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FISCAL IMPACT REPORT

ORIGINAL DATE 1/16/08

SPONSOR Pena LAST UPDATED _____ HJM 2

SHORT TITLE Superfund for Uranium-Contaminated Sites SB _____

ANALYST Wilson

APPROPRIATION (dollars in thousands)

Appropriation		Recurring or Non-Rec	Fund Affected
FY08	FY09		
	\$0.1	Recurring	General Fund

(Parenthesis () Indicate Expenditure Decreases)

ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT (dollars in thousands)

	FY08	FY09	FY10	3 Year Total Cost	Recurring or Non-Rec	Fund Affected
Total			\$0.1	\$0.1	Recurring	General Fund

(Parenthesis () Indicate Expenditure Decreases)

Relates to HB22

SOURCES OF INFORMATION

LFC Files

Responses Received From

Department of Health (DOH)

Energy, Minerals & Natural Resources Department (EMNRD)

Environment Department (ED)

SUMMARY

Synopsis of Bill

House Joint Memorial 2 proposes that the Energy, Mineral and Natural Resources Department (EMNRD), ED, and DOH be requested to undertake jointly an inventory of the location of sites in New Mexico that have been contaminated by uranium exploration, mining, and milling activities and the extent of contamination at each of those sites, including an assessment of potential short-term and long-term harm to humans, and making recommendations regarding the

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feasibility of establishing a state “superfund” program to undertake or accelerate the cleanup of sites posing threats to human health.

The memorial resolves that by September 1, 2008 the EMNRD, ED and DOH jointly present their findings and recommendations to the appropriate interim legislative committees and that copies of this memorial be transmitted to the Governor, the Secretary of Energy, Minerals and Natural Resources, the Secretary of Environment, the Secretary of Health, the President of the Navajo Nation, the Speaker of the Navajo Nation Council, the Governor of the Pueblo of Acoma, and the Governor of the Pueblo of Laguna.

FISCAL IMPLICATIONS

ED and EMNRD state the task of assessing all sites in New Mexico potentially contaminated by uranium mining will require significant funding and staff resources that the two agencies do not have to accomplish the tasks in HJM2.

DOH states that the tasks required in this memorial will not likely require additional resources for DOH because the resources needed to undertake the study required in this memorial will be provided in HB 22, if it passes.

SIGNIFICANT ISSUES

Beginning in the 1950s and 1960’s, a number of private companies began extensive exploration, mining, and milling of the uranium deposits in the Grants Mineral Belt in northwestern New Mexico. These activities took place on private, state, federal, and tribal lands. State and federal studies have shown that surface water, groundwater, soils, and biota remain substantially contaminated by past uranium mining and milling activities.

The uranium exploration, mining, and milling activities continued through the 1990s; over one hundred seventy-five thousand tons of uranium ore were mined and milled from the uranium deposits located on New Mexico lands. As a result of these uranium mining and milling activities, hundreds of abandoned, un-remediated uranium mines exist in northwestern New Mexico communities. A large number of Native American and non-Native American families continue to live in close proximity to those abandoned, un-remediated mine sites.

Mining and milling processes remove uranium and other constituents in the ore from their relatively safe natural deposits and convert them to a fine sand, then sludge, whereby the potentially hazardous materials become more susceptible to erosion and dispersion into the environment. Additionally, various acid-leaching processes caused a continuous leaching of substances and their increased migration into the environment; including groundwater, surface water, soil and biological organisms.

As a result, uranium mining and milling processes produced a substantial quantity of radioactive waste that can create exposure pathways to the natural environment potentially threatening the health of nearby residents. These radioactive materials, including uranium, radon gas, radium, and thorium present a long-term radioactive hazards once released into the environment.

DOH believes the un-remediated radioactive and hazardous waste piles from past uranium exploration, mining, and milling activities continue to present a threat to the health and well-

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being of residents of northwestern New Mexico through multiple exposure sources and pathways, including drinking contaminated water, breathing contaminated air, and eating contaminated agricultural crops, produce and livestock. Livestock are particularly vulnerable due to the amount of soil they ingest while grazing, in addition to ingestion of contaminated stock pond water and pasture grasses. Livestock that grazed in the mining areas were found to have hazardous levels of radioactive and other contaminants in their edible organs and muscle tissue. These exposures can also be increased among the native people due to their cultural uses of natural resources.

ED states that the extensive uranium mining and processing in New Mexico from the 1950s to the 1970s were mainly conducted prior to the enactment of state and federal regulations that protect human health and the environment. Therefore, many of those operations resulted in significant environmental impacts, including water pollution.

Current state water quality regulations are designed to prevent future water pollution at any new uranium mining and processing facilities that fall under the state's jurisdiction. 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 ground water contamination. Requirements for financial assurance to ensure mine sites are adequately closed following cessation of operations, and requirements to abate any soil, groundwater, or surface water contamination that may occur are also in place. ED recently evaluated the adequacy of the uranium standard for groundwater to protect public health. ED 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 was changed from 5.0 mg/l to 0.03 mg/l and the state now has a much higher level of groundwater protection for uranium sites.

Since the late 1970s, a number of large sites with water pollution and human health impacts have been cleaned up or are currently being reclaimed under WQCC regulations or federal regulations such as the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). However, smaller abandoned sites that have potential human health and environmental impacts related to uranium mining have not been studied, and there may be no viable responsible party left to be required to conduct such studies. Assessing the extent of contamination and risks to public health from these sites would be useful and beneficial for the protection of fresh waters, public health and the environment. Such work would require extensive research, field work and costly laboratory analysis for soil and water sampling and radiological surveys, as well as toxicological risk assessments. It would be hard to quantify the costs associated with that assessment since the extent of contamination is unknown and the tasks could not be completed without necessary funding.

EMNRD estimates there are a large number of abandoned uranium mines through out the state, mostly in the area of the "Grants uranium belt" north of I-40, between Gallup and Grants and that there are approximately 400 abandoned uranium mines that may have varying degrees of contamination. Of those 400 sites, approximately 250 were developed to the point of producing uranium. The larger uranium mines have come under the jurisdiction of one or more agencies and have either been completely reclaimed or are being actively reclaimed at this time. The majority of the remaining sites are most likely small underground mines that were left unreclaimed when the price of uranium fell significantly.

DOH states that evaluating the feasibility of establishing a state "superfund" program for the

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cleanup of these uranium-contaminated sites in New Mexico is needed to determine if there is a need and mechanism for cleaning up these sites. The proposed joint collaboration between the three departments will create this opportunity.

ADMINISTRATIVE IMPLICATIONS

ED claims that they will require additional staff to manage the requirements included in this memorial.

EMNRD 's Mining and Minerals Division is in the process of attempting to inventory and make general assessments of the extent of the abandoned mines and the extent of potential hazards to the public on state and federal lands. However, due to lack of sufficient resources to devote to the project, it is being accomplished as time and resources allow. HJM 2 the three agencies to conduct this inventory, including contamination assessments in a matter of months, but does not appropriate any funds to accomplish the work. EMNRD states that even if there were funds appropriated, it would be difficult to accomplish the tasks requested within the nine month time frame given in HJM 2.

DOH will use the resources provided in HB 22 to perform the DOH part of the study.

RELATIONSHIP

HJM relates to HB 22 which appropriates \$200,000 from the general fund to DOH in FY09 and FY10 to undertake a comprehensive health study of the effects of past uranium mining and milling practices on the health of residents of McKinley and Cibola counties, including members of the Navajo Nation.

The results of this “superfund” feasibility study could provide a mechanism for evaluation and cleanup if areas are identified as having uranium-related health effects in HB 22 studies.

OTHER SUBSTANTIVE ISSUES

EMNRD has been working closely with the Navajo Abandoned Mine Land Program and Navajo Environmental Protection Agency to determine ways to address abandoned mines in the vicinity of Indian Lands. These entities recognize the need for significant funding in order to conduct environmental assessments and address abandoned uranium mines.

DOH notes that communities with the greatest number of uranium mining and milling operations have more Hispanic, Native American, and low income residents. They often do not have resources - legal, financial, or social – to protect themselves. Thus, communities that are affected significantly by negative effects of uranium mining and milling practices do not have a means to prevent the disparate and potentially negative public health, environmental, and cultural impacts.

DW/bb