

Fiscal impact reports (FIRs) are prepared by the Legislative Finance Committee (LFC) for standing finance committees of the NM Legislature. The LFC does not assume responsibility for the accuracy of these reports if they are used for other purposes.

Current FIRs (in HTML & Adobe PDF formats) are available on the NM Legislative Website (legis.state.nm.us). Adobe PDF versions include all attachments, whereas HTML versions may not. Previously issued FIRs and attachments may be obtained from the LFC in Suite 101 of the State Capitol Building North.

FISCAL IMPACT REPORT

ORIGINAL DATE 1-30-09

SPONSOR Lovejoy LAST UPDATED _____ HB _____

SHORT TITLE Inventory Abandoned Uranium Sites SB 224

ANALYST Woods

APPROPRIATION (dollars in thousands)

Appropriation		Recurring or Non-Rec	Fund Affected
FY09	FY10		
	\$300.0	Non-Recurring	General

(Parenthesis () Indicate Expenditure Decreases)

Relates to HB84, SB223, HJM6

SOURCES OF INFORMATION

LFC Files

Responses Received From

Energy, Minerals, and Natural Resources Department (EMNRD)

New Mexico Environment Department (NMED)

Department of Health (DOH)

SUMMARY

Synopsis of Bill

Senate Bill 224 seeks to appropriate \$300,000 from the General Fund to the Energy, Minerals and Natural Resources Department in FY10 and FY11 to (1) complete an inventory of abandoned uranium mining sites in New Mexico, (2) characterize the extent of existing contamination at those sites, and (3) estimate the cost of cleaning up contamination at those sites. Any unexpended or unencumbered balance remaining at the end of FY11 shall revert to the General Fund.

FISCAL IMPLICATIONS

It is noted that, according to the December 2008 revenue estimate, FY10 recurring revenue will only support a base expenditure level that is \$293 million, or 2.6 percent, less than the FY09 appropriation. All appropriations outside of the general appropriation act will be viewed in this declining revenue context.

SIGNIFICANT ISSUES

As background, the Department of Health (DOH) advises that uranium mining operations were prevalent in New Mexico. Beginning in the 1950s and 1960s and continuing through the 1990s, a number of private companies began extensive exploration, mining, and milling of the uranium deposits in New Mexico. These activities took place on private, state, federal, and tribal lands. More than 1,200 abandoned uranium mines have so far been documented on the Navajo Nation (Grey RM, Tsingine R., and Yazzie MH: *Navajo AML Reclamation Program. Presentation to Navajo Abandoned Uranium Mines Collaboration Annual Meeting*, May 1, 2003). About half of those sites may require environmental restoration. In addition, the New Mexico Bureau of Geology documented 123 abandoned uranium mines in Cibola County, 358 in McKinley County, and 109 in Sandoval County (McLemore, et al., *New Mexico Bureau of Geology and Mineral Resources, Open-file Report 461*, 2002). About half of those mines were developed and operated in the Grants Mineral Belt between 1950 and the early-1990s, generating 38 million tons of ore by 1970 (McLemore and Chenoweth, *New Mexico Bureau of Geology and Mineral Resources, Open-file Report 353*, Revised December 1991). DOH further indicates that, as a result of these uranium mining activities, hundreds of abandoned, un-remediated uranium mines exist in New Mexico communities, including a large number in Native American communities. State and federal studies have shown that surface water, groundwater, soils, and biota remain substantially contaminated by past uranium mining and milling activities. The radioactive and hazardous waste piles generated by the mining operations may affect the health of residents when drinking contaminated water, breathing contaminated air, or eating contaminated agricultural crops, produce, and livestock (Brugge and Goble, *American Journal of Public Health*, 2002; Lapham, Millard, and Samet, *Health Physics*, 1989).

The Energy, Minerals and Natural Resources Department (EMNRD) indicates that there is a need to fund the inventory and cleanup of abandoned uranium mine sites in New Mexico. During the uranium “boom” from the 1950s to the early 1980s, New Mexico was the largest producer of uranium in the world. However, at the time, there were few, if any, regulatory controls that required uranium mines and mills to be reclaimed. EMNRD (the Mining and Minerals Division) has begun to inventory and assess abandoned uranium mines and the extent of potential hazards to the public. Thus far, EMNRD has identified 259 mines where uranium production occurred. Of these mines, more than half (137) have no records of any reclamation having been conducted. In addition, EMNRD estimates another 400 to 500 sites with uranium mining activity where there is no record of production. Most of the mines are in the area of the “Grants uranium belt” north of Interstate 40, between Gallup and Grants. Further, that EMNRD has just begun to conduct fieldwork to assess the amount of work necessary to reclaim these sites. Assessments have been completed at 21 mines and several more are ongoing. These assessments have been funded with small amounts of non-recurring private and federal funds. These assessments measure the scale of the disturbance at the mine sites and allow the planning of cleanup alternatives. Additional funding is needed to complete the assessments.

The Environment Department (NMED) advises that current state water quality regulations are designed to prevent future pollution at new uranium mining facilities. Since 1978, pursuant to the Water Quality Act, operators have been required to obtain groundwater discharge permits under New Mexico Water Quality Control Commission (WQCC) Regulations to prevent groundwater contamination. Requirements are also in place for abating soil, groundwater, or surface water contamination that may occur, and for financial assurance to be placed on new

mines to ensure that the mine sites are adequately closed following the cessation of operations, and requirements. In addition, NMED recently evaluated the adequacy of the uranium standard for groundwater to protect public health. NMED hired a toxicologist in 1999 to study the effects of uranium in groundwater on public health. As a result of that assessment, the standard for uranium changed from 5.0 mg/l to 0.03 mg/l and the state now has a much higher level of protection for groundwater and public health from uranium mining and processing. Since the late 1970s, certain uranium mining sites with water pollution and human health impacts have been cleaned up or are currently being remediated under WQCC regulations or federal regulations such as the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). However, these cleanups have only taken place at sites with current viable companies that are responsible for the contamination. Characterizations of the potential impacts related to abandoned uranium mining sites have been limited. Characterizing contamination at these abandoned mines would be useful and beneficial for the protection of public health.

NMED concludes by noting that the legislation will allow EMNRD to inventory and characterize surfacel contamination at abandoned uranium mine sites so that initial estimates of cleanup costs for surface exposure to these wastes may be addressed. However, the level of funding provided will not be sufficient to address characterization of potential threats to ground waters and surface waters from leaching of water pollutants found in uranium mining wastes. Under the Water Quality Act and WQCC regulations, NMED is the regulatory agencies responsible for assessing and overseeing ground water and surface water cleanup of all sites in New Mexico potentially contaminated by uranium mining. Characterization of subsurface leaching of water pollutants found in uranium mining wastes will need to be conducted prior to being able to fully estimate the costs of cleaning up these sites.

PERFORMANCE IMPLICATIONS

EMNRD has begun developing a database of closed uranium mines using prior work by New Mexico Tech and other agency information. EMNRD is using existing resources to work on this database, which hampers completion of this project. The funding provided through SB224 would greatly enhance the completion of this project.

ADMINISTRATIVE IMPLICATIONS

EMNRD states, “SB224 provides one-time, non-recurring funding for the proposed tasks that expires in two years. Completion of the proposed tasks would need to be structured to minimize the impact on existing full time equivalent resources and the completion of other statutorily administratively mandated duties.”

RELATIONSHIP

DOH notes related legislation:

- HB84 Uranium Legacy Cleanup Act, which proposes to enact the Uranium Legacy Cleanup Act to be administered by the Department of Energy, Minerals and Natural Resources that would administer the act including oversight of cleanup actions and create revenue to fund cleanup activities.

- SB223, which proposes to appropriate \$200,000 from the General Fund to DOH in FY10 and FY11 to conduct a comprehensive study of the adverse effects on human health resulting from contamination from past uranium mining and milling activities in New Mexico.
- HJM6, which proposes to appoint a Uranium Mining Task Force to continue a study of statutory and regulatory changes necessary to protect New Mexico's natural resources from adverse environmental impacts that could result from the implementation of new uranium mining techniques.

TECHNICAL ISSUES

NMED indicates that a number of the abandoned uranium sites are on Indian lands in the checkerboard area in McKinley and Cibola Counties, and that “SB 224 is not clear whether the funds can be used for projects on Indian lands that are not subject to state regulatory authority for approval of cleanup actions.”

OTHER SUBSTANTIVE ISSUES

NMED notes that threats to public health from past uranium mining, and the need to protect public health through the abatement of existing sources of soil and water pollution is a significant issue facing New Mexico. This is becoming an increasingly significant concern as the price of uranium has greatly increased in recent years and mining companies are interested in starting new uranium mining operations that have the potential for future public health impacts. Past environmental impacts and threats to public health and water quality from uranium mining, especially from abandoned sites, needs to be determined in order to ensure that those areas are viable for future use for all New Mexicans.

WHAT WILL BE THE CONSEQUENCES OF NOT ENACTING THIS BILL

EMNRD concludes that, “State agencies will continue to seek funding and resources to address abandoned uranium mines that pose a hazard to the public.”

AMENDMENTS

None suggested by respondents.

BW/mt