Survey Results of Environmental Representatives of all New Mexico Native American Pueblos and Reservations on the Risks Associated with the Waste Isolation Pilot Plant (WIPP) and its Transuranic Nuclear Waste Transportation Routes

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Introduction

Since March 26, 1999, the Waste Isolation Pilot Plant (WIPP) has functioned as a defense-related transuranic waste disposal facility in the United States. It exists in salt deposits 655 m below southeastern New Mexico. TRU wastes have half-life greater than twenty years and activity greater than 100 nanocuries per gram of waste. These wastes are contaminated with plutonium and other elements with atomic numbers greater than uranium. Our exploratory survey has been developed to independently assess the views and perception of risks associated with WIPP transuranic nuclear waste transportation and storage. We have interviewed environmental representatives of all twenty-three pueblos and reservations in New Mexico, including Pueblo of Acoma, Pueblo of Cochiti, Pueblo of Isleta, Pueblo of Jemez, Pueblo of Laguna, Pueblo of Nambe, Pueblo of Picuris, Pueblo of Pojoaque, Pueblo of Sandia, Pueblo of San Felipe, Pueblo of San Ildefonso, Pueblo of San Juan, Pueblo of Santa Ana, Pueblo of Santa Clara, Pueblo of Santo Domingo, Pueblo of Taos, Pueblo of Tesuque, Pueblo of Zia, Pueblo of Zuni, Jicarilla Apache Tribe, Mescalero Apache Tribe, The Navajo Nation, and Ute Mountain Ute Tribe.

All twenty-three surveys were completed by telephone or e-mail between March and September 2002. Some multiple responses and discussions, per respondent, occurred. Questions, as addressed below, ranged from nuclear waste siting, general perception of the implementation of the WIPP on the New Mexico American Indian communities, to future concerns including waste transportation and high-level waste.
Summary of Key Findings

Our results are consistent with findings from past studies and surveys. In February 1994, the United States Department of Energy (DOE) published *Comparative Study of Waste Isolation Pilot Plant (WIPP) Transportation Alternatives*. The DOE reported that emergency response capability for radiological incidents/accidents was lacking at the majority of Indian tribes. In October 1999, a voluntary mail survey conducted by the Injury Prevention and Emergency Medical Services Bureau, New Mexico Department of Health, revealed that inadequate emergency preparedness programs and equipment existed in New Mexico. In 2002, similar issues and concerns, related to a lack of tribal emergency response planning and training and independent technical reviews in the Yucca Mountain Draft Environmental Impact Statement (DEIS) were addressed by the Office of the Governor, The Nevada Agency for Nuclear Projects in *A Mountain of Trouble: A Nation at Risk: Report on Impacts of the Proposed Yucca Mountain High-Level Nuclear Waste Program*, Volume 1.

Tribal environmental leaders in our study expressed concern about the integrity of the WIPP, the security of the waste-filled trucks, the safety of the drivers, and the hazards along the roads. Risk perceptions of the American Indian environmental representatives were influenced by quantity and quality of DOE interaction, New Mexico road maintenance, economy, traffic hazards, emergency preparedness, radiation awareness, technical familiarity, personal assessments, and WIPP expansion proposals.
An equal number of respondents (30.43%) believe that the transuranic nuclear wastes should remain where they are now until adequate scientific studies are conducted to determine the fate of these wastes or the wastes should be moved and buried underground at the WIPP. A majority of respondents (65.23%) believe that if wastes are placed at a central facility, the facility should be completely underground. Other respondents (47.83%) report that there are transportation routes for the waste-filled trucks near their tribal homes. Approximately 69.56% of these tribal officials do not know whether or not the WIPP was the best place for the permanent disposal of transuranic nuclear wastes. The greatest concern about the WIPP remains possible soil or water contamination (26.09%).

Many respondents (47.83%) suggest that the WIPP can be improved through structural improvements to protect from contamination hazards and significant security improvements to protect from possible terrorist attacks at WIPP. Another 47.83% of the tribal officials recommend oversight and regulation, independent of the Department of Energy, should be implemented at WIPP. Approximately 30.43% of respondents believe that WIPP transportation issues can best be improved through further road improvements for the waste-filled trucks.

Additionally, 69.56% of the respondents do not feel that their tribes are adequately prepared to deal with the implementation of the WIPP. Although the tribes were provided emergency preparedness training, 30.43% of the respondents feel that their tribe lacks adequate equipment to respond to any WIPP-related radiological hazards. Future concerns about the WIPP relate to post-closure safeguards, soil and water contamination prevention, terrorism, road and street safety, and plans to develop the WIPP into a surface and underground facility (52.17%).
Many respondents (43.48%) report that the events of September 11, 2001 did not shape the way they think of the WIPP. However, 47.83% of the tribal officials strongly oppose high-level waste disposal at the WIPP if Yucca Mountain in Nevada is rejected or delayed for any reason. A majority of these respondents (69.56%) do not support railroad transportation of transuranic wastes to the WIPP.

Further results to all questions are presented below.

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1. How does your tribe feel about nuclear waste disposal?

- Wastes should remain at the nuclear waste facilities, transported to a central facility, or remain where they are now until adequate scientific studies are conducted. Wastes should be stored on Native American reservations if we are compensated. 4.35%
- Wastes should remain where they are now until adequate scientific studies are conducted to determine the fate of these wastes. 30.43%
- Wastes should be moved and buried underground at the WIPP. Wastes should be transported to a central facility, indefinitely. 17.40%
- Wastes should remain at the nuclear waste facilities. 8.70%
- Wastes should be transported to a central facility, indefinitely. 4.35%
- No comment. 4.35%
- Wastes should be moved and buried underground at the WIPP. 30.43%
2. If you believe that the waste should be placed at a central facility, where should it be?

- Anywhere except New Mexico. 21.74%
- At a surface facility far from the WIPP. 4.35%
- No comment. 4.35%
- Anywhere except New Mexico. 21.74%
- Completely underground. 65.23%
- At a surface facility far from the WIPP. 4.35%
3. How has your tribe been directly affected by the WIPP?

- My tribe has not been affected by the WIPP. 43.48%
- There are transportation routes for the waste-filled trucks near our homes. The WIPP provides jobs to members of my tribe. 8.70%
- There are transportation routes for the waste-filled trucks near our homes. 47.83%
4. Do you feel that the WIPP was the best place for the U.S. Government to permanently dispose of transuranic wastes?

- Yes: 13.04%
- No: 17.40%
- I do not know: 69.56%
5. What are your greatest concerns about the WIPP?

- Adverse economic impacts. Possible soil or water contamination. The threat of terrorism on the WIPP or its waste-filled trucks. 8.70%
- Radiological hazards from waste-filled trucks near or on our lands. 17.39%
- Possible soil or water contamination. 21.74%
- Radiological hazards from waste-filled trucks. Possible soil or water contamination. 13.04%
- The threat of terrorism on the WIPP or its waste-filled trucks. 13.04%
- Possible soil or water contamination. 26.09%
6. What benefits do you associate with the WIPP?

- We do not believe there are any benefits to the WIPP. My tribe enjoys the strong cooperation between the U.S. Government and our tribe. 4.35%
- We are glad that the WIPP exists to permanently dispose of transuranic wastes. 13.04%
- My tribe feels mixed feelings about the cooperation between the U.S. Government and our tribe. 39.13%
- We do not believe there are any benefits to the WIPP. My tribe feels mixed feelings about this cooperation 4.35%
- No comment 4.35%
- We do not believe there are any benefits to the WIPP. My tribe feels mixed feelings about the cooperation between the U.S. Government and our tribe. 30.43%
7. How does your tribe believe that the WIPP can best be improved?

- No improvements are necessary for the WIPP. 13.04%
- Structural improvements to protect from contamination hazards and significant security improvements to protect from possible terrorist attacks at WIPP. Oversight and regulation, independent of the Department of Energy, should be implemented at WIPP. 47.83%
- There should be significant security improvements to protect from possible terrorist attacks. Oversight and regulation, independent of the Department of Energy, should be implemented at the WIPP. 17.39%
- There should be significant security improvements to protect from possible terrorist attacks. 13.04%
- No comment. 4.35%
- No improvements are necessary for the WIPP. 13.04%
- No improvements are necessary for the WIPP. 13.04%
8. How has the government's implementation of the WIPP changed your view of the U.S. Government's nuclear waste disposal efforts?

- My views of the U.S. Government's decision remain unchanged. 52.17%
- I respect the U.S. Government's decision now more than I did earlier. 4.35%
- I distrust the U.S. Government's decision now more than I did earlier. 4.35%
- I neither respect nor distrust the U.S. Government's decision. However, I do have many concerns. 34.78%
- No comment. 4.35%
9. Do you feel that your tribe is adequately prepared to deal with the implementation of the WIPP?

- Yes. 4.35%
- No. 69.56%
- My tribe is not affected by the WIPP. 17.39%
- No. My tribe is not affected by the WIPP. 8.70%
10. Do you feel that your tribe was provided essential training and education through the U.S. Government to adequately manage any WIPP-related radiological hazards?

- No. We do not live near the WIPP site or any waste transportation routes. Although my tribe was trained, it lacks adequate equipment to respond to any WIPP-related radiological hazards. 4.35%
- No. We do not live near the WIPP site or any waste transportation routes. Although my tribe was trained, it lacks adequate equipment to respond to any WIPP-related radiological hazards. 30.43%
- Yes. 8.70%
- No. We live near the WIPP site or any waste transportation routes. 17.39%
- No. We live near the WIPP site or any waste transportation routes. 34.78%
11. What are your future concerns about the WIPP?

- Will the WIPP be adequately sealed to prevent contamination of soil and water? Will it be subject to terrorism? Will it become both a surface and an underground facility? 4.35%
- Who will safeguard the WIPP once it closes? 13.04%
- Will the WIPP be adequately sealed to prevent contamination of soil and water? 4.35%
- I do not have any future concerns about the WIPP. 4.35%
- I do not know enough about the WIPP to comment. 8.70%
- Will the roads and streets be safe from radiological hazards? Will it become a surface and an underground facility? 52.17%
12. How did the events of September 11, 2001 shape the way you think of the WIPP?

- The events of September 11, 2001 did not shape the way I think of the WIPP. 43.48%
- I worry about the security of the WIPP site. 39.13%
- I worry about the security of the WIPP waste truck drivers. 13.04%
- I worry about any possible WIPP-related security threats to the safety of my tribe. 4.35%
- The events of September 11, 2001 did not shape the way I think of the WIPP. 43.48%
13. Do you support or oppose High-Level waste disposal, wastes that are very hot and are capable of generating a lot of heat, at the WIPP if Yucca Mountain in Nevada is rejected or delayed for any reason?

- I strongly oppose any high-level waste disposal at the WIPP. 47.83%
- I do not oppose any high-level waste disposal at the WIPP. 13.04%
- I oppose any high-level waste disposal at the WIPP. 34.78%
- No comment. 4.35%
14. Are you pleased with the current transportation routes for the hazardous waste-filled trucks to the WIPP?

- My tribe is satisfied with these routes. 8.70%
- My tribe is not satisfied with these routes. 21.74%
- These routes do not affect my tribe. 30.43%
- My tribe is not familiar with these routes. 17.39%
- My tribe has mixed feelings about these routes. 4.35%
- My tribe has mixed feelings about these routes. 17.39%
15. How does your tribe believe that WIPP transportation issues can best be improved?

- Further road improvements. Waste-filled trucks should be strengthened to prevent any possible radiological hazards. Adequate police protection should be provided to all waste-filled trucks to protect against any possible terrorist threats. 17.39%
- No improvements are necessary at the WIPP. 4.35%
- No comment. 8.70%
- Further road improvements for the waste-filled trucks. 30.43%
- Waste-filled trucks should be strengthened to prevent any possible radiological hazards. 8.70%
- Adequate police protection should be provided to all waste-filled trucks to protect against any possible terrorist threats. 13.04%
16. Do you support railroad transportation of transuranic wastes to the WIPP?

No. 69.56%

Yes. 26.09%

I do not know. 4.35%