform decision makers.

• Performance assessment is intended to increase understanding.