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F I S C A L I M P A C T R E P O R T

SPONSOR Wirth **ORIGINAL DATE** 2-2-07 **LAST UPDATED** 2-24-07 **HB** 318/aHENRC/aHBIC

SHORT TITLE Power Plant Mercury Emission Controls **SB**

ANALYST Aubel

ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT (dollars in thousands)

	FY07	FY08	FY09	3 Year Total Cost	Recurring or Non-Rec	Fund Affected
Total		(.01) See Fiscal Impact			Recurring	General Fund

(Parenthesis ( ) Indicate Expenditure Decreases)

Relates to HB 16 and HB 481

SOURCES OF INFORMATION
LFC Files

Responses Received From
Department of Health (DOH)
New Mexico Environment Department (NMED)
Energy, Minerals, Natural Resources Department (EMNRD)

SUMMARY

Synopsis of HBIC Amendment

The House Business and Industry Committee Amendment strikes the HENRC Amendment, which established an effective date for the new rules affecting coal burning power plants constructed after July 1, 2007. The HBIC Amendment then reinstates this effective date under an expanded concept of what would be required under the regulations regarding control technology for mercury emissions, as follows:

"the greater of what is achievable with the best available control technology or ninety percent of the mercury from input fuel for all coal-fired power plants."

New coal processing techniques, such as Inte-grated Gasification Combined Cycle technology, which converts coal to gas that is burned in a turbine to produce electricity, are considered progress in "clean-coal plants." In a conventional power plant, coal is pulverized and burned in a boiler to produce electricity. Emissions are caught and filtered at the back-end of the process. Thus, this amendment appears to address mercury reduction related to coal-burning power plants from the input side, versus simply from the emissions side.

Synopsis of HENRC Amendment

The House Energy and Natural Resources Committee amendment to House Bill 318 would impose "Best Available Control Technology" requirements for construction of new coal-fired power plants that may be more stringent than federal standards, but would exempt the two existing coal-fired plants in New Mexico that the state has jurisdiction over: San Juan Generating Station, operated by the Public Service Company of New Mexico (PNM,) and the Escalante Generating System. According to NMED, PNM is currently installing controls for mercury on the San Juan Generating Plant that should result in reduced mercury emissions and the Escalante Generating does not emit as much mercury.

Synopsis of Original Bill

House Bill 318 amends the Air Quality Control Act to allow the Environmental Improvement Board (EIB) and local boards to adopt rules to require "best available control technology" for mercury emissions from power plants that may be more stringent than federal requirements.

FISCAL IMPLICATIONS

There are no direct fiscal impacts for state government. However, indirect cost savings may accrue. NMED reports that an estimated 4.0 thousand newborns in New Mexico are affected by mercury each year and suggests that reductions in mercury exposure will reduce state health care costs related to mercury-related health problems. Substantiation for this claim is found in a study peer-reviewed study by the Mt. Sinai School of Medicine's Center for Children's Health and the Environment, which calculated that the United States loses $8.7 billion annually due to the impact of mercury on children's brain development.

SIGNIFICANT ISSUES

Mercury is a persistent, bio-accumulative (which means it undergoes chemical magnification up the food chain) neurotoxin. DOH notes that mercury exposure is a potential health issue for New Mexicans and that even very low levels can pose a concern, particularly for pregnant women, infants, and children. The toxicity manifests in a variety of conditions including learning disabilities, tremors, muscle in-coordination, loss of memory, personality changes, deafness, and loss of vision and is also toxic to the kidneys. Many of the adverse effects of mercury are reversible, therefore minimizing or eliminating certain exposures can have a beneficial effect on the exposed individual.

According to the findings of the Mercury Exposure Reduction Task Force, which was established by the 2006 Legislature through House Memorial 5, coal-fired power plants are a large generator of mercury releases. The task force report, *New Mexico Mercury Reduction Action Plan*, includes an Executive Summary and recommendations, which are included as Attachment 1.

According to NMED, by requiring "best available control technology" (BACT) for mercury emissions from power plants, HB 318 strives to ensure that the mercury emissions from power plants within New Mexico are the lowest possible to minimize the adverse health effects on its citizens.

NMED defines BACT as follows:

> *Best Available Control Technology is a term used in federal regulations that defines a site-specific process for determining the maximum degree of control technology that can be installed at a facility to reduce air pollution while taking into consideration impacts to energy, the environment and the economy. The process is case-by-case and begins with the most effective control technology, allowing for elimination of technologies based on prohibitive costs or inefficiency.*

Such technology may be more stringent than required under federal standards. NMED states that current statute limits the state to require more stringent standards than federal standards, except for regulations pertaining to solid waste incinerators.

This limited state authority was identified as one of the five most important issues for NMED in the Transition Task Force report of December 9, 2002.

PERFORMANCE IMPLICATIONS

EMNRD states HB 318 will most likely result in less mercury emissions since the bill would allow for regulations to require more efficient air pollution control technology for mercury emissions from power plants.

ADMINISTRATIVE IMPLICATIONS

HB 318 will likely have some administrative impact on NMED during the drafting of rules for mercury emissions controls to propose to the EIB and local boards, although NMED states that current resources are adequate to develop and propose such regulations.

CONFLICT, DUPLICATION, COMPANIONSHIP, RELATIONSHIP

HB 318 related to House Bill 16, which proposes to establish a multi-organizational effort to implement the findings of the Mercury Exposure Reduction Task Force.

HB 318 relates to House Bill 481, which proposes to reduce mercury releases into the environment through limiting dental amalgam disposal into wastewater.

TECHNICAL ISSUES

HB 318 would amend Section 74-2-5 NMSA 1978.

OTHER SUBSTANTIVE ISSUES

NMED states that the United States Environmental Protection Agency (EPA) federal regulation for power plants puts in place a cap-and-trade program to control mercury emissions instead of a performance standard, which allows mercury emission "credits" be bought and sold by power plants. According to NMED, in practice this means that power plants can emit any amount of mercury as long as they purchased sufficient emission “credits.”

NMED states that EPA’s cap-and-trade program has been heavily criticized as based on

manipulated scientific and economic analysis. On February 3, 2005, the EPA Inspector General reported that the EPA intentionally biased its scientific analysis to make the cap-and-trade program look more effective than control technology. On March 7, 2005, the Government Accounting Office reported that EPA manipulated the data to make the cap-and-trade program appear to be more economical than installation of control technology.

NMED concludes that if facilities in New Mexico take this approach, mercury emissions in New Mexico - which NMED claims are already among the highest in the western United States - could increase. NMED reports that the state has joined a multi-state legal proceeding to oppose the federal mercury program.

Twenty-four states in the nation are not precluded from adopting rules more stringent than EPA, and several states have already adopted or are in the process of developing their own rules for mercury emissions from power plants because the federal program does not go far enough in requiring air pollution control technology for mercury.

Federal regulations require that BACT be implemented for new facilities with large emissions of air pollution and existing facilities with large emissions of air pollution that modify their facility. Thus, NMED states that the EPA maintains a national "clearinghouse" of BACT and other control technology parameters that can serve as a support source for defining the BACT at a facility.

WHAT WILL BE THE CONSEQUENCES OF NOT ENACTING THIS BILL

Without the original HB 318, New Mexico will not have authority to adopt mercury-emission regulations that require installing any technology that is more stringent than federal regulations. The federal requirements that allow power plants to purchase mercury credits in lieu of installing more advanced mercury-pollution-control technology would continue. All three responding agencies cautioned that mercury pollution would probably increase, affecting public health.

Without the amended HB 318, to the extent that new coal-fired power plants are constructed in New Mexico, the more stringent "Best Available Technology" could not be applied.

POSSIBLE QUESTIONS

1. Would current power plants be required to re-permit under these new rules, or would they be "grandfathered"?

2. What BACT technologies what be economically viable for New Mexico that are not in current use?

3. Would these regulations apply to power plants on tribal lands?

MA/mt

Attachment 1
Executive Summary: New Mexico Mercury Reduction Action Plan

Executive Summary

During the 2006 legislative session, Representative Peter Wirth introduced memorials asking the New Mexico Environment Department and the Department of Health to look at mercury issues facing the state. House Memorial 5 required the departments to develop a Mercury Reduction Plan for New Mexico. A Mercury Reduction Plan Task Force worked in collaboration with the Dental Mercury Workgroup, convened pursuant to House Memorial 13, to develop a state Mercury Reduction Action Plan. The two working groups[1] have completed a Mercury Reduction Action Plan that includes this executive summary, the recommendations, and the supporting report.

The Task Force proposes the following state policy regarding mercury and asks that this policy be adopted by the State of New Mexico:

> *It is the policy of the State to minimize harm from exposure to mercury in New Mexico by reducing or eliminating emissions, discharges, and use of mercury and/or mercury-containing products to the greatest extent possible, when such measures are technically and economically feasible, taking into account the health and environmental costs of exposure to mercury.*

This report and its recommendations provide mechanisms for implementing this policy.

Legislative Recommendations for Mercury Reduction
The Task Force recommends that the State of New Mexico:

a. Adopt the mercury policy recommended above:
   "It is the policy of the State to minimize harm from exposure to mercury in New Mexico by reducing or eliminating emissions, discharges, and use of mercury and/or mercury-containing products to the greatest extent possible, when such measures are technically and economically feasible, taking into account the health and environmental costs of exposure to mercury."
b. Allocate $200,000 to NMED and DOH (through an appropriation to NMED) to fund:
   i. staffing and resources to implement the reduction strategies that can be done immediately;
   ii. a mercury study including
      1. a comprehensive and quantitative inventory of mercury sources, waste and emissions;
      2. a comprehensive mercury exposure study on pathways for mercury exposure; and
      3. a monitoring program to assess air, water, soil and biota for mercury contamination.
   iii. to educate the public on the hazards of mercury exposure; and

[1] A list of the members of the Mercury Reduction Plan Task Force and Dental Mercury Workgroup is attached as Attachment 1. In addition, the two memorials, House Memorial 5 and 13, which convened the two working groups are attached as Attachment 2. Please note that there is a separate report for House Memorial 13.

iv. to develop a state fish consumption advisory program, including both commercial and locally caught fish advisories, which will provide public information and outreach.

c. Make a statutory change to require that all dental facilities in New Mexico be equipped with amalgam separators to assure that little or no solid mercury drains into municipal wastewater or septic systems and that the separators be properly maintained by the dental facilities.
d. Fully support the Solid Waste Bureau legislative request to refund the grant and loan fund to safely remove and recycle mercury from the waste stream, where possible; to educate the public on mercury removal from the waste stream; and to assist local governments in conducting household hazardous waste collection programs.
e. Give preference to power generating plants that use renewable sources of energy, and evaluate economic incentives to promote sources of energy that emit minimal or no mercury emissions, such as renewable energy sources and advanced coal emission reduction technologies.

Recommendations to NMED
The Task Force recommends that the New Mexico Environment Department:

a. Conduct a comprehensive and quantitative inventory of mercury sources, waste and emissions, initiate action steps identified and report back to the Legislature with recommendations, if necessary, regarding statutory changes suggested by NMED.
b. Create initiatives to recover and recycle mercury-containing equipment and products, including but not limited to, automotive switches, fluorescent lights, relay switches and measuring devices. These initiatives should include increasing public awareness of the hazards of mercury, encouraging the public to buy non-mercury-containing products, and informing the public of the proper disposal of mercury-containing products.
c. Increase business and governmental awareness regarding the hazards of mercury, mercury-containing equipment, alternatives to this equipment and proper disposal of mercury-containing materials.
d. Work with states, tribes and at a national and international level to reduce airborne mercury emissions.
e. Provide adequate staffing and resources for enforcement of mercury-related regulations, including NM wildlife habitat standards, and promotion of storm-water best management practices.
f. Consider crematoria initiatives, including adoption or adaptation of the best management practices being developed by Colorado for crematoria.

Recommendations to DOH
The Task Force recommends that the New Mexico Department of Health:

a. Conduct a comprehensive mercury exposure study on pathways for mercury exposure and report back to the legislature with recommendations, if necessary, regarding statutory changes suggested by DOH after input from stakeholders;
b. Identify and publish a list of all products containing mercury that are ingested or applied to the body, provide education to the public and medical community, and consider a ban on mercury-containing products, where appropriate. The list shall include:
    - Dietary supplements, herbs, homeopathic and Ayurvedic medications that contain mercury
    - Medications marketed in New Mexico that contain mercury

- Any cosmetics sold in New Mexico that contains mercury

c. Avoid use of dental mercury amalgam in vulnerable patients in the following ways:
    1. Avoid placing, removing or polishing amalgam in the teeth of pregnant women, or women who may become pregnant, as the developing brain of the fetus is the most sensitive receptor to mercury toxicity;
    2. Avoid using mercury to restore children's teeth as their developing central nervous systems are particularly susceptible to mercury impairment;
    3. Avoid using mercury in other vulnerable patients including those with kidney disease, central nervous system disorders, autoimmune disorders, and allergic/chemical hypersensitivity, and breastfeeding women; and
    4. Avoid placing amalgam in patients with other kinds of metal surfaces in their mouths.
d. Minimize exposures to airborne mercury in dental offices.
    1. Promote the use of methods and equipment to reduce the exposure to mercury vapor in dental patients and staff; and
    2. Inform dental practitioners of the health and environmental risks of mercury exposures.
e. Reduce exposures to mercury from vaccines containing mercury preservative by:
    1. Implementing a plan to make influenza vaccine that contains no mercury preservative available for pregnant women, with support from health care providers;
    2. Educating providers who care for pregnant women on the availability and benefits to their patients of influenza vaccine that contains no mercury preservative;
    3. Continuing to promote the production and use of vaccines that contain no mercury preservative; and
    4. Introducing a resolution at the Association of State and Territorial Health Officers meeting calling on vaccine manufacturers to move toward all vaccines that contain no mercury preservative.
f. Educate the public on the risks and benefits of dental mercury amalgam and vaccine containing mercury preservatives.

Recommendations to NMED and DOH

The Task Force recommends that the both departments:

a. Reduce exposures from food containing mercury, including fish, by developing a state fish consumption advisory program for both commercial and locally caught fish, providing public information and outreach, and studying the feasibility of requiring mercury labeling of food products and posting warnings at all commercial establishments and restaurants that sell fresh, frozen, packaged or cooked fish.
b. Create an ongoing Mercury Reduction Advisory Committee that is similar in structure and function to the Task Force established by House Memorial 5.
c. Create a comprehensive fact sheet on mercury that includes exposures from fish, dental amalgam, vaccines, and other common sources.