

# URANIUM RECOVERY PROGRAM ENSURING PUBLIC SAFETY AND PROTECTION OF THE ENVIRONMENT

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#### Overview

- Safety reviews
- Environmental reviews
- Inspections
- Reclamation and decommissioning
- Public/Stakeholder involvement

#### General

- NRC has regulatory mandate, not promotional
- Safety and environmental focus
- Staff review in accordance with regulation and guidance
- Consistency (standard review plans, reg guides)
- Public process
- Stakeholder interest meetings, opportunity for hearing, comments

# Key Safety Aspects (General)

- Full safety review of license applications –multi-discipline (Hydrogeologists, Health Physicists, Geotechnical Engineers, Surface Water Hydrologists)
- Use of Standard Review Plans Guidance
- Site characterization
- Radon emissions
- Radiation safety program
- Operations
- Environmental monitoring
- Groundwater protection
- Effects of accidents
- Financial assurance

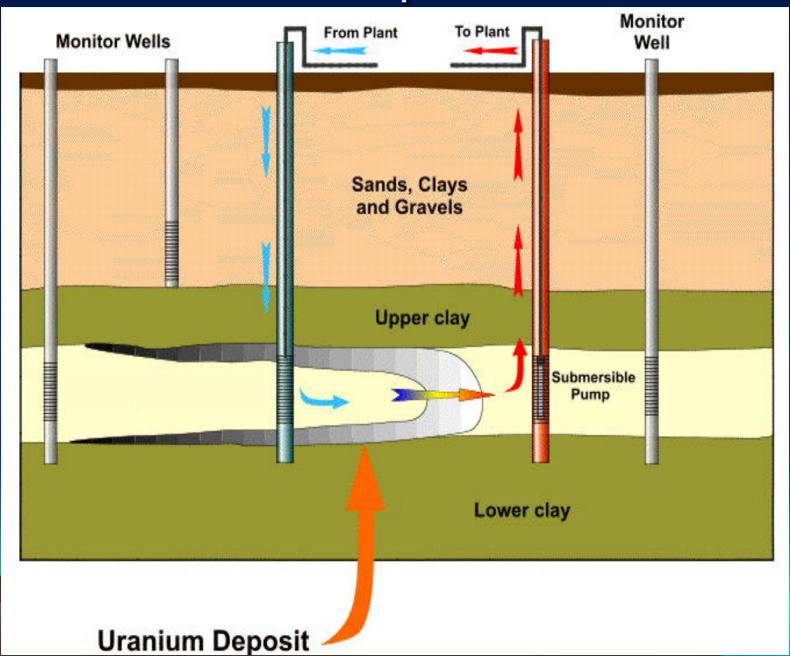
# Key Safety Aspects (Conventional Mills)

- Sitting/site characteristics
- Radioactive safety controls and monitoring
- Protecting water resources
- Radioactive waste management systems
- Decommissioning and reclamation
- Geotechnical stability
- Surface water and erosion protection

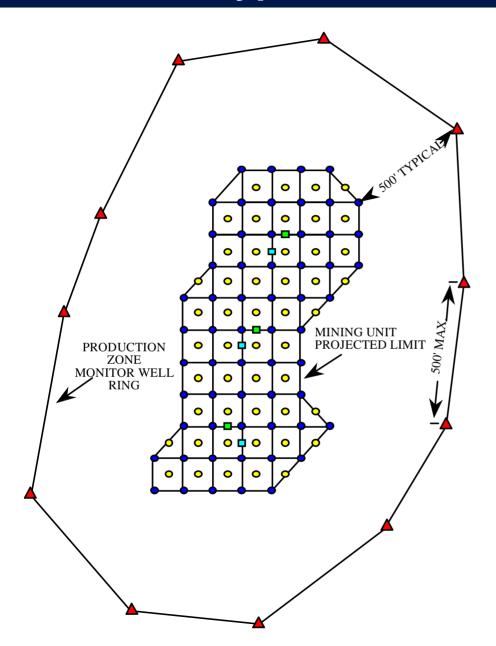
# Key Safety Aspects (In-situ Leach)

- Site characterization
- Hydraulic confinement
- Groundwater monitoring
- Hydraulic control of recovery zones
- Groundwater restoration
- Liquid effluent control
- Spills
- Radon emissions
- Radiation safety program

## The ISL process

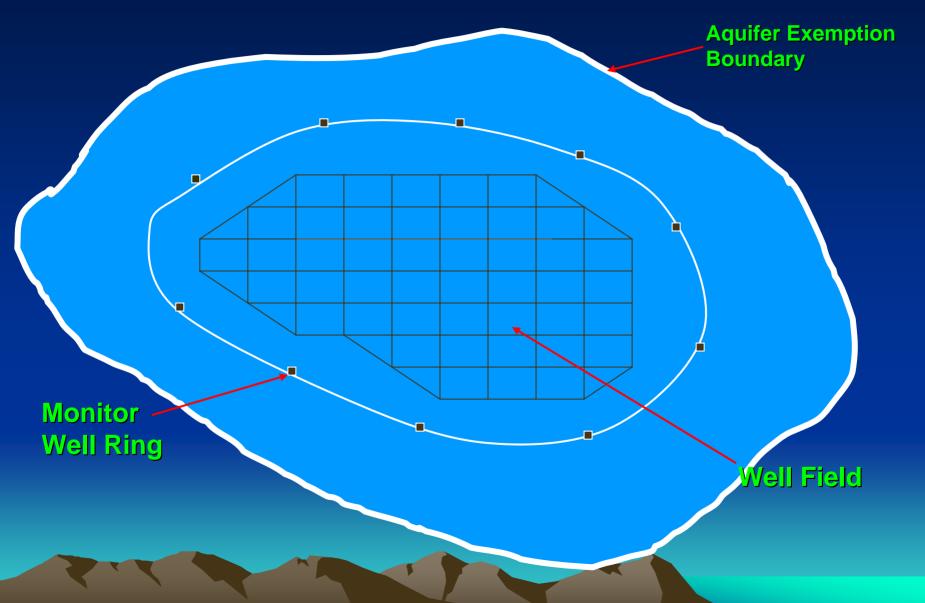


#### **Typical ISL Wellfield Layout**



- INJECTION WELL
- PRODUCTION WELL
- ▲ PRODUCTION ZONE MONITOR WELL
- OVERLYING AQUIFER MONITOR WELL
- UNDERLYING AQUIFER MONITOR WELL

#### **Typical ISR Wellfield Layout**



#### Key Environmental Aspects

- Land Use
- Geology and Soils
- Water Resources
- Ecological Resources
- Air Quality
- Waste Management
- Environmental Justice

- Historic and Cultural Resources
- Transportation
- Socioeconomics
- Cumulative impacts
- Wildlife

## Inspection Aspects

- Radiation safety program
- Area radiation and contamination control
- Protective clothing and equipment
- Assessing personnel radiation exposure
- Equipment and instrumentation
- Posting and labeling
- Effluent monitoring
- Environmental protection
- Groundwater protection

### Addressing Stakeholder Concerns

- Public process
- Notice of opportunity for hearing
- Environmental reviews Endangered Species Act, National Historic Preservation Act
- Indian Tribe outreach
- Public meetings
- State and other Federal Agencies

#### Conclusion

 NRC focused on safety and environmental protection with uranium recovery facilities

Public process