

**ENVIRONMENT, SAFETY, AND RISK ASSOCIATES CORPORATION (ESRA)**



**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**

**April 2003**

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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%).

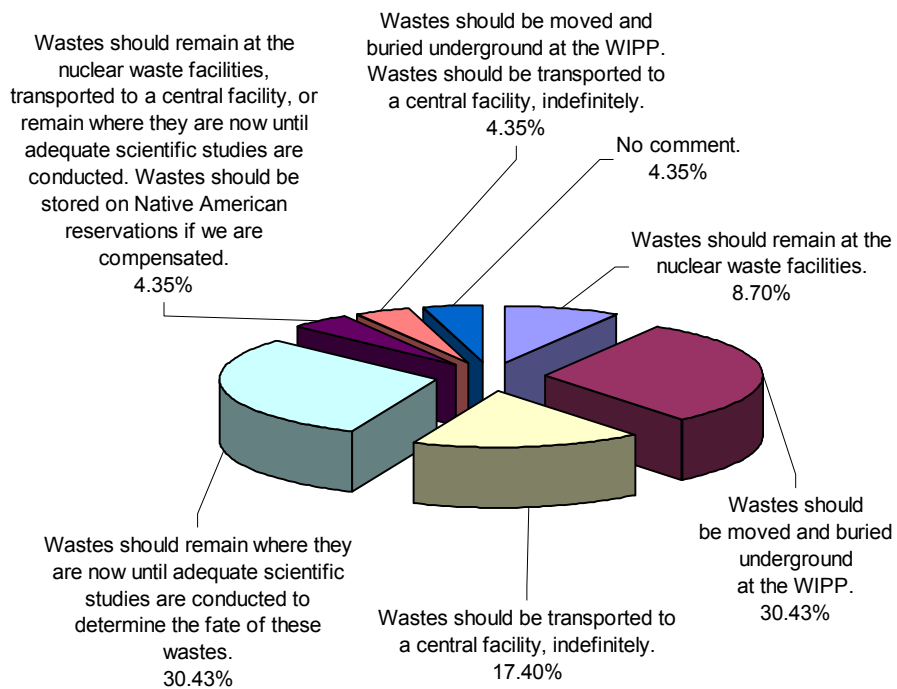
Many respondents (43.48%) report that the events of September 11, 2001 did not shape the way they think of the WIPP. However, 47.83% of the tribal officials strongly oppose high-level waste disposal at the WIPP if Yucca Mountain in Nevada is rejected or delayed for any reason. A majority of these respondents (69.56%) do not support railroad transportation of transuranic wastes to the WIPP.

Further results to all questions are presented below.

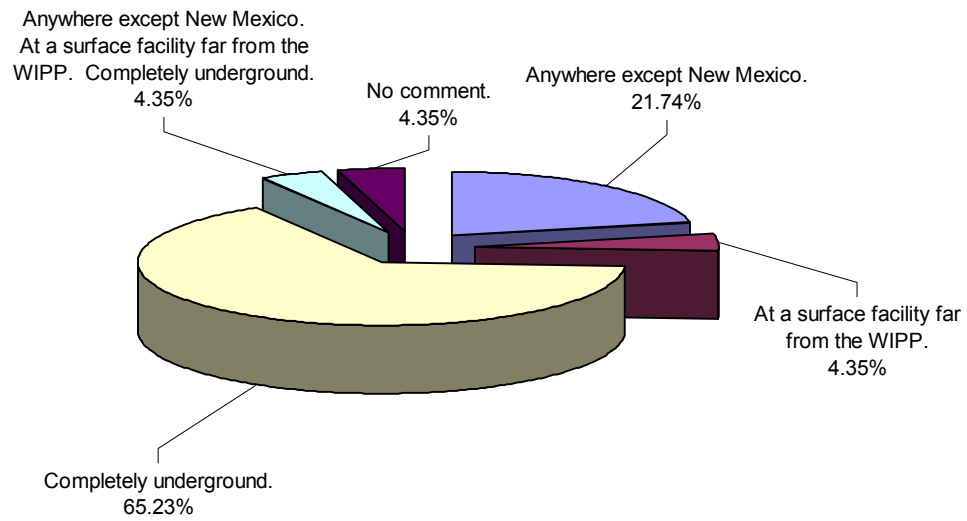
### **Acknowledgements**

The author wishes to express deepest gratitude to all of the Governors and environmental representatives of all New Mexico American Indian pueblos and reservations who contributed their time and participated in this survey. (The views expressed by these representatives in this survey do not necessarily reflect the views expressed by their pueblos and reservations.) The author especially wishes to thank Dr. Ian Farmer for his most invaluable comments and suggestions.

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

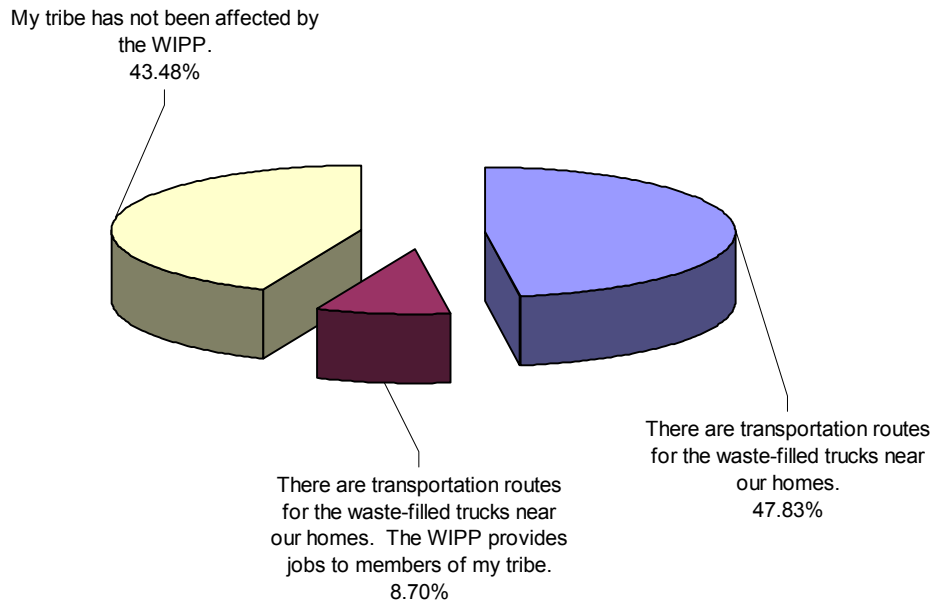


**2. If you believe that the waste should be placed at a central facility, where should it be?**

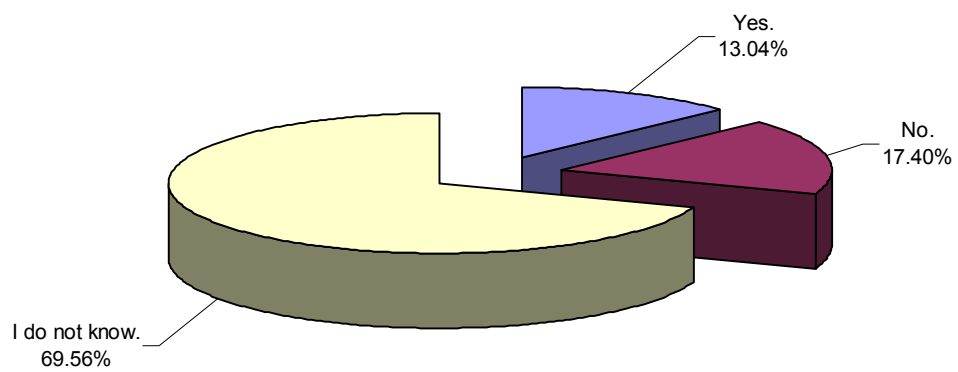




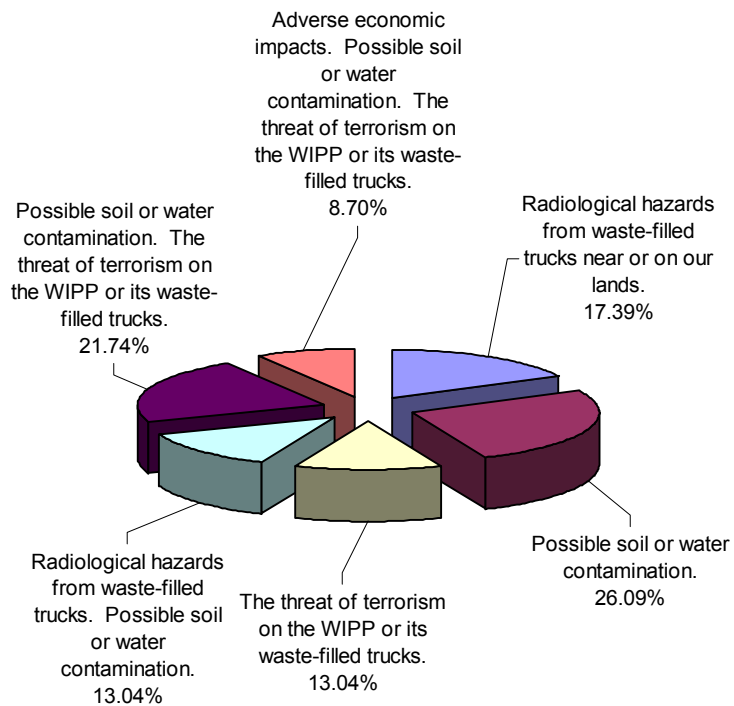
### 3. How has your tribe been directly affected by the WIPP?



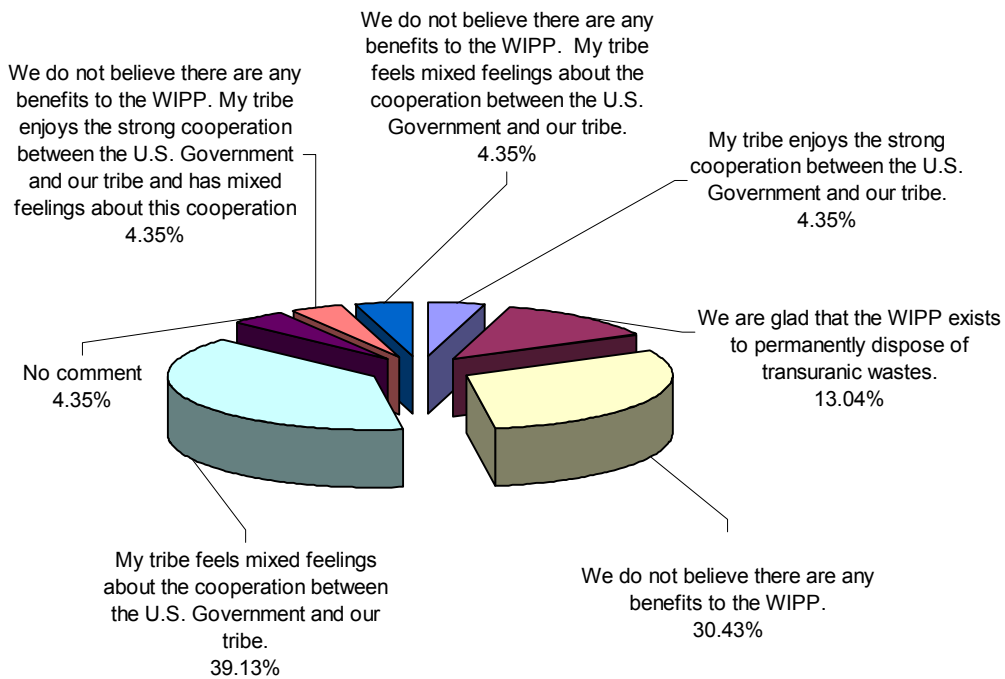
4. Do you feel that the WIPP was the best place for the U.S. Government to permanently dispose of transuranic wastes?



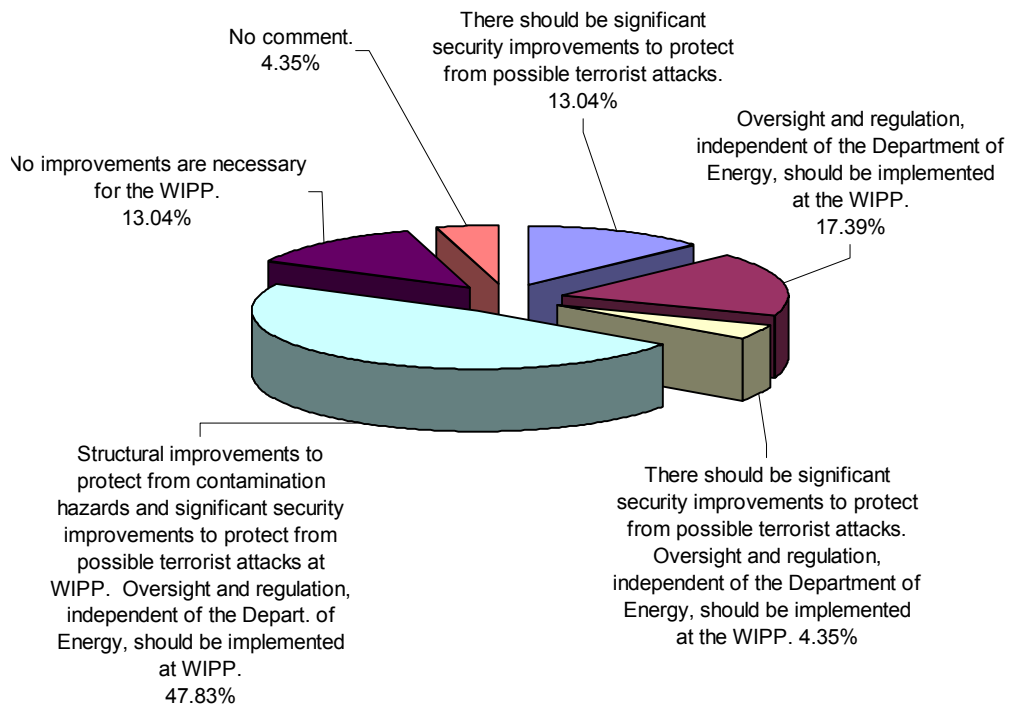
## 5. What are your greatest concerns about the WIPP?



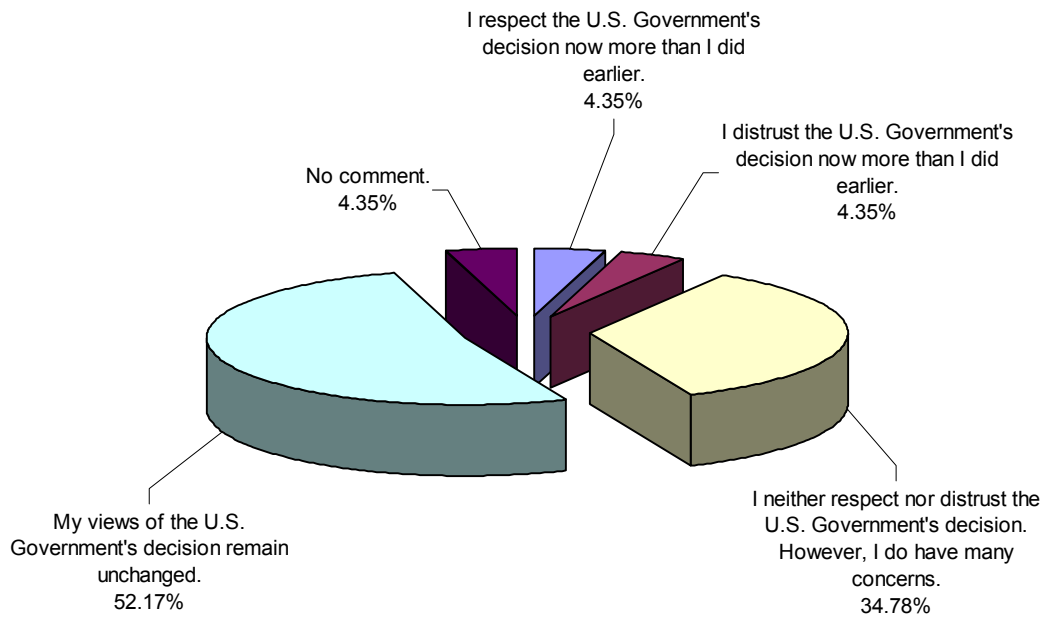
**6. What benefits do you associate with the WIPP?**



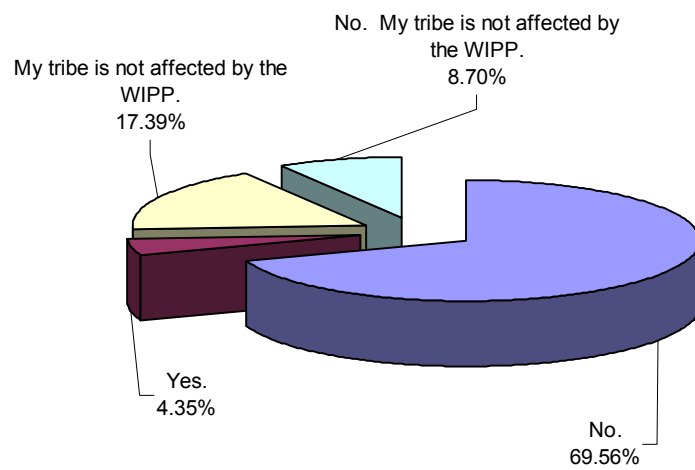
**7. How does your tribe believe that the WIPP can best be improved?**



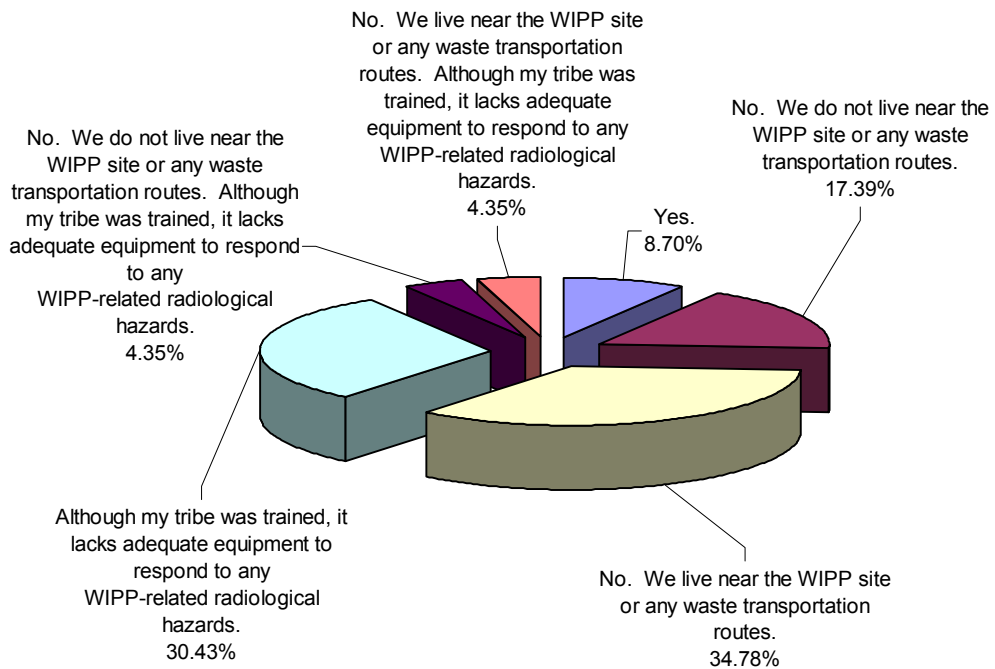
**8. How has the government's implementation of the WIPP changed your view of the U.S. Government's nuclear waste disposal efforts?**



**9. Do you feel that your tribe is adequately prepared to deal with the implementation of the WIPP?**

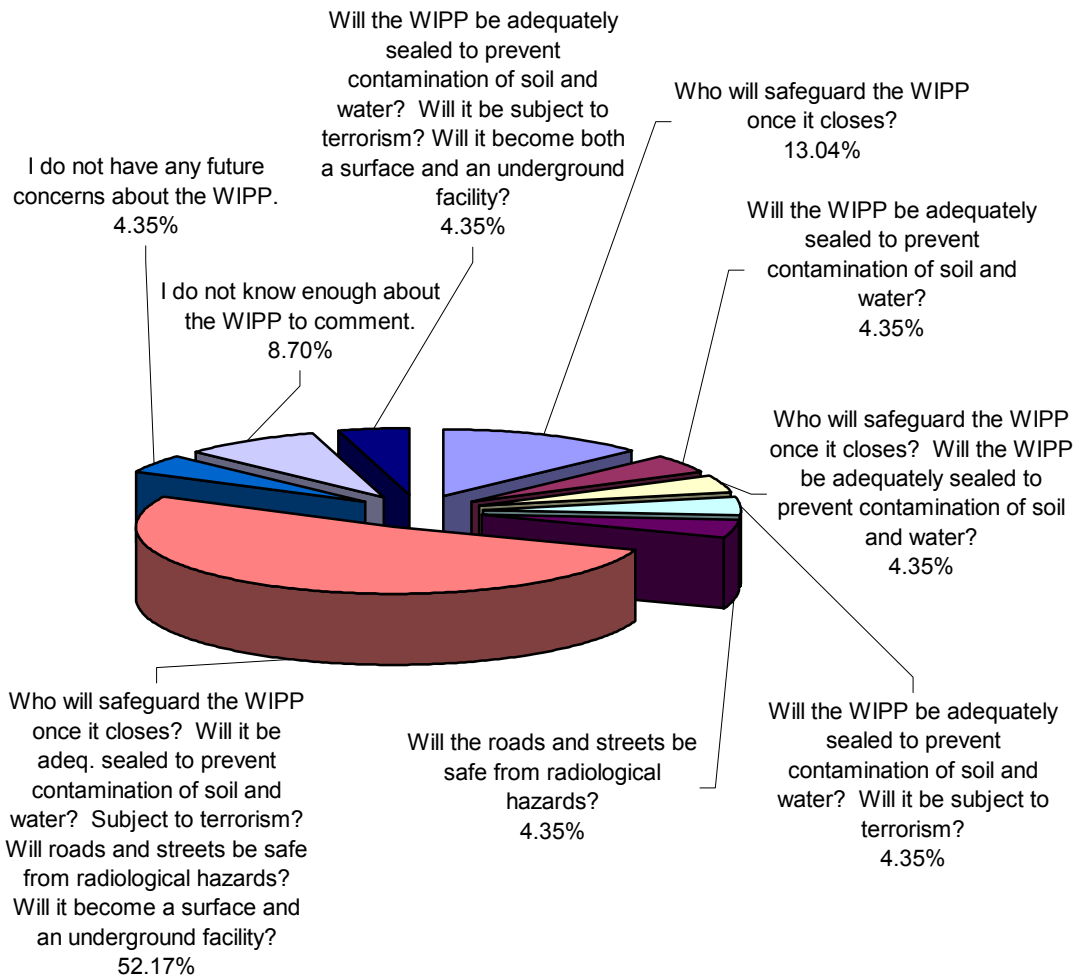


**10. Do you feel that your tribe was provided essential training and education through the U.S. Government to adequately manage any WIPP-related radiological hazards?**

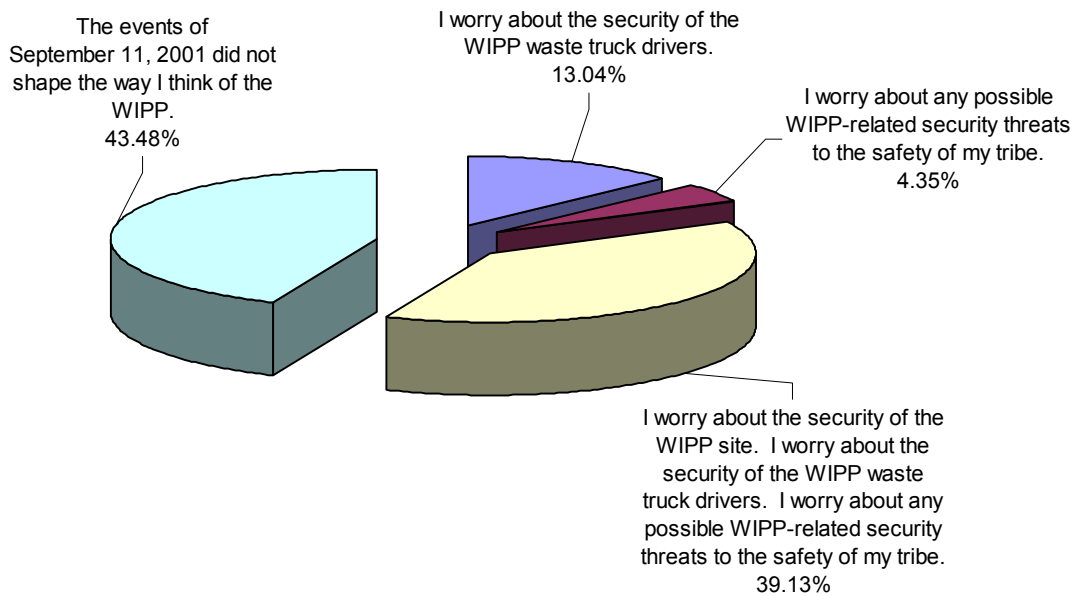




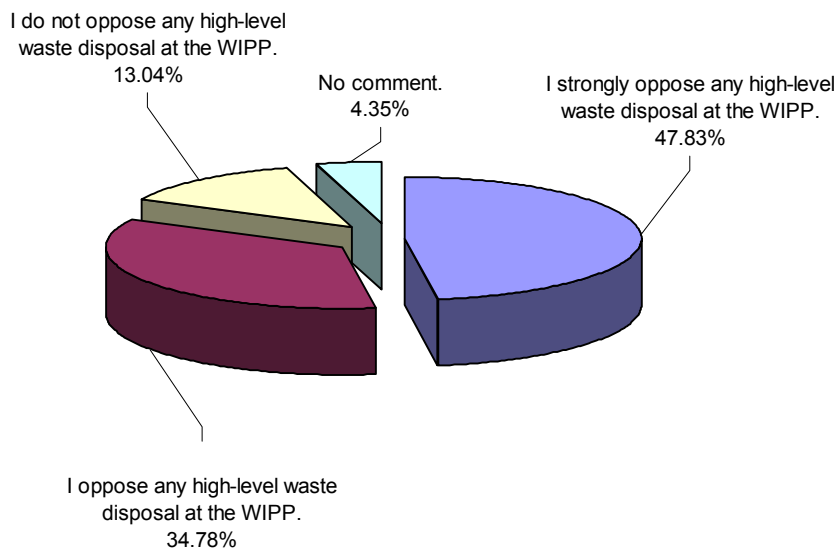
## 11. What are your future concerns about the WIPP?



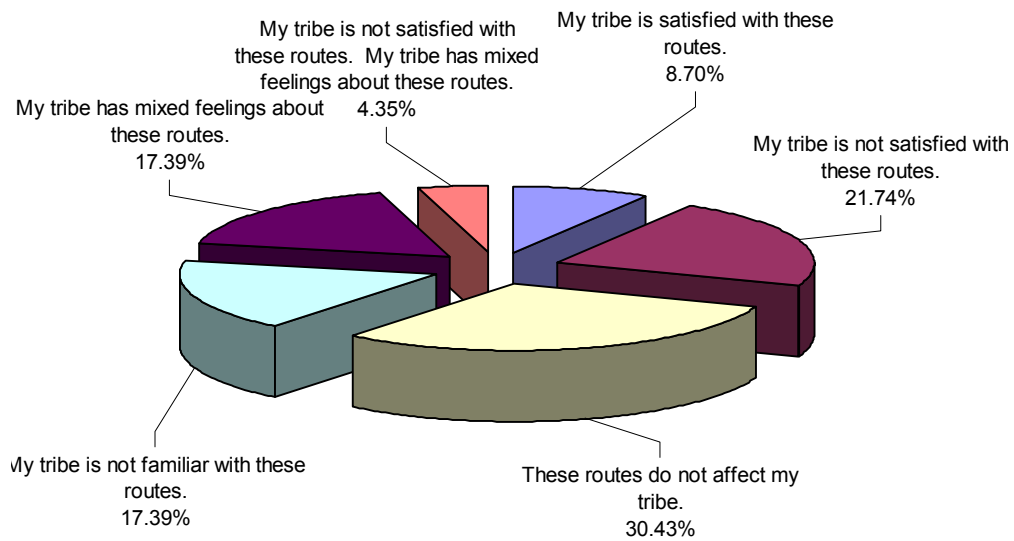
**12. How did the events of September 11, 2001 shape the way you think of the WIPP?**



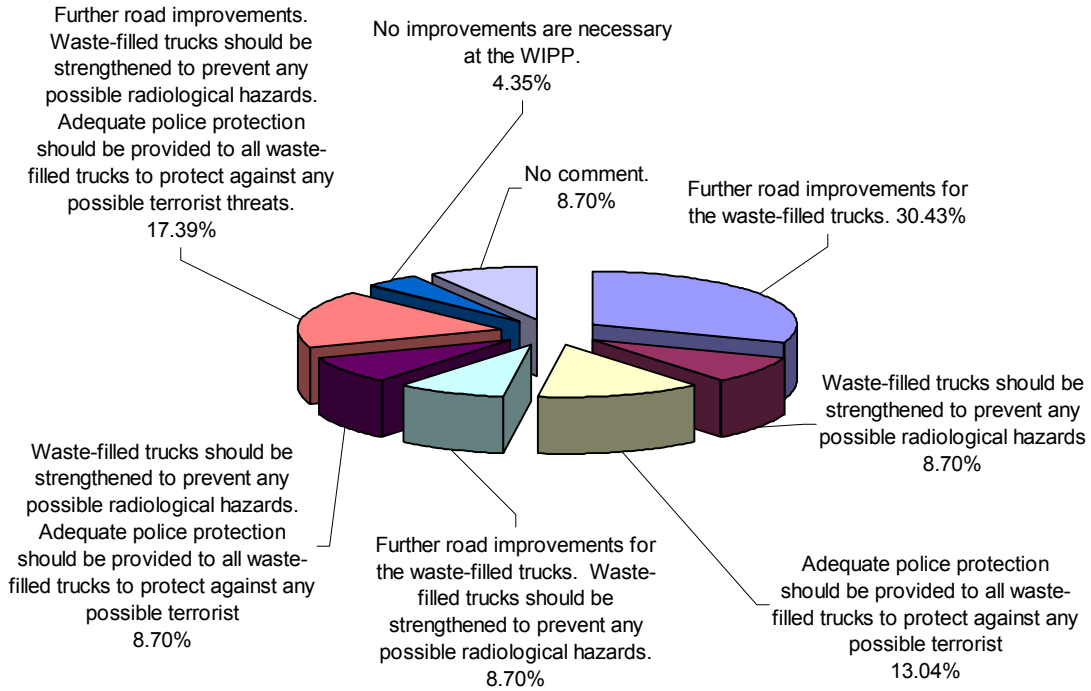
13. Do you support or oppose High-Level waste disposal, wastes that are very hot and are capable of generating a lot of heat, at the WIPP if Yucca Mountain in Nevada is rejected or delayed for any reason?



**14. Are you pleased with the current transportation routes for the hazardous waste-filled trucks to the WIPP?**



**15. How does your tribe believe that WIPP transportation issues can best be improved?**



**16. Do you support railroad transportation of transuranic wastes to the WIPP?**

