

State of Colorado Experience With Management of Radioactive Waste from Uranium Recovery Operations

Jennifer Opila

Radiation Materials Unit Leader

Colorado Dept. of Public Health & Environment

Topics to Discuss

- History of Uranium Recovery in Colorado
- UMTRA Lessons Learned
- Future of Uranium Operations in Colorado

History of Uranium Recovery in Colorado

- Uranium mining began in 1872.
- Colorado became an agreement state in 1968
- Historical operations in various stages of license termination



Colorado Waste Sites

UMTRCA Title I

- Durango
- Grand Junction
- Gunnison
- Maybell
- Naturita
- Rifle
- Slick Rock

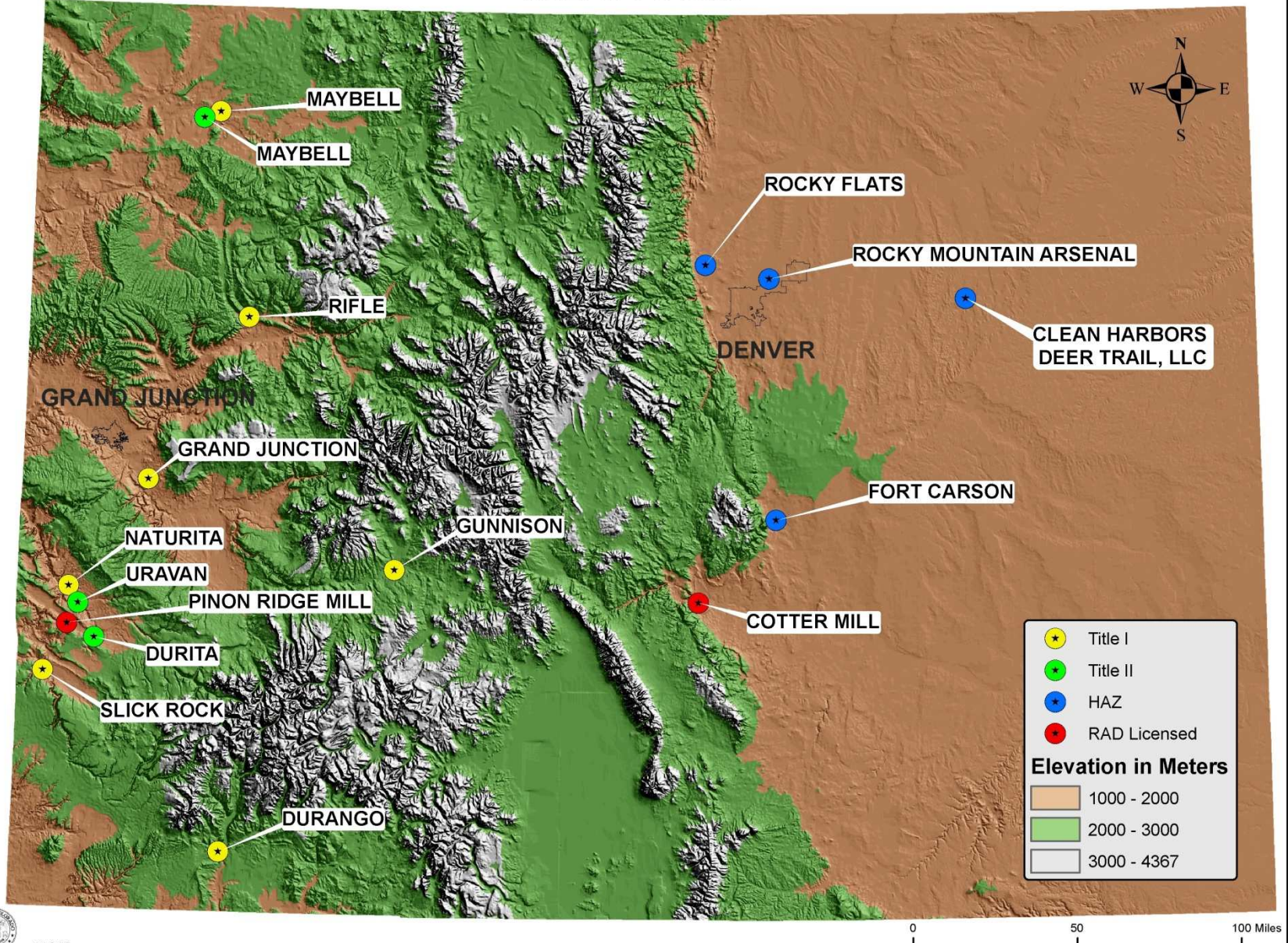
UMTRCA Title II

- Durita
- Maybell
- Uravan

Radioactive Material License

- Cotter Mill
- Pinon Ridge Mill

State of Colorado



Examples of Colorado UMTRCA Title II Sites



Naturita
May 2009



Gunnison
May 2006

UMTRA Lessons Learned: Impacts on Impoundments

- Noxious weed infestations
- Erosion in surrounding areas
- Large animal use of the cells
- Fence and sign repair
- Trespassing
- Low degree of success of revegetation in surrounding areas
- Ants, burrowing rodents

UMTRA Lessons Learned: Other

- Engineering documents need to be maintained
- Designs need to include vehicle access to all areas surrounding the cells
- Incident or event-based inspections are best
- Institutional knowledge is difficult to maintain. Periodic meetings with cooperating agencies may help

Future of Uranium in Colorado

- Cotter Canon City Mill is decommissioning
- Energy Fuels - new conventional uranium mill
- Powertech has expressed interest in In-situ operations

Energy Fuels Uranium Mill

- License application submitted November 2009
- License issued January 2011
- **First conventional uranium mill licensed in 25 years**
- Lawsuit filed against the Department January 2011
- Construction delayed until Spring 2012

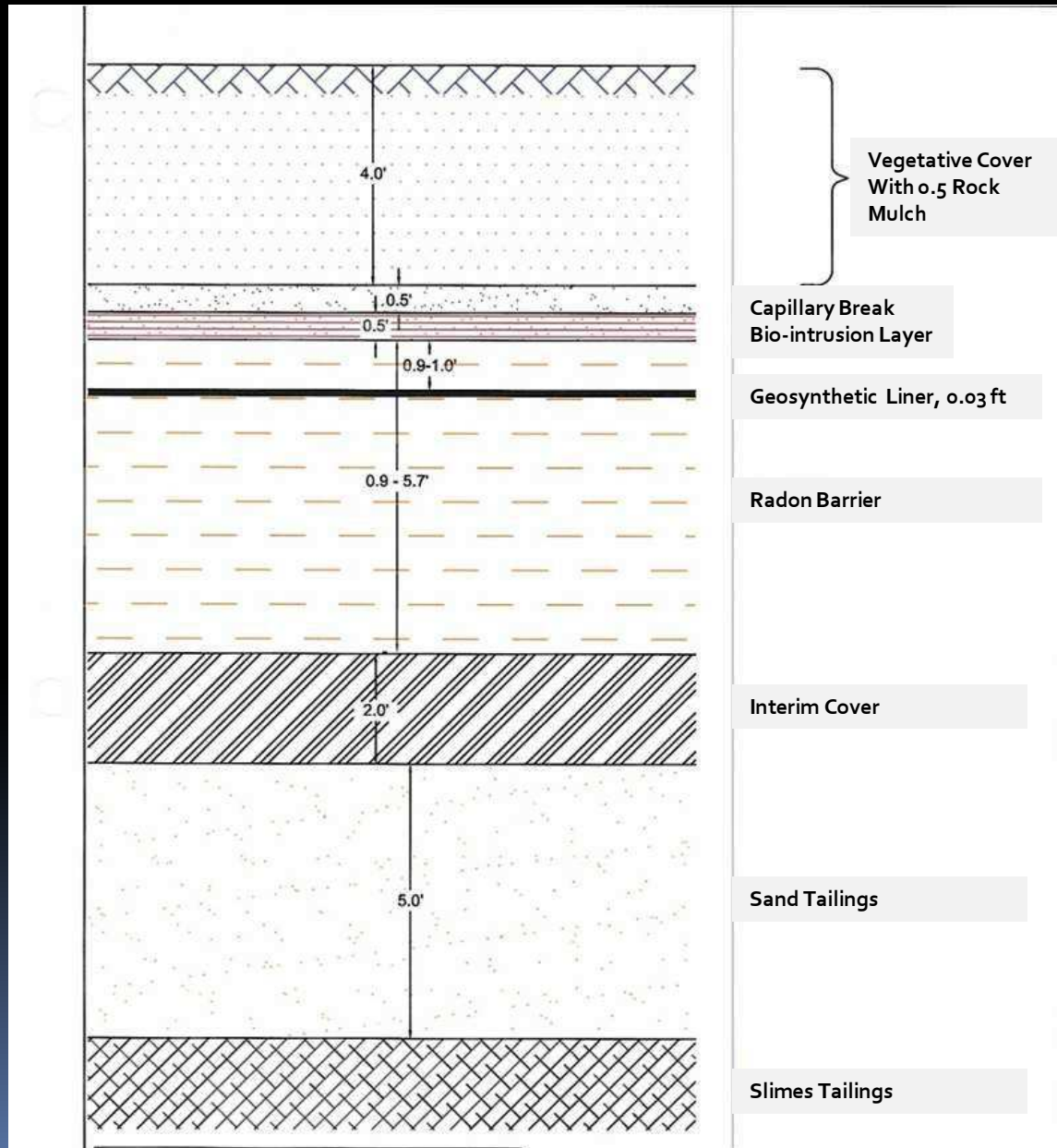


Energy Fuels Site, Paradox Valley, Colorado-Utah Border



Site of Energy Fuels Uranium Mill
Paradox Valley, CO

Approved “With Conditions”



Conditions include:

- Capillary barrier testing
- Full-scale test cover construction and evaluation using several cover configurations

Newly licensed facility to be built, operated, and closed prior to cover construction.

Questions?



Jennifer Opila, Colorado Radiation Program
303-692-3403 Jennifer.opila@state.co.us