



U.S. Department of Energy
Office of Civilian Radioactive Waste Management



U.S. Department of Energy Opening Remarks

Presented to:
**Appendix 7 Meeting on Peña Blanca Natural
Analogue Studies**

Presented by:
April V. Gil, PhD
Director, Regulatory Interactions and Strategy Division
Office of Repository Development
U.S. Department of Energy

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Las Vegas, Nevada

Purpose of Appendix 7 Meetings

- **Formal interactions are governed by the**
 - *Agreement between DOE/OCRWM and NRC/NMSS regarding pre-licensing interactions (1999)*
- **Appendix 7 of the agreement covers communications with the NRC Onsite Representatives**
 - *Agreement concerning the NRC Onsite Representatives for the repository project prior to licensing*
 - **Not considered formal interactions**



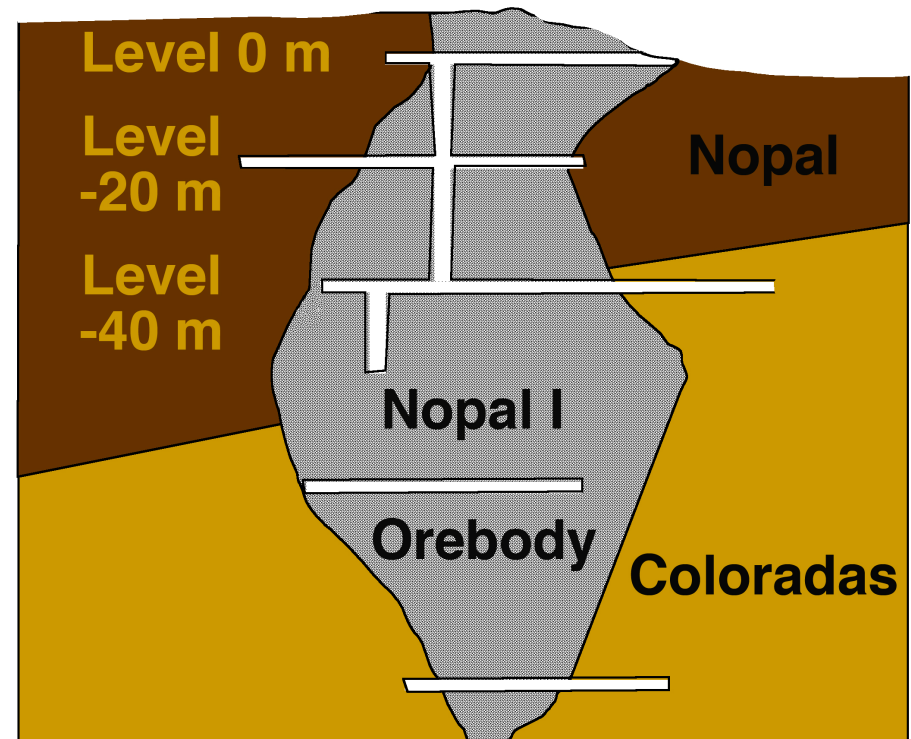
Purpose of Appendix 7 Meetings

- Discussions between the NRC Onsite Representative and NRC staff assigned to the Onsite Representative office and OCRWM and OCRWM contractors
- Focused discussion of technical topics
- Discuss data, share information
- No commitments may be made
- Does not require formal written reports or bilateral meeting summaries



Peña Blanca as a Natural Analogue to Yucca Mountain

- **Similarities to Yucca Mountain**
 - Thick (>200 m) unsaturated zone
 - Uranium deposit located in rhyolitic ash-flow tuff
 - Semi-arid to arid climate with low infiltration rates
 - Basin and range style structural setting
 - Ore body mineralogy similar to spent fuel



(from Reyes et al., 1980)



Peña Blanca Natural Analogue Site

- **Use of information from Peña Blanca**
 - **Provide field observations to test process model results**
 - ◆ **Evaluating the fate of spent fuel, actinides, and fission products in tuff**
 - **Provide confidence in the adequacy of performance assessment models**
 - **Reduce uncertainty in long-term performance of natural barrier system**



Overview of Presentations

- **Summary of key results from previous studies**
 - Seepage
 - Age dating
 - Uranium series nuclides in groundwater
- **Use of Peña Blanca data in Total System Performance Assessment**
- **Future data exchanges and schedule for field work**



Presenters

- **Dr. Pat Dobson, LBNL**
- **Dr. Teamrat Ghezzehei, LBNL**
- **Dr. Mostafa Fayek, University of Tennessee**
- **Dr. Steve Goldstein, LANL**
- **Dr. George Saulnier, Framatome ANP/AREVA**

