

## **Community Involvement with Moab UMTRA**

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**ABSTRACT:** The community around Moab, Utah has been actively interested in the US Department of Energy Uranium Mill Tailings Remedial Action at the old Atlas Minerals uranium mill site. Local government established a committee to monitor progress and local impacts. The position of UMTRA Liaison was created to aid local understanding of the technical aspects and to facilitate communications between the public and the UMTRA Project team. A vision for future use of the site was established in collaboration with local, state and federal stakeholders. Local governments are also actively seeking support from the State of Utah and US Congress. Significant national support for Moab UMTRA comes also from the downstream states and indigenous nations.

**BACKGROUND:** A uranium mill began operating near the banks of the Colorado River in 1956 just outside Moab, Utah, at the time a small agricultural community of about a thousand residents, to take advantage of the discovery of many high-quality uranium ore bodies in the region. The mill was sold in 1962 to Atlas Minerals Corporation but closed in 1984 after the uranium market declined substantially. During the 28 years of operations mill tailings, the sand-like material that remains after the ore is processed, accumulated in an unlined impoundment occupying about 130 acres of the site, part of which is in the floodplain. In 1995, Atlas placed an interim soil cover over the “tailings pile” but no significant actions were taken to defend the Colorado River from ground water contaminated by the milling operations.

When Atlas declared bankruptcy in 1998, the US Nuclear Regulatory Commission appointed Pricewaterhouse-Coopers (PWC) as licensee and trustee for the site. PWC then began groundwater studies, some surface clean-up and started consolidation of the tailings. Responsibility for the Moab mill site was transferred by the U.S. Congress in 2001 to the US Department of Energy, who then took responsibility for site remediation under Title I of the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA). By the time DOE took ownership of the site, the tailings and other contaminated materials were estimated at sixteen million tons. A DOE contractor conducted further work to characterize the site and then began installing a ground water interim action system in 2003 to protect the river while a tailings remediation plan was developed.

By the time the Moab mill became a Title I site, Moab had grown to become a community of about six thousand residents but much of that growth occurred in the first few years after the mill was built. Many Moab residents worked at the mill but after the mill closed the local economy gradually transformed to one based on tourism and recreation. The very scenic Arches National Monument, directly across a highway from the mill site, was re-designated as a national park in 1971 and is now visited by nearly 1.5 million visitors each year from around the world.

Tailings shipments began in April, 2009 to the UMTRA disposal cell at Crescent Junction, Utah, 31 miles north of the Colorado River. The Crescent Junction site was selected because of convenient road and rail access, sparsely-populated location and a geologic setting with negligible impact on ground and surface water. Fifty-two per cent of the estimated 16 million tons of tailings have been shipped so far.

**EARLY COMMUNITY INVOLVEMENT:** The Moab community was intensely interested while clean-up alternatives were being considered from 2002-2005. Hundreds of residents participated in public hearings and commented on the various alternatives. Five alternatives for clean-up of the tailings pile, including no action, cap-in-place, and three offsite locations, were considered in the 2005 Final Environmental Impact Statement<sup>1</sup>. The preferred alternative, removal of the tailings and disposal in an engineered cell remote from the river, was announced in the Record of Decision<sup>2</sup>. Active remediation of the contaminated ground water at the Moab site was also a preferred alternative in the ROD.

In 2005, the “Moab Tailings Project Grand County Stakeholders” group was organized “to oversee the project to ensure that the health, safety and economic interests of local residents are protected”<sup>3</sup>. At their first meeting in 2006 they changed their name to “Moab Tailings Project Steering Committee” (MTPSC) and have been meeting regularly ever since, formally delegated responsibility by the Grand County Council<sup>4</sup> to monitor the Moab UMTRA project. MTPSC members (“Stakeholders”) are designated by local governments, state and federal agencies with a stake in the outcome of the Moab UMTRA, including City of Moab, Grand County (Council, Emergency Management, Community Development and Water Services Agency), National Park Service, Bureau of Land Management and Utah’s Division of Waste Management and Radiation Control. The national non-profit Nature Conservancy has a committee member because they own the wetlands property directly across the river from the mill site. The Utah Department of Workforce Services also designates a member since the Moab UMTRA is a significant employer in the area. One At Large member is designated by Grand County.

**UMTRA LIAISON:** DOE funds a small grant to Grand County to offset some of the related local expense incurred by County government, including liaison efforts. In 2009, Grand County established an UMTRA Liaison position and hired a retired local resident with the background and training to understand and explain regulatory, chemical and radiological issues to the public<sup>5</sup>. The UMTRA Liaison is a part-time Grand County employee whose position is funded by the DOE grant, assuring an appropriately neutral position between the public and the project. However, federal law prohibits the Liaison from lobbying members of the US Congress.

The Liaison also conducts community outreach on behalf of Grand County, providing an independent perspective to the media and community groups about the project, arranging for site tours for new Council and MTPSC members, and participating in events that promote awareness and understanding of the Moab UMTRA. For example, with concurrence of the Federal Project Director, the Liaison organized public tours of the Moab UMTRA site as a part of the 2016 Moab Festival of Science.

The UMTRA Liaison spends one day most weeks at the Moab mill site, providing a convenient channel for communications between the public and the project team. The Liaison also tours the disposal cell site at Crescent Junction monthly escorted by a DOE employee to review progress and current activities.

**VOLUNTARY COMPLIANCE WITH LOCAL CODES:** Moab UMTRA must operate under DOE and NRC guidelines but also voluntarily complies with a Conditional Use Permit<sup>6</sup> issued by Grand County. For example, Moab UMTRA complies with pertinent local land use codes regarding landscaping to partially screen the “industrial view.” Moab UMTRA provides an Annual Statement of Continued Compliance (ASCC) to the Grand County Council, addressing environmental impacts, safety record, employment and upcoming project plans. Moab UMTRA has agreed every year to address any additional concerns raised by the MTPSC, who then votes whether to recommend County Council accept the ASCC.

**RESPONSIVENESS TO CITIZEN CONCERNS:** Moab UMTRA responds directly to citizens and also through the Liaison for local citizen concerns. The Federal Project Director interacts frequently with the Mayor of City of Moab and appears at sessions of the MTPSC and County Council upon request.

Citizens can and do come to the Liaison office in the County Courthouse to express concerns or ask questions about the project. When the Liaison is unable to answer these questions to the satisfaction of the citizen, the concern is passed along to the project team through the project's Public Affairs Manager. See the Moab UMTRA website at [www.gjem.energy.gov/moab/contacts.htm](http://www.gjem.energy.gov/moab/contacts.htm) for current contact information. Occasionally the Liaison assists citizens with the submittal of a Freedom of Information Act request (for federal records) or a Government Records Access & Management Act request (the Utah counterpart for state or local records).

Journalists periodically ask the Liaison for comments about the project. Requests for DOE statements are forwarded to the Public Affairs Manager. Requests for Grand County perspectives are handled by the Liaison.

**INCIDENT COMMUNICATION PROTOCOL:** The Moab UMTRA has agreed to promptly notify the Stakeholders of any project incident that significantly affects or could materially affect the public, including project employees. Our experience shows that word-of-mouth disclosures are rapid and effective in a community the size of Moab but frequently the accuracy suffers. It is important to disseminate accurate information so Grand County shares an updated notification list with project management each year to assure that current community leaders are kept informed.

**FUTURE VISION FOR THE SITE:** During 2013-2014 the MTPSC and Grand County undertook a public input process to determine preferred uses of the Moab site after remediation. The process included two public workshops, an online comments system and a web page with comprehensive information, culminating in preparation of an Initial Community Vision ("ICV") for the Moab site. The ICV was then presented to both the Grand County Council<sup>7</sup> and the Moab City Council<sup>8</sup>, receiving supportive resolutions from both.

A part of this process included educating the community about what to expect and what would be allowed. DOE will not likely retain ownership of the Moab mill site property after remediation is complete. Other federal agencies will have right of first refusal so the adjacent landowners BLM and NPS could accept the site or portions of it. The State of Utah comes next in line, so perhaps the Utah State Parks might be interested. The site could be made available to Grand County or City of Moab if no federal or state agency is interested. The community also now understands that while UMTRCA authorizes use of federal funds for remediation, any commercial or public development of the remediated site would need to be funded from other sources.

The public input process revealed a strong community preference for mixed use of the site, including commercial development along the highway, natural park-like areas in the floodplain, public event venues and nature and recreational trails. Many suggestions were received including a museum recognizing the uranium industry, a fruit orchard to recognize the agricultural legacy of the area, a shuttle bus facility to serve Arches NP and a federal administrative center on a small portion of the site to consolidate administrative facilities from several federal buildings in town, freeing those buildings for commercial uses.

The community plans to conduct another round of public input every five years until the remediation work is complete.

Moab UMTRA collaborated with Grand County and Utah Department of Transportation to incorporate a pedestrian underpass in a new highway bridge project to allow safe access to a future recreational trail proposed along the river on the mill site.

**LOCAL SUPPORT FOR UMTRA FUNDING:** Unlike the other UMTRCA Title I clean-ups, the State of Utah chose not to share the clean-up cost of the Moab site. However, the local community is now concerned that without state participation the project could continue for decades, delaying many beneficial uses of the site. The City of Moab is currently collaborating with Grand County to appeal to the Utah State legislature for state funding for a portion of the Moab UMTRA. While this would be complex and perhaps politically challenging in Utah, the federal-state UMTRA partnerships have worked successfully in other states and the appeal of beneficial uses of the site is strong.

**NATIONAL SUPPORT FOR UMTRA FUNDING:** While Moab UMTRA is effectively protecting the Colorado River, public fear of radioactive contamination spurs support at the state and national levels. The most direct national support has come from Utah's congressional delegation. Utah's congressmen and staff have visited the Moab UMTRA site on several occasions.

Approximately 25 million people downstream from Moab depend on the Colorado River for municipal and agricultural water in Utah, Arizona, Nevada and California. The Metropolitan Water District of Southern California has sent delegations to Moab and supports funding<sup>9</sup> for timely completion of the project.

**CHALLENGES IN PUBLIC UNDERSTANDING:** As with any complex subject, there have been continuing challenges in educating the public about the Moab UMTRA. A recurring issue is that some of the public assumes anything radioactive represents a significant health risk so it has been important to educate the public about the level of risk associated with uranium mill tailings. An effective approach has been to compare this with radiation exposures commonly encountered in daily life plus more hazardous exposures. Our experience is that this helps the public put exposures to low-level radiation (such as from tailings) into proper perspective.

In 2013 the MTPSC requested the Utah Department of Health (UDOH) conduct an epidemiological study to determine if there were increased incidences in the Moab area of any health issues related to the Moab UMTRA<sup>10</sup>. UDOH presented their results<sup>11</sup> in May, 2013 at a public meeting of the MTPSC, who then posted the study on the Grand County website. While UDOH found increased incidence of two specific types of cancer, both were strongly correlated with lifestyle choices (tobacco use for example) but not with exposures to the uranium tailings.

Another challenge arises when the public "intuition" is counter to reality. For example, during late-Spring of 2011 the Colorado River overflowed the channel onto the Moab site. Some members of the public were concerned that this would necessarily "spread the contamination from the pile". The hydrogeological explanation for why this didn't happen was somewhat complex so sampling of the water, sediments and fish was also conducted to confirm the lack of contaminant spread.

It has also been clear that a segment of our public cannot be convinced by providing the facts, perhaps because they don't understand the scientific evidence or just mistrust any information provided by the government. To minimize mistrust, it is important to provide accurate, supportable information to the public without exaggeration, pro or con.

**SUMMARY:** It is worthwhile to both the project team and the local community to communicate to our citizens the technical aspects of a uranium tailings remediation project, but that communication can be improved by employing a knowledgeable, neutral and objective third party who also understands the social impacts of the project. For the Moab UMTRA, the local community was engaged for years before

removal of tailings began but a dedicated liaison was not hired until shortly after. Now, seven years later and with many lessons learned, the liaison approach used in Moab seems to still be working well and would likely continue to be worthwhile with any qualified successor in the liaison position.

## **Acknowledgments**

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## **References**

1. *Remediation of the Moab Uranium Mill Tailings, Grand and San Juan Counties, Utah, Final Environmental Impact Statement, DOE/EIS-0355, July 2005.*
2. *Record of Decision for the Remediation of the Moab Uranium Mill Tailings, Grand and San Juan Counties, Utah, Federal Register, September 21, 2005 for transport predominantly by rail and disposal at Crescent Junction, amended February, 2008 to allow some transport by truck.*
3. "Grand County Stakeholders", Moab Times-Independent, Dec 1, 2005.
4. Grand County Resolution 2841-2006, established MTPSC.
5. Grand County Resolution 2915-2010, defined UMTRA Liaison roles.
6. Grand County Resolution 2741-2006, established Conditional Use Permit.
7. ICV Grand County Resolution 3015-2014, January 21, 2014.
8. ICV City of Moab Resolution 11-2014, January 28, 2014.
9. See pages 413-414, *President's Budget Request for FY17: Appendix, Non-Defense Environmental Cleanup*; Moab referenced in text under Small Sites, where total Program and Financing for Small Sites is estimated at \$52 million.
10. See *Approved Minutes for April 26, 2013 and May 28, 2013, Moab Tailings Project Steering Committee.*
11. *Cancer Incidence Statistical Review for Moab (including Spanish Valley), Grand County, Utah Covering the Period from 1975 to 2009*, Utah Department of Health, April 15, 2013. See UDOH website [www.health.utah.gov/enviroepi/cancerstudies/](http://www.health.utah.gov/enviroepi/cancerstudies/) for the full report.

## Acronyms

ASCC – Annual Statement of Continued Compliance  
BLM – Bureau of Land Management, manages public lands for the DOI  
DOE – United States Department of Energy  
DOI – United States Department of the Interior  
EIS – Environmental Impact Statement  
EM – Office of Environmental Management, DOE  
FY – Fiscal Year, FY17 begins October 1, 2016  
IAEA – International Atomic Energy Agency  
ICV – Initial Community Vision, preferred public uses of Moab UMTRA mill site  
LM – Office of Legacy Management, DOE; manages Moab UMTRA sites after remediation  
MTPSC – Moab Tailings Project Steering Committee, public and agency stakeholders  
NP – National Park, such as Arches National Park  
NPS – National Park Service, manages national parks and monuments for the DOI  
NRC – United States Nuclear Regulatory Commission  
PBR – President’s Budget Request, starting point for federal budget for a FY  
PWC – Pricewaterhouse-Coopers, trustee for Moab UMTRA sites 1998-2001  
ROD – Record of Decision  
UDOH – Utah Department of Health  
UMREG – Uranium Mining and Remediation Exchange Group of IAEA  
UMTRA – Uranium Mill Tailings Remedial Action, authorized under UMTRCA  
UMTRCA – Uranium Mill Tailings Radiation Control Act of 1978