Annual Project Review for Council
by Lee Shenton
Grand County UMTRA Liaison
Observations provided by Grand County UMTRA Liaison on behalf of the Moab Tailings Project Steering Committee, as established by Grand County Resolution 2970A.
Tailings Removed
(Millions of Tons per Year)

<table>
<thead>
<tr>
<th>Year</th>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tons</td>
<td>40.7</td>
<td>39.0</td>
<td>32.6</td>
<td>30.6</td>
<td>31.4</td>
<td>36.5</td>
<td>35.7</td>
<td>38.6</td>
<td>38.6</td>
<td>35.3</td>
</tr>
</tbody>
</table>

* ARRA* indicates American Recovery and Reinvestment Act of 2009, aka “Stimulus”

Funding
(Million $)

Five other DOE Non-Defense Environmental Small Projects

Tailings shipment and funding information provided by Moab UMTRA. Other observations provided by Grand County UMTRA Liaison on behalf of the Moab Tailings Project Steering Committee, as established by Grand County Resolution 2970A.
Tailings Removed: 201,000 tons per month with ARRA. Shipments curtailed Dec 2012 – Feb 2013 due to funding cuts. Shipments interrupted by rock slide. 37,500 tons per month since workforce reduced.

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Operations Status

- **56% of tailings moved**
  - 8.9 million tons shipped
  - 2 trains/week, ~37,500 tons/month (L6M)
  - Proposed $35.3 mil FY18 vs $38.6 mil FY17
- **Key aging equipment replaced**
- **Ground water remediation progressing**
  - Freshwater “curtain” activated when river level low

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Main Project Goals

- Move tailings away from Colorado River
- Protect river by intercepting ground water contaminants
- Remediate vicinity properties
- Reclaim project sites at Moab and Crescent Junction

Total project costs are estimated at about $1 billion

At the current rate (rolling six month average) the last of the tailings will be shipped in 2033.
Impacts Around Moab: 16Q4-17Q3

pCi/L = picoCuries per Liter, radiation from Radon gas in the air, L4Q average

Guideline: 3.7

Offsite radon not to exceed 3.0 pCi/L above background

Radon level at northwest boundary: 1.8

Background: 0.7
Per Cent of Allowable Impact

RADON
GAMMA
PARTIC

Guideline: Gamma not to exceed 100 mREM/yr above background.
Gamma total for last 12 months at nearest home was 94 mREM,
Or 2 mREM (2% of 100 mREM guideline) above CJ background.

Impacts Around CJ: 16Q4-17Q3
mREM = milli-Roentgen Equivalents in Man, biological dose equivalent, sum of L4Q
Environmental monitoring data provided by Moab UMTRA. Other observations provided by Grand County UMTRA Liaison on behalf of the Moab Tailings Project Steering Committee, as established by Grand County Resolution 2970A.
Airborne Radioparticulates

Total mREM L4Q

Data through 17Q3

UMTRA Guideline
10 mREM/yr
(~ one chest X-ray)
For respirable particles

Particulates roughly track rate of tailings shipments during ARRA

SHIPMENTS SUSPENDED Dec ’12-Feb ’13

Thompson
Arches NP
Mill E (Sta 0102)
Mill NW (Sta 0129)

Background
1.5 mREM/yr
Plus Ac/Pa 16Q4

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Ground Water Remediation

- Well field between pile and river intercepts contaminated ground water
- Fresh water “curtain” injection as needed
- Side channel habitat protected seasonally with added fresh water

Extracted by Dec-2017 (kept out of river)
900,000 pounds ammonia
4,800 pounds uranium

Could continue 1-2 years after pile removed

Well field data provided by Moab UMTRA. Other observations provided by Grand County UMTRA Liaison on behalf of the Moab Tailings Project Steering Committee, as established by Grand County Resolution 2970A.