

# License Renewal Process

November 2, 2011



---

Colorado Department  
of Public Health  
and Environment

# Current Status

- Cotter's license expires January 31, 2012
- Renewal application to be submitted by December 31, 2011
- Current license conditions continue until renewal or termination
- Current license conditions do not allow processing
- Resumption of processing would require full license renewal process (also major construction)

# License Renewal Process

- Completeness determination within 45 days of submittal
- First public meeting/hearing within 45 days of completeness determination
- Second public meeting/hearing within 30 days of first
- County commissioner comments on environmental report within 90 days of first meeting
- Agency decision required within 360 days of second public meeting

# License Decision

- Environmental impact assessment
  - Radiological and non-radiological short term and long term impacts
    - Environmental
      - Surface water, Groundwater, Soils, Air, Radon, Flora, Fauna
    - Economic
    - Social
    - Technical
    - Transportation
    - Other
- Decision analysis
  - Explain basis of decision

# Cotter Financial Assurance Status

Steve Tarlton, CDPHE

November 2, 2011



---

Colorado Department  
of Public Health  
and Environment

# License Surety

- Based on April 22, 2010 estimate
- Cotter and Department agreed to total license surety amount of \$20.8 million
- Existing license surety was \$14.7 million
- Agreed to initial payment of \$2 million, plus deferred amounts tied to the completion of specific projects by January 2011 and July 2011
- January 2011 projects valued at \$2,030,000 and July 2011 projects valued at \$2,117,759

# License Surety (cont'd)

- Granted schedule extension for two final buildings. All to be completed by December 2011
- 2011 Annual review indicated additional \$781,951 for inflation and additional TCE investigation
- The total license surety is now \$21,628,951 with payment of \$4,147,000 deferred for ongoing projects

# Long-Term Care Fund

- Created in 1979 through deposit of \$210,000 with the Colorado State Treasurer
- As of June 2011, Long-term Care Fund had grown to \$985,136 through interest payments
- Fund was established to provide adequate annual revenue in perpetuity for monitoring and maintenance after site closure (estimated to begin in 2006)

# Long-Term Care Fund (cont'd)

- Initial estimate for annual cost was \$7,170 (in 1979 dollars) and included:
  - atmospheric radon testing at the boundary,
  - semi-annual radon flux measurements of the impoundment,
  - gamma surveys,
  - vegetation analyses,
  - groundwater quality monitoring,
  - fence repair, sign and access road maintenance, and
  - rodent control/vegetation eradication on the impoundment.

# Long-Term Care Fund (cont'd)

- It is currently estimated that long-term care funds would not be required prior to 2035.
- Annual cost of \$7170 in 1979 dollars is approximately \$28,505 in 2035 dollars.
- Long-term Care Fund is estimated to grow to \$3,984,521 by 2035.

# RAP Surety

- Determined in letter to Cotter dated October 26, 2010
- Cotter estimate of January 4, 2010 was \$2,891,319
- Department estimate of April 22, 2010 was \$15,066,000
- Difference was due to scope differences.

# RAP Surety (cont'd)

- Scope differences resolved through informal negotiations
- Three groundwater plumes addressed:
  - Lincoln Park north of DeWeese Dye Ditch.
  - SCS Dam to DeWeese Dye Ditch (006)
  - Facility
- NW (Golf Course) Plume is addressed in License surety estimate.

# RAP Surety (cont'd)

- Agreed-to scope used only as basis of surety estimate
- Decisions on remediation will require additional data and public process
- Initial adjustment to \$3,133,288 for undisputed amounts
- Final amount is still under negotiation

# RAP Surety (cont'd)

<b>Phase</b>	<b>CDPHE Estimate</b>
Lincoln Park	\$ 1,108,074
Facility	\$6,874,684
006	<u>\$1,938,803</u>
<b>Total</b>	<b>\$9,921,561</b>

# CCAT Lawsuit

- Filed in Denver District Court September 19, 2010 regarding surety amounts and process
- Amended January 14, 2011
- Motion to Dismiss by CDPHE and Cotter denied June 3, 2011
- No date set for briefings or hearing

# Building Decommissioning

November 2, 2011



---

Colorado Department  
of Public Health  
and Environment

# Building Demolition

- Product Building demolition in process; to be completed by December 31, 2011
- SX Building has been demolished; is being chopped up and disposed in primary impoundment
- A few incidental buildings and facilities to be removed subsequently
- Structures to remain include laboratory, change house, guard shack, main substation, railroad structures and maintenance shop; subject to future demolition

5-27-2006

Primary  
Impoundment



**July 2009**

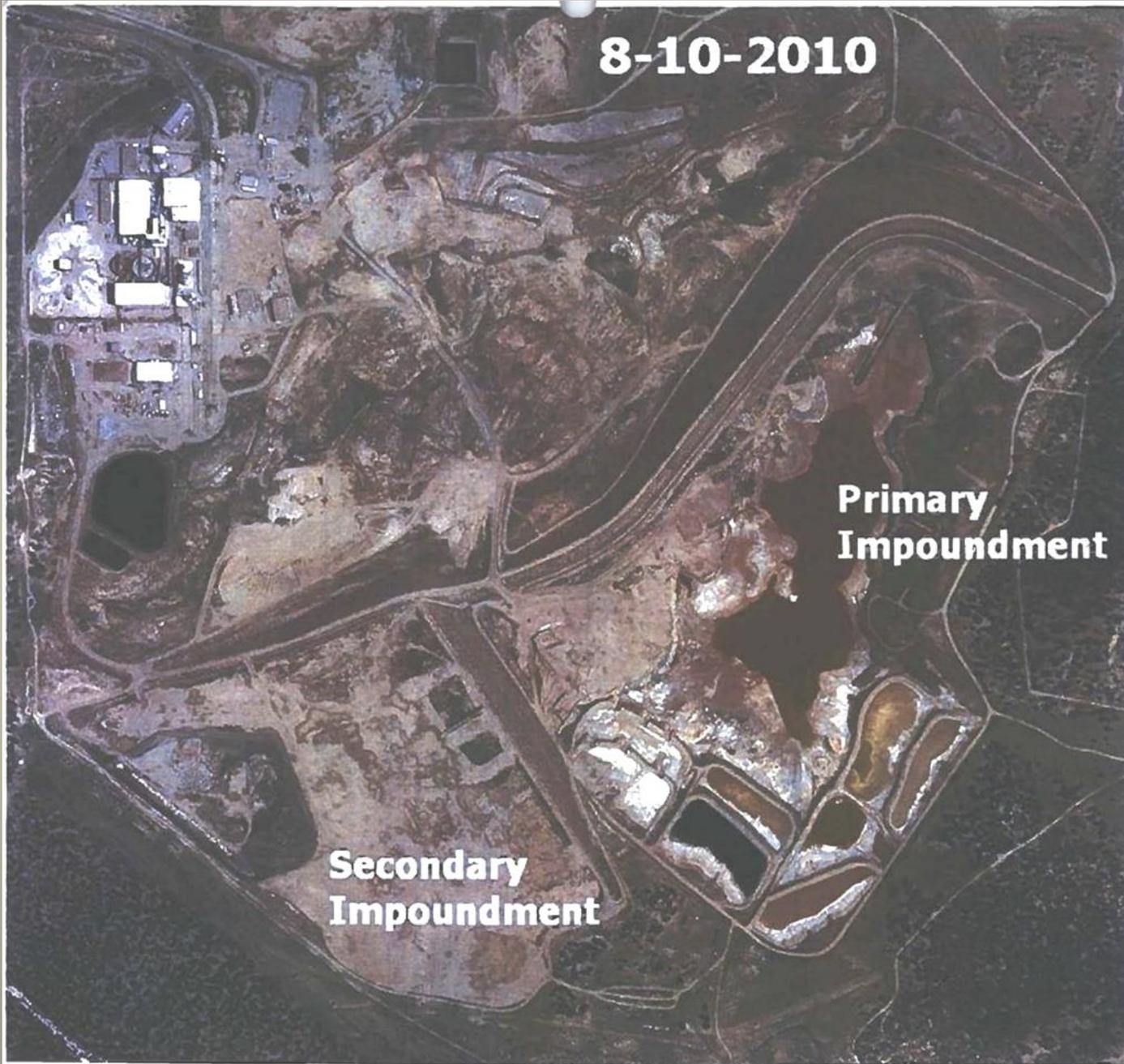
**Primary  
Impoundment**



**8-10-2010**

**Primary  
Impoundment**

**Secondary  
Impoundment**



August 10, 2011



# Sulfation Building Pre-demolition



# Sulfation Building Post-demolition



# Boiler Building Pre-demolition



# Boiler Building Post-demolition



# Secondary Crusher Pre-demolition



# Secondary Crusher Post-demolition



# Zirconium Product Building Pre-demolition



# Zirconium Product Building Post-demolition



# Catalyst Plant Pre-demolition



# Catalyst Plant Post-demolition



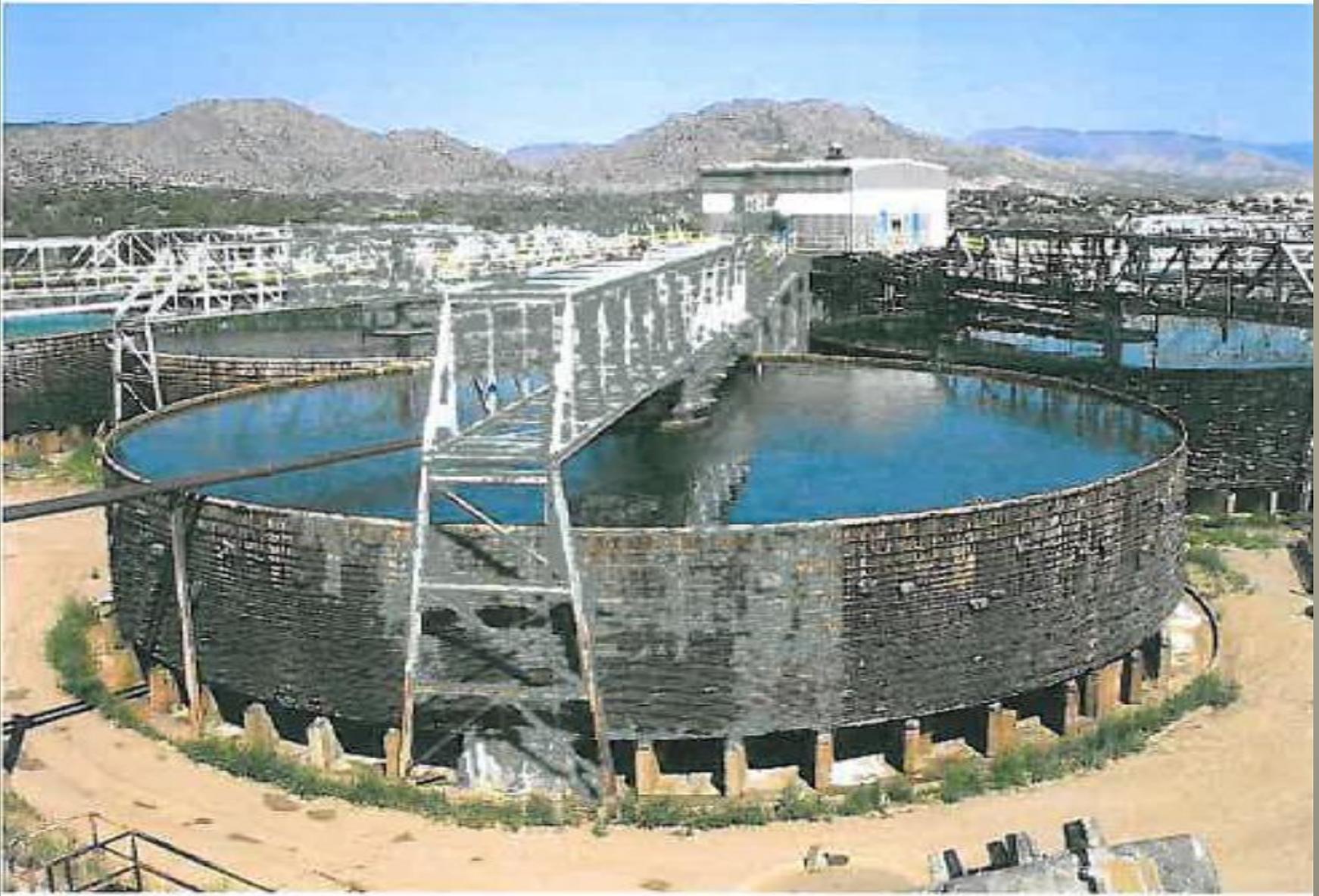
# Grind Leach Building in April



# Grind Leach Building in May



# CCD Pre-Demolition



# CCD Post-Demolition



# CCD Post-Demolition



# Secondary Impoundment



# Secondary Impoundment Interim Cover



# Pre-Demolition Secondary Baghouse and Conveyor



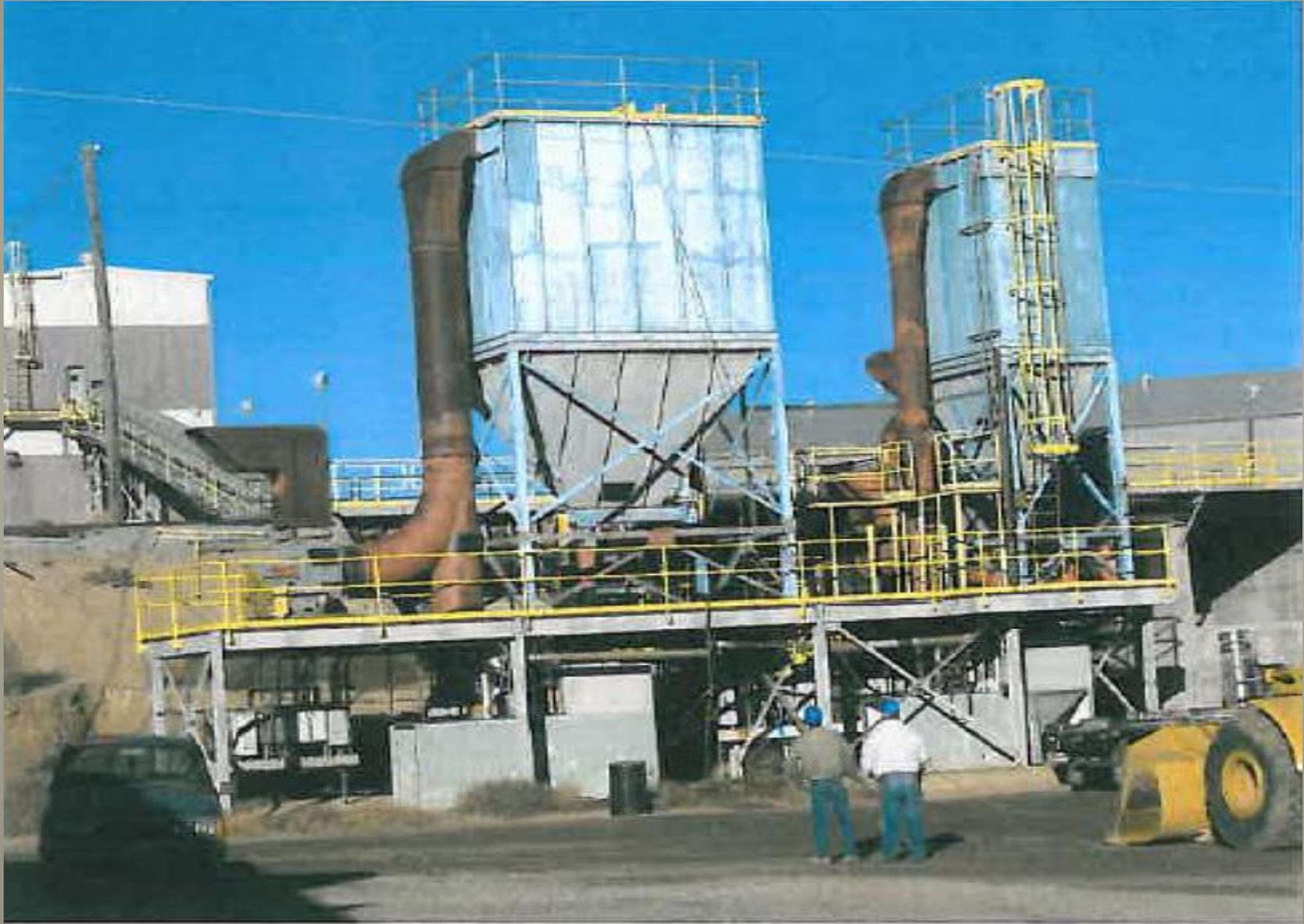
# Post-Demolition Secondary Baghouse



# Post-Demolition Secondary Conveyor



# Pre-Demolition Secondary Feed Baghouses and Grizzly



# Post-Demolition Secondary Crusher Baghouses and Grizzly



# Pre-Demolition Grind Leach Conveyor



# Post-Demolition Grind Leach Conveyor



# Typical Pipe Racks



# Typical Post-Demolition Pipe Racks



# Characterization

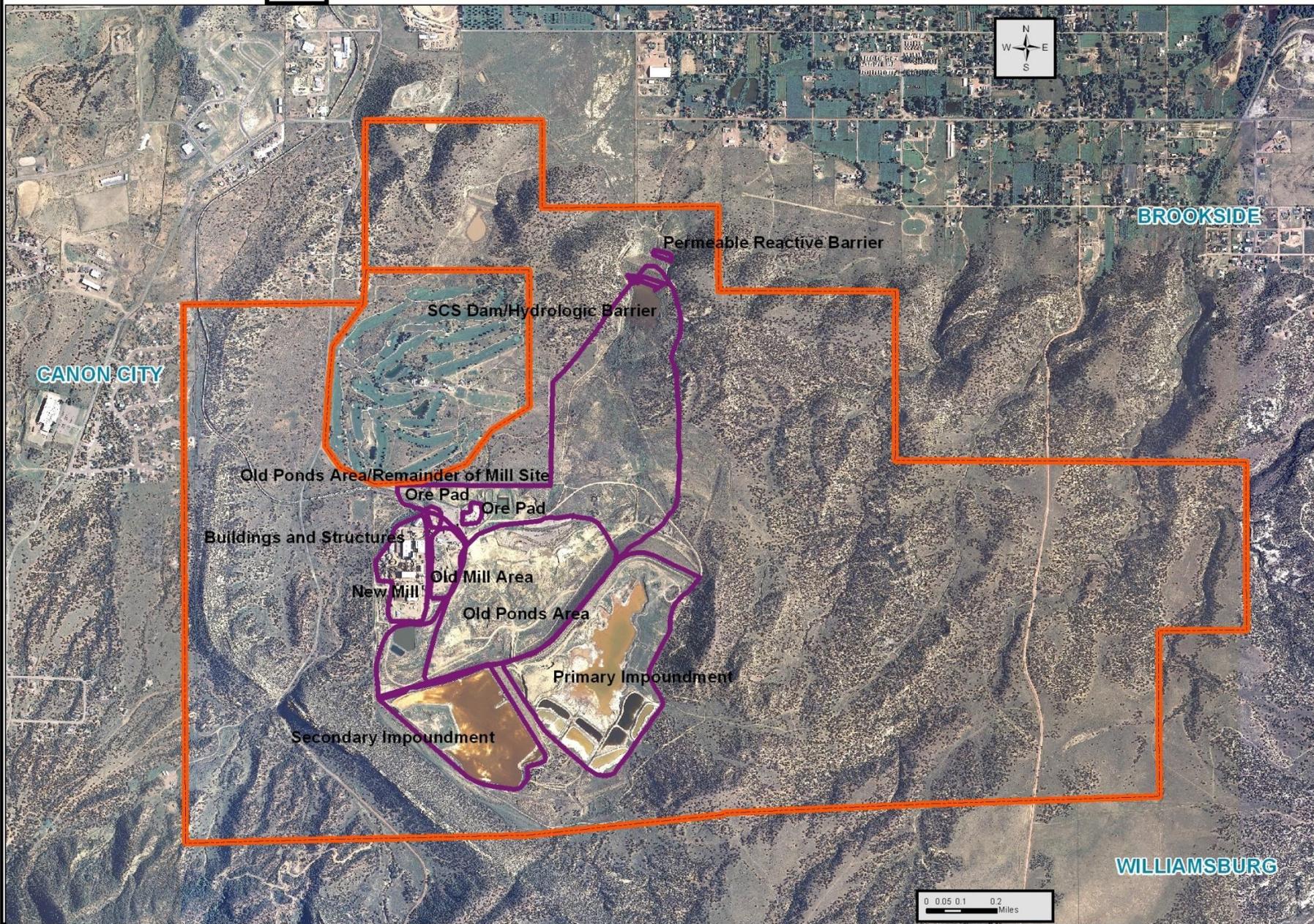
November 2, 2011



Hazardous Materials &  
Waste Management Division

# Cotter Mill & Vicinity

 Cotter Mill Area  
 Mill Structures



October 27, 2011



# Impoundment Reclamation

November 2, 2011



---

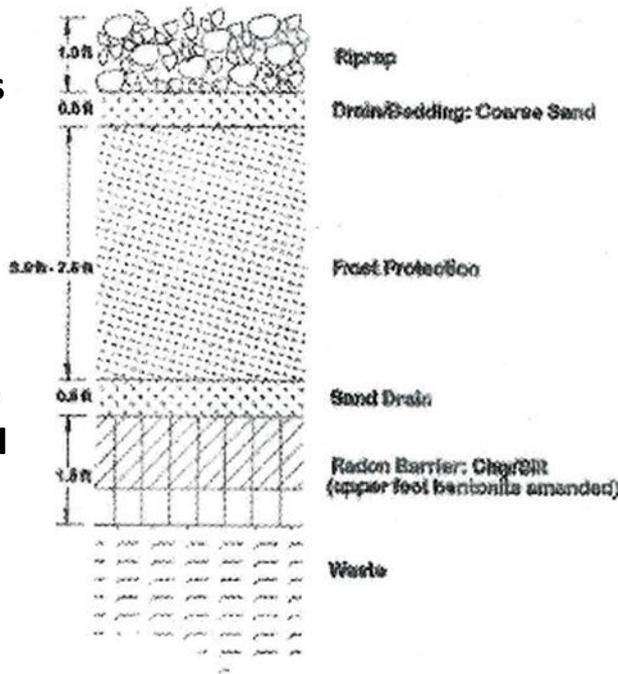
Colorado Department  
of Public Health  
and Environment

# Impoundment Cover Design Timeline

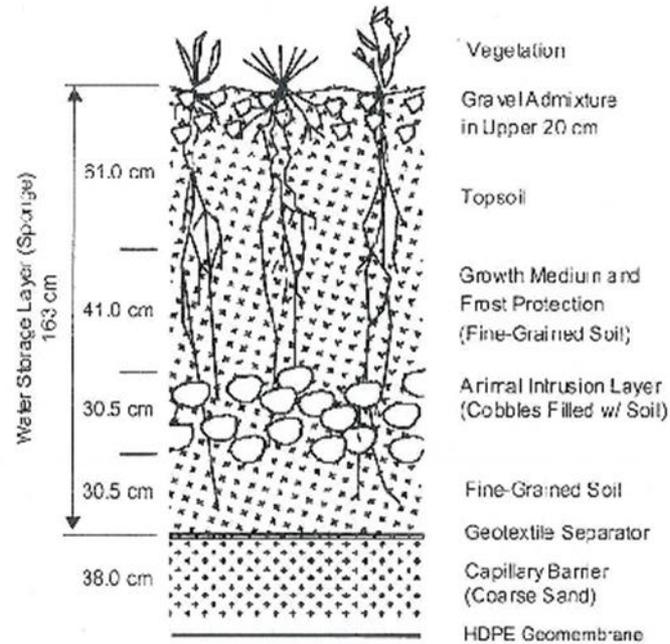
- Sept 2003 Updated Reclamation Plan submitted with renewal application
- Jan 2004 State meets with Cotter to discuss Reclamation Plan, including cover design concepts
- Aug 2004 Alternative Reclamation Plan received
- May 2005 Comments sent to Cotter on 2004 Alternative Plan; response to comments never received; Updated plan accepted for renewal
- Jun 2011 Updated 2011 Reclamation Plan including cover design information received
- Sep 2011 Letter to Cotter not approving current cover design concept. New concept shall be submitted within 45-days from letter (approx. mid-November)

# Cover Design Alternatives For Radioactive Disposal Cells

**Traditional DOE  
Approach**



**Alternative (Water Balance)  
Approach  
(approved by NRC and EPA)**

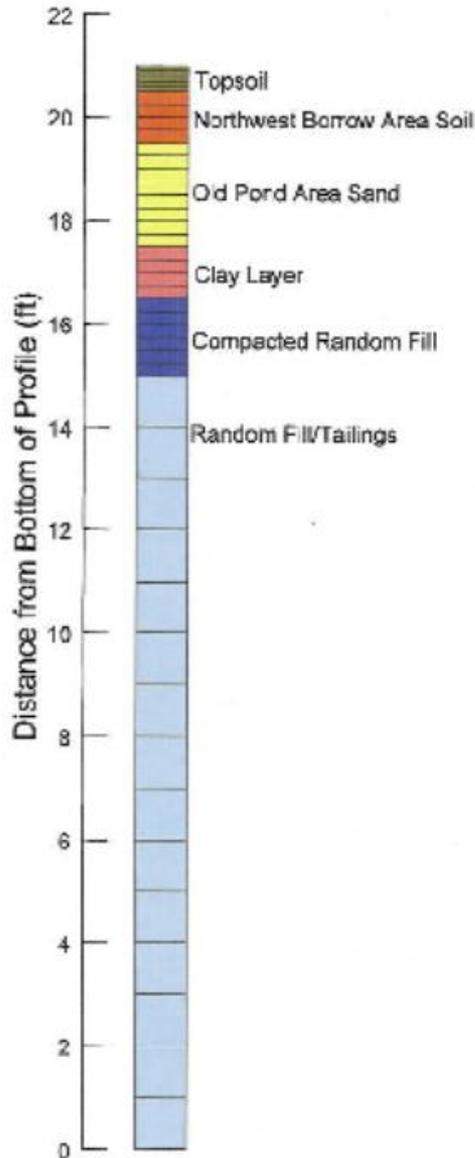


Used at the  
Monticello, UT  
site.

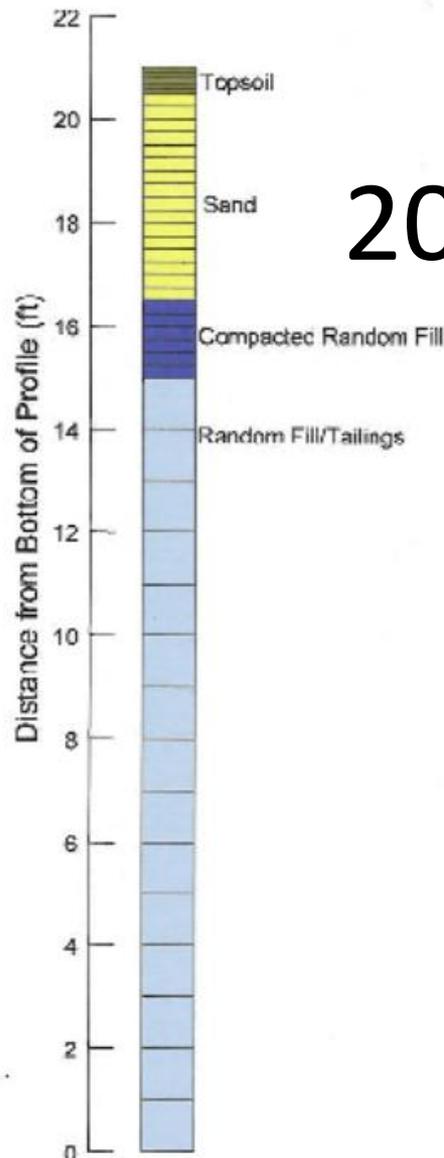
Similar to NRC  
approved covers  
constructed at:

- Grand Junction
- Gunnison
- Rifle
- Maybell
- Other Colorado  
Title I and Title II  
sites

## Multi-Layered Cover



## Alternative Cover



# 2004 Cover Design

- Cotter evaluated both types of covers.
- Computer modeling of water through the cover by Cotter's consultant showed similar performance with both concepts.
- State identified issues with this concept remained unresolved.

**MFG, Inc.**

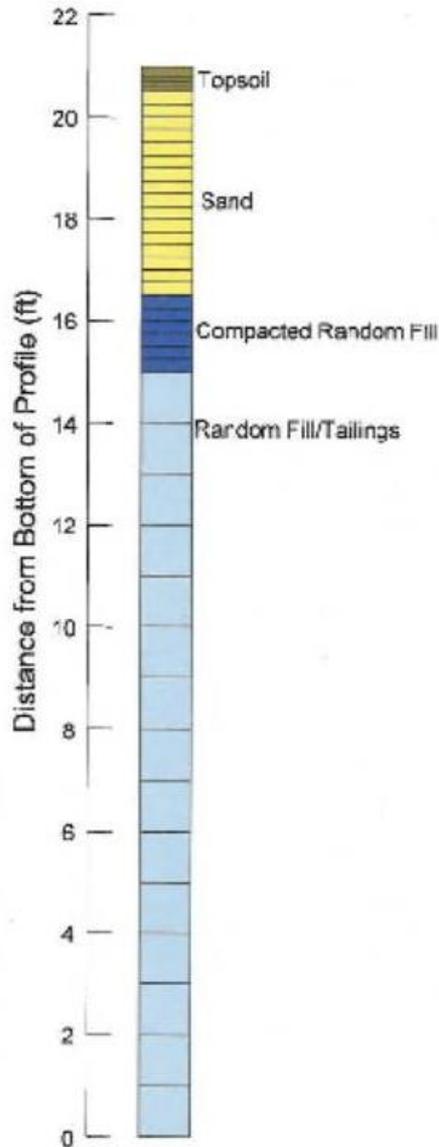
consulting scientists and engineers

FIGURE 1.4  
MULTI-LAYERED AND ALTERNATIVE  
COVER SYSTEMS  
MODELED PROFILES

Date: APRIL 2004

Project: 101077

File: Figure1.4.ppt



# 2011 Cover Design

Cotter selected the water balance “alternative” concept moving forward.

State concerns with current concept that require resolution:

- Radon barrier design
- Slope of final cover
- Some of the modeling parameters
- Biota (animal) considerations

# Water Management Issues

November 2, 2011



---

Colorado Department  
of Public Health  
and Environment

# Purpose

- Currently, water collected at the site is pumped to primary impoundment for evaporation.
- Primary impoundment is being closed and new mechanism for water management must be defined.

# Present Sources of Water

- Surface water from site is collected at SCS Dam
- Groundwater from site is collected at hydraulic barrier at toe of SCS Dam or at cut-off wall (previously the permeable reactive treatment wall) and from two on-site wells
- Water is collected from dewatering of primary and secondary impoundments

# SCS Dams, Hydraulic Barrier & PRTW/COW



# New Potential Sources of Water

- Groundwater Remediation Systems
  - On-site trenches
  - NW Plume/Golf Course
  - Dam-to-Ditch (006)
  - Other Lincoln Park
- Soil excavation groundwater

# Alternatives

- New evaporation pond
  - On-site
  - Secondary impoundment
  - Dam-to-Ditch area
- Water treatment and discharge

Alternatives will be evaluated in license renewal process - 2012