

STATE OF COLORADO

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Dedicated to protecting and improving the health and environment of the people of Colorado

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Colorado Department
of Public Health
and Environment

September 13, 2013

The Honorable Gail Schwartz
The Honorable Michael McLachlan
The Honorable Steven King
The Honorable Ray Scott
Colorado State Capitol
200 East Colfax
Denver, Colorado 80203

Mr. Reeves Brown
Colorado Department of Local Affairs
1313 Sherman Street, Room 500
Denver, Colorado 80203

Dear Members of the UMTRA Program Oversight Committee,

Enclosed is a copy of the Colorado Department of Public Health and Environment's Annual Report to the Uranium Mill Tailing Remedial Action (UMTRA) Program Oversight Committee for July 1, 2012 to June 30, 2013 for your review. This Annual Report fulfills the reporting requirements set forth in section 39-29-116(4), Colorado Revised Statutes.

Sincerely,

Gary W. Baughman, Director
Hazardous Materials and Waste Management Division

Enclosure



Colorado Department
of Public Health
and Environment

Uranium Mill Tailings Management

Annual Report to the Uranium Mill Tailings Remedial Action
(UMTRA) Program Oversight Committee

July 1, 2012 to June 30, 2013

Submitted to the Colorado Legislature on September 13, 2013

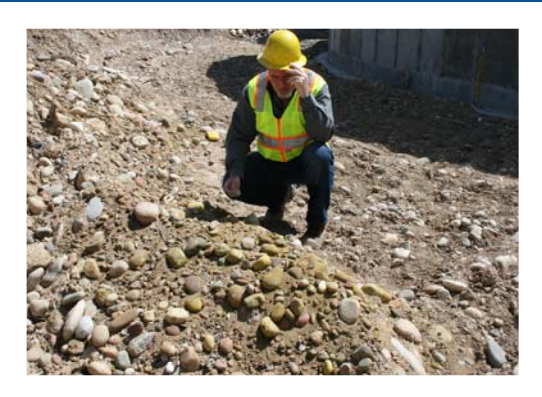


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Colorado Department of Public Health and Environment Hazardous Materials and Waste Management Division

Remediation Program

Monica Sheets, Program Manager
Michael Cosby, UMTRA Property Specialist
Kate Elsberry, UMTRA Program Support
Wendy Naugle, UMTRA Groundwater

Statute

C.R.S. 25-11-301 et. seq.

Date

September 13, 2013

For Information or Copies

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Authorization

The Colorado Department of Public Health and Environment (department) is authorized by Colorado Revised Statutes (C.R.S. 25-11-301 et. seq.) to assist local governments in the identification and management of uranium mill tailings remaining in western Colorado communities. This authority filled a void left after the U.S. Department of Energy's (DOE's) authority to remediate surface tailings deposits under the Uranium Mill Tailings Radiation Control Act (UMTRCA) expired on September 30, 1998. These uranium mill tailings, which are a health hazard, are likely to be disturbed by infrastructure repair and local redevelopment. Colorado House Bill 99-1267, last amended by Senate Bill 07-200, authorized the department to continue its involvement in the Uranium Mill Tailings Remedial Action (UMTRA) Groundwater Restoration Phase.

Scope of Work

The department assists local government and private parties in identifying, removing, storing and disposing of uranium mill tailings; participates in UMTRA groundwater restoration, monitoring and long-term surveillance activities. This annual report is required by contractual agreement with the Colorado Department of Local Affairs to document the department's activities within this scope of work and under the cooperative agreement with the DOE for the UMTRA Groundwater Restoration Program. It also fulfills the reporting requirements of C.R.S. 39-29-116 (4).

Accomplishments

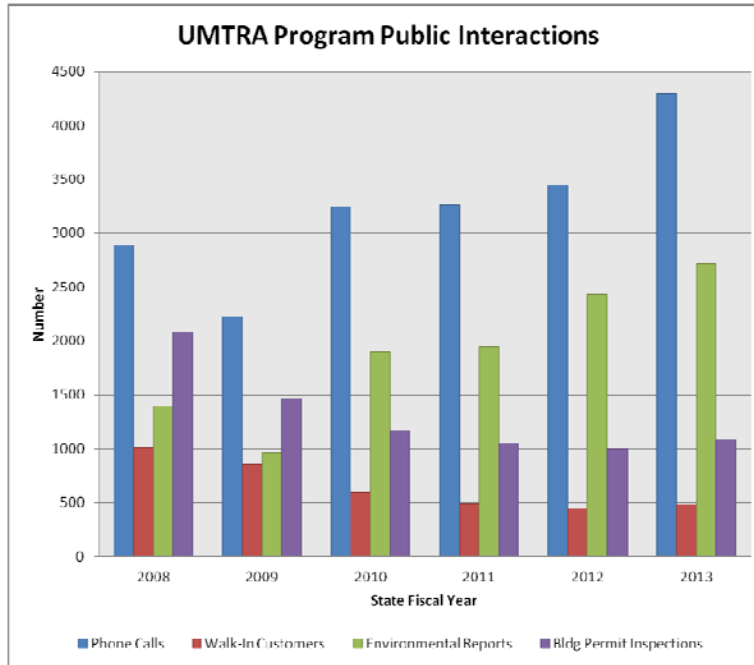
The department is working to improve and streamline tailings management. Growing population and continuing development, particularly in Mesa County, has caused an increased public demand for information on the potential for uranium on properties and for field verification when records reviews are

not sufficient. The department strives to maintain good working relationships with affected local governments and engages in outreach to ensure that the UMTRA communities understand the program and know whom to contact at the State with questions or issues. The City of Grand Junction and Mesa County are the most involved jurisdictions and have the most extensive working knowledge of the program. In addition, the department continues to provide the public with tailings surveys and information on specific properties, as well as technical assistance on tailings removal projects as necessary. Most of the department's public services are provided within one working day. Recognizing the continued value of the program, legislation was passed in 2007 to extend the program until 2017.

The department continues to work with DOE on the Groundwater Restoration Phase of the project. These efforts include working with DOE to refine the modeling predictions, review groundwater quality data to determine that there are no exposures to contaminated groundwater and most importantly, to monitor the institutional controls that are in place to preclude exposure to contaminated groundwater. DOE continues to monitor groundwater at each of these sites and provides the results to the State in annual Verification Monitoring Reports.



HELPING LOCAL GOVERNMENTS AND THE PUBLIC



Public Information

A major function of the post-Uranium Mill Tailings Remedial Action Program is public information dissemination. The department offers this information in various settings and formats. In direct support of tailings management activities, explanations and interpretations are provided during building permit survey inspections, environmental report preparation, file searches, interaction with walk-in customers, guidance in tailings removals, and radiation survey instruments loans. The topics discussed include not only proper tailings management, but also radon and the availability of the department's related printed materials. The program responded to

approximately 4,284 phone calls and 483 walk-in customers during fiscal year 2012-2013 — a nearly 20% increase for phone calls and 10% increase for walk-ins.

Environmental Reports

In response to public requests, the department produces environmental reports and letters regarding specific properties. Most frequently these come from real estate companies during property transactions. Department staff review computer databases and property files to determine whether the property was included in the UMTRA Program, the nature of remediation performed on the property and whether tailings remain on the property.

There are files on over 70,000 properties. If a report for a given property does not exist, or indicates that tailings potentially exist, a field survey is conducted at the owner's request. The report often includes data and maps from these files. In fiscal year 2012-2013, the department prepared 2,720 of environmental reports, 300 more than the previous year.

Program information is available at:
www.cdphe.state.co.us/hm/rptailing.htm.



Interim Storage Facility



One important component of the post-Uranium Mill Tailings Remedial Action Program is the operation of an interim storage facility in Grand Junction. This facility stores tailings temporarily until a sufficient quantity exists to warrant opening the Cheney Disposal Cell for permanent disposal of the material. The interim storage facility, which is located on property owned by the City of Grand

Junction, is managed by the department under a contract between the two parties. In 2005, the City of Grand Junction prepared a second storage area at the site for the potential receipt of tailings materials. This area was divided to allow for the separation of materials received from different communities in an effort to address liability concerns regarding mixing of materials and to facilitate the ability of other communities to sign the hauler agreement requirement by the City of Grand Junction for other local governments using the facility.

From July 1, 2012 through June 30, 2013, approximately 3,188 cubic yards of material was placed in the interim storage facility. A total of 3,813 cubic yards of material was hauled for permanent disposal in the Cheney Disposal Cell during this period.

Waste Minimization

The department facilitates waste minimization through oversight of excavation activities. Whenever department representatives are on site, they work with the contractor to minimize the size of the excavation to avoid digging a larger hole than necessary and to carefully exclude clean material. Although it is difficult to quantify

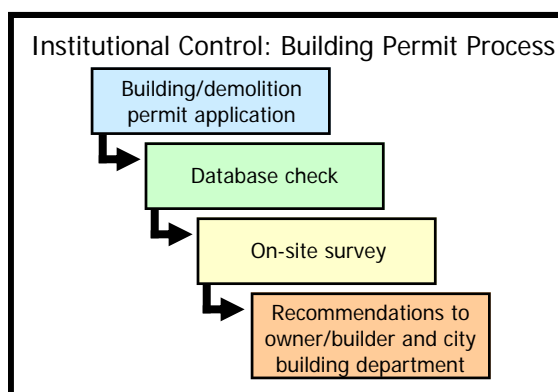
the amount of uncontaminated material not excavated as a result of this waste minimization practice, the department believes this practice preserves disposal capacity in the Cheney cell and reduces hauling costs. In addition, the department inspects material brought to the interim storage facility to exclude uncontaminated material that was excavated inadvertently.

Building Permit Inspections

Significant volumes of uranium mill tailings remain in the Grand Junction area. The City and County of Grand Junction require owners to consult with the department for all building and demolition permits in the city. First, a database check is performed to determine if the property had involvement with the uranium mill tailings program. If the property has a history of tailings, or if there is a tailings site within the immediate vicinity of the property, an on-site survey is performed. If uranium tailings are discovered, recommendations are made to the owner/builder and to the city building department.

In fiscal year 2012-2013, 1,086 requests were

received for building permit surveys. Of those, 943 were processed by a computer data check and 143 underwent both the data check and an actual field survey. From those surveys, 30 properties were found to contain tailings.



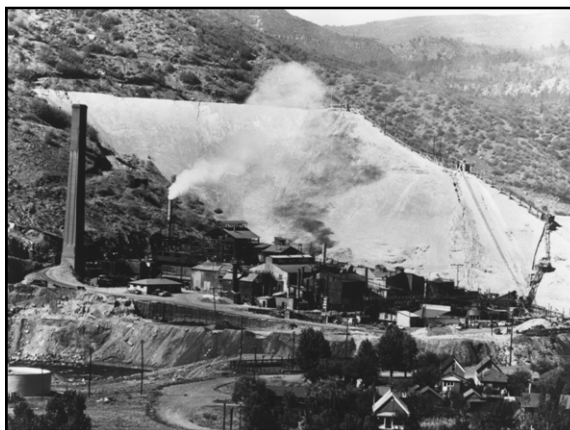
Groundwater/Millsite Issues

Under the post-Uranium Mill Tailings Remedial Action agreement, the department participates in the Groundwater Restoration Phase of the Uranium Mill Tailings Remedial Action Project. The U.S. Environmental Protection Agency (EPA) recognized the difficulty in restoring groundwater at the abandoned mill sites when it established the cleanup regulations for the UMTRA Title I program in 40 CFR 192. The EPA regulations state that if DOE determines that sole reliance on active remedial procedures is not appropriate and the groundwater can be more reasonably cleaned up through natural flushing, then the period for remedial procedures may be extended to a term not to exceed 100 years.

Recognizing the potential for large expenditures of State funds if active remediation techniques were employed at Colorado sites, the department concurred with DOE's determination that sole reliance on active remediation was not appropriate and that cleanup of the groundwater could be more reasonably accomplished through natural flushing. This determination was based on characterization studies at each site and detailed hydrogeologic groundwater models predicting the time required to meet standards through natural flushing. In all cases, compliance with groundwater concentration limits at Colorado sites was predicted to occur within the 100-year period allowed by the regulations. The department has concentrated efforts on ensuring that institutional controls with a high degree of permanence are in place and that alternate sources of drinking water are available for all properties affected or potentially affected by groundwater contamination from the mill sites.

For most of the sites, the groundwater modeling projects were conducted in the late 1990's so at least 10 years of monitoring data are now available for comparison to modeling predictions. As expected, the modeling is somewhat imprecise, because at most of the sites the degree of correlation between the actual concentrations and the model predictions is low. In most cases, natural flushing is not occurring at the rates predicted by the models. The department continues to work with DOE to determine if the models should be refined, if additional, more active strategies could be employed to enhance or increase natural flushing rates, or if more time is needed before new decisions are made. During fiscal year 2012-2013, the department reviewed documents submitted by DOE including annual Verification Monitoring Reports, groundwater monitoring plans/data, and revised Groundwater Compliance Action Plans. The department continues to work with DOE to refine the methods used to monitor the institutional controls that are in place to preclude exposure to contaminated groundwater.

Additional, more detailed information about the groundwater status for each mill site is available from the department on request.





Long-Term Stewardship

All surface site work was completed by the Uranium Mill Tailings Remedial Action Program and reviewed by the State in fiscal year 1999. The department continues to monitor the disposal sites through the Department of Energy (DOE) Long-Term Surveillance and Maintenance Program, which performs site inspections to determine whether the disposal cells are performing as designed. Problems, such as minor erosion, are repaired when necessary and otherwise are regularly monitored (e.g., small erosion gullies are measured and photographed each year to see if they are expanding). The department performs inspection oversight within its existing staffing authority, with federal dollars under the groundwater restoration phase cooperative agreement.

During fiscal year 2012-2013, the department participated in eleven inspections at UMTRA sites. Increasing uranium concentrations in a monitoring well at the Durango disposal site continues to draw the attention of the department. As a result, DOE increased the monitoring efforts and is evaluating several possible root causes for the increases. The department believes that a lined surface water retention basin located near the monitor well may have leaked in the past and contaminated seepage has now reached the monitor well. Liner repairs have been conducted and current monitoring information indicates that basin does not leak. The department will continue to monitor and evaluate this situation.

Land Annotation

The federal Uranium Mill Tailings Radiation Control Act requires that all properties included in the program have their property records annotated to indicate what cleanup happened on the property and when. However, this requirement only applies to properties cleaned up under the program. No annotation is required on properties that are known to have had tailings, but that were never included in the cleanup program due to the owner's refusal to participate. Colorado historically has opposed this annotation requirement because it applies only to

properties that participated in the program and unfairly stigmatizes the properties that did participate and now are considered to be clean. In deference to these concerns raised by Colorado, as well as other States, the DOE has delayed the rulemaking required by federal law to implement the annotation requirement and, to date, have not. However, without a (federal) statutory change, this issue will remain open. A more effective solution might be to pass legislation requiring a report for all building permits and/or real estate transactions in the affected areas.

Land Transfer/Mill Site Reuse

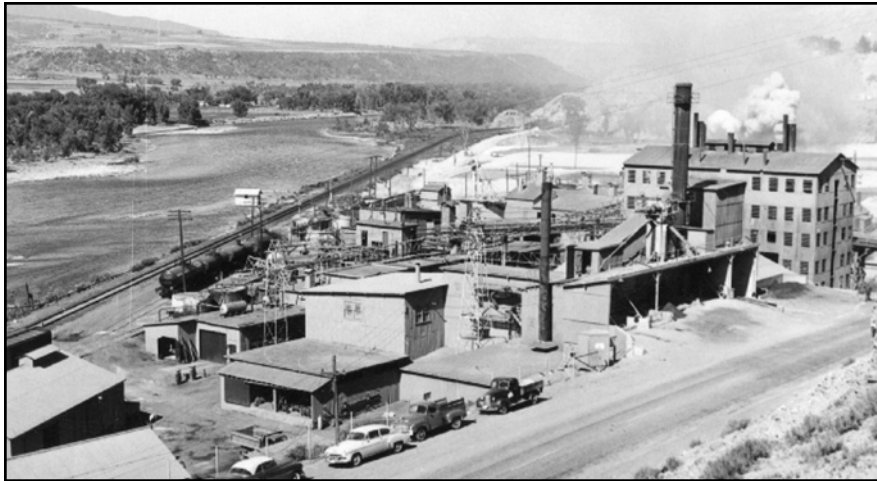
To preclude windfall profits to the mill site owners, the UMTRCA statute required the state to take title to the property. The statute then allows the state to keep the property, sell it (giving 90% of the revenue to DOE), or donate it to a local government for public use. The department has transferred all sites owned by the state to the relevant local governments. A list of Uranium Mill Tailings Remedial Action Sites and the current owners appear below.

The deeds for the mill sites that were transferred to local government ownership contain restrictions that govern how the site can be reused and provide for department and DOE approval for reuse plans. These restrictions were necessary because of remaining low-levels of contamination that are present on the site and because of the groundwater contamination. The deeds were also annotated to document any remaining contamination on the site. In addition, most

of the mill sites are covered by either Environmental Covenants or Notices of Environmental Use Restrictions. Because of these restrictions, the department and DOE must review and approve reuse plans for the mill sites. During fiscal year 2012-2013, the department worked with Gunnison County, the City of Grand Junction, the City of Durango and the City of Rifle on various different reuse plans for their sites.

The Slick Rock mill sites, which are privately owned, are the only remaining mill sites that do not currently have institutional controls in place. The department has been working with DOW Chemical (parent of Umetco Minerals) to execute environmental use restrictions on the Slick Rock Mill Sites. Also, the Town of Naturita expressed interest in obtaining that portion of the Naturita Mill Site that is privately owned. The department has no continuing involvement in this proposed property transfer, but will provide technical assistance to the parties at their request.

Site	Owner
Durango South Parcel	Animas-La Plata Water Conservation District
Durango North Parcel	City of Durango
Grand Junction	City of Grand Junction
Gunnison	Gunnison County
Maybell	U.S. Department of Energy
Naturita	Town of Naturita owns half; other half is privately owned
New Rifle	City of Rifle
Old Rifle	City of Rifle
Slick Rock (2)	Dow Chemical



Old Rifle Mill Site



Conclusion

This is the 15th annual Uranium Mill Tailings Management Report. Increasing numbers of requests for reports and surveys demonstrates the long-term need for assistance to local governments and private citizens regarding the safe handling of uranium mill tailings. More than three thousand people annually require information about the history of tailings contamination in communities affected by the Uranium Mill Tailings

Remedial Action Program. Many times each year, tailings are encountered that must be managed safely. Continued public awareness of the presence and safe handling of mill tailings is important, and the department should continue its public outreach efforts. The program continues to operate cost-effectively and within budget. This report further demonstrates all the involved parties have worked cooperatively to achieve program goals.

FISCAL YEAR 2015 BUDGET REQUEST

Budget Request

The following spreadsheet presents the budget request for State fiscal year 2015. This budget reflects an anticipated three percent increase in personal services and operating costs for 2015. There is no longer a requirement that the State match 10% of the federal grant.

The program completed the digitizing of approximately 70,000 microfilm records and is continuing to index them into corresponding electronic files. New property reports that are produced are being digitized and a database has been created to track these files and integrate them with the newly digitized microfilm files. The old paper records have been scanned and have been added to the database created in 2011.

Currently, staff works on these tasks as daily workloads permit. Using existing budget and staff, it is estimated to take several years to complete the indexing of all the files in an electronic database. Therefore, in order to be responsive to public inquiries and be more efficient, the department is in the process of hiring temporary staff to help with this extensive and comprehensive indexing project. The position will be created to work on this project only and the department will terminate the position when the task is complete.



STATE OF COLORADO UMTRA BUDGET (JULY 2014 - JUNE 2015)

Table 1
State of Colorado UMTRA FY14 Budget
July 2014 - June 2015

a. Personnel	Title	Task	Salary*	POST-UMTRA (7X4)		Groundwater (RJ4)		TOTAL
				FTE	Cost	FTE	Cost	
	Program Manager	Policy	\$ 141,613	0.03	\$ 4,248	0.00	\$ -	\$ 4,248
	Professional Engineer	Technical review	\$ 133,540	0.00	\$ -	0.20	\$ 26,708	\$ 26,708
	Env. Protection Spec.	Technical review	\$ 103,030	0.90	\$ 92,727	0.10	\$ 10,303	\$ 103,030
	Env. Protection Spec.	Technical review	\$ 102,452	0.06	\$ 6,147	0.00	\$ -	\$ 6,147
	Program Assistant I	Staff support	\$ 70,806	0.93	\$ 65,850	0.07	\$ 4,956	\$ 70,806
	Admin Asst	Indexing	\$ 36,764	0.67	\$ 24,509			
	Administration	Retirement payouts			\$ -			\$ -
		Admin Line (Approp 277)		2.59	\$ 193,482	0.37	\$ 41,967	\$ 210,940
		POTS						\$ -
				2.59	\$ 193,482	0.37	\$ 41,967	\$ 210,940
b. Travel					\$ 2,750		\$ 2,000	\$ 4,750
c. Operating		Supplies			\$ 5,200		\$ 1,298	\$ 6,498
		Vehicle Lease & Mileage			\$ 3,200		\$ 1,082	\$ 4,282
	Contractual	Legal Services			\$ 386		\$ 5,360	\$ 5,746
	Other	Training			\$ 500		\$ 649	\$ 1,149
		Medical Monitoring			\$ 500		\$ 420	\$ 920
		Records storage			\$ 5,000			\$ 5,000
		OIT (estimated at 2.5% of all PS)			\$ 4,837		\$ 1,469	\$ 6,306
		Total Direct Charges			\$ 215,855		\$ 54,245	\$ 245,590
INDIRECT								
		Federal On-site @: 22.10%					\$ 6,665	\$ 6,665
		Federal Off-site @: 16.40%					\$ 2,503	\$ 2,503
		Federal Flow-thru @: 1.20%					\$ 64	\$ 64
		State Cash Onsite @: 22.90%			\$ 6,012		\$ -	\$ 6,012
		State Cash Offsite @: 17.60%			\$ 28,991		\$ -	\$ 28,991
		State Cash Flow-thru @: 1.30%			\$ 5		\$ -	\$ 5
		Division Indirect @: 20.00%			\$ 43,094		\$ 9,777	
		Planned Indirect			\$ 78,102		\$ 19,008	\$ 44,240
		Total Cost			\$ 293,957		\$ 73,253	\$ 289,830
					\$ 293,957		\$ 73,253	
		Total State Share			\$ 293,957		\$ -	\$ 293,957
		Total Federal Share			\$ -		\$ 73,253	\$ 73,253

* Salaries include base salary plus benefits.