Responses to Questions from Stakeholders Participating in July 7 WIPP Community Forum

- Are the slide presentations available online? Where?
  Yes, the presentation and recording of the meeting are available on the WIPP website https://wipp.energy.gov/presentations.asp.

- Does WIPP provide tours?
  Yes, WIPP provides tours throughout the year to multiple groups and individuals. Please contact the WIPP Public Affairs Office at 1-800-336-9477 to request a tour.

A. WIPP operating timeframe

- When is WIPP estimated to close?
  The WIPP Land Withdrawal Act (Public Law 102-579) authorizes the WIPP facility to dispose of 6.2 million cubic feet of defense-generated transuranic waste. This law does not stipulate a time by which this mission must completed or limit the amount of disposal space that may be used within the 16 square mile WIPP land withdrawal area.

  The WIPP Annual TRU Waste Inventory Report (ATWIR) includes volume and generation date estimates for TRU waste destined for WIPP, as well as for waste that MAY be classified as TRU waste and may eventually be eligible for disposal at WIPP. While these are the best estimates, based on current and planned inventories, some variation in the actual volumes and date of generation is anticipated. The ATWIR is made available to the public annually near the end of January each year.

  Although there is no estimated closure date, based on the information in the ATWIR and historical shipping rates, completion of waste emplacement activities is between 2050-2085.

- DOE promised NM it would be able to clean up all the TRU or plutonium contaminated waste in nuclear weapons sites across the county in 25 years, and close WIPP. DOE's permit actually says it will stop taking more waste at the WIPP site after 2024. Why did DOE break its promise? And who in NM gave DOE permission to do this?
  The 2024 date was an early estimate for closing WIPP and the Land Withdrawal Act never stated WIPP would close after 2024. However, there were many logistical variables relative to characterization, certification, packaging and shipping that were unproven. Unanticipated inefficiency in waste packaging and shipping have led to the need for more physical space for disposal of the original volume approved in the Land Withdrawal Act. Subsequently, planning and schedules have been updated and the site has gained significant operational experience. The Land Withdrawal Act does not specify a limit based on time or disposal area, but rather a volume limit of 6.2 million cubic feet of defense-generated transuranic waste. WIPP is currently at approximately 40% capacity according to the capacity limit set by the Land Withdrawal Act.

  DOE has and continues to fulfill its remaining obligations in the Consultation and Cooperation Agreement. There is no planned expansion of the WIPP facility. WIPP is subject to the waste

volume limits stipulated in the Congressionally approved Land Withdrawal Act and DOE is not proposing to expand the authorized volume capacity of 6.2 million cubic feet. Both the U.S. Environmental Protection Agency (EPA) and the State of New Mexico regulate various aspects of WIPP operations. Changes to the configuration of WIPP that may impact the performance of the repository over a 10,000 year horizon are submitted to the EPA for review and approval. Changes to WIPP that require a change to the Hazardous Waste Facility Permit or to the Groundwater Permit are submitted to the New Mexico Environmental Department (NMED) for review and approval. Additionally, DOE is required to submit a Hazardous Waste Facility Permit renewal application to NMED every 10 years. Currently, NMED is reviewing WIPP's second 10-year renewal application and a request to authorize TRU waste emplacement in Panels 11 and 12. Panels 11 and 12 replace emplacement volumes lost due to operational conditions in Panels 1-9.

- Do I understand correctly WIPP's excuse for keeping facility open past 2025 is because the original volume has not been met - therefore the facility remains open?
  The 1992 WIPP Land Withdrawal Act, passed by Congress, limits WIPP to 6.2 million cubic feet of defense related transuranic waste. It does not specify a closure date, only the volume the repository can hold. The original date of 2024 mentioned in the state permit was a preliminary estimate based on a higher anticipated rate of waste emplacement.

  WIPP is currently at approximately 40% capacity according to the capacity limit set by the Land Withdrawal Act.

- Who pays for WIPP and who gets the money?
  WIPP is a U.S. Department of Energy (DOE) facility and is funded by the U.S. government. DOE pays a contractor to manage and operate the facility on their behalf.

- This is clearly not a "modernization" of WIPP's mission, but an expanded one. How does DOE explain the use of the term "modernization" when
    - the form of the waste will be new,
    - the mine volume will be more than twice its current size, and
    - the route covers 11 states?

  Modernizing WIPP's infrastructure is necessary to safely and compliantly complete WIPP's current mission. There is no expansion of WIPP's mission in the works nor is there an expansion of WIPP's mission being considered. All of the waste emplaced in WIPP meets the definition of defense related transuranic waste as specified in the Land Withdrawal Act.

  Unanticipated inefficiency in waste packaging and shipping have led to the need for more physical space for disposal of the original volume approved in the Land Withdrawal Act. The Land Withdrawal Act does not specify a limit based on time or disposal area, but rather a volume limit of 6.2 million cubic feet of defense-generated transuranic waste.

- Why has the DOE lied to New Mexicans about the proposed bore hole projects in Quay and Otero counties and why has the DOE lied about the agreement to close WIPP in 2024?
  DOE abandoned the Deep Borehole Filed Test in 2017 due to federal budget constraints.

  The 2024 date was an early estimate of when closing activities could commence at WIPP. However, there were many unknowns at the time that could not be planned for. Subsequently,

additional planning and schedules have been developed and DOE has determined the previous date is not possible. This date was an early estimate for planning purposes, as the Land Withdrawal Act does not specify a time but rather a volume limit of 6.2 million cubic feet of defense-generated transuranic waste.

- New Mexico has a signed contract with DOE for WIPP to end 2024. DOE WIPP has not respected the will of the citizens of New Mexico. New Mexicans have not had their wishes respected. Where is the voice of New Mexicans? Who has given permission to change the mission of WIPP? Who has given the permission for expanding WIPP beyond 2024?
  The 2024 date was an early estimate of when closing activities could commence at WIPP. However, there were many unknowns at the time that could not be planned for. Subsequently, additional planning and schedules have been developed and DOE has determined the previous date is not possible. This date was an early estimate for planning purposes, as the Land Withdrawal Act does not specify a time but rather a volume limit of 6.2 million cubic feet of defense-generated transuranic waste.

  DOE has and continues to fulfill its remaining obligations in the Consultation and Cooperation Agreement. There is no planned expansion of the WIPP facility. There is no planned expansion of the WIPP facility. WIPP is subject to the waste volume limits stipulated in the Congressionally approved Land Withdrawal Act and DOE is not proposing to expand the authorized volume capacity of 6.2 million cubic feet. Both the U.S. Environmental Protection Agency (EPA) and the State of New Mexico regulate various aspects of WIPP operations. Changes to the configuration of WIPP that may impact the performance of the repository over a 10,000 year horizon are submitted to the EPA for review and approval. Changes to WIPP that require a change to the Hazardous Waste Facility Permit or to the Groundwater Permit are submitted to the New Mexico Environmental Department (NMED) for review and approval. Additionally, DOE is required to submit a Hazardous Waste Facility Permit renewal application to NMED every 10 years. Currently, NMED is reviewing WIPP's second 10-year renewal application and a request to authorize TRU waste emplacement in Panels 11 and 12. Panels 11 and 12 replace emplacement volumes lost due to operational conditions in Panels 1-9.

- DOE agreed to close WIPP in 2024. Why does this chart show new shipments past then?
  The WIPP Land Withdrawal Act specifically limits the amount and type of waste that can be disposed of at WIPP, to 6.2 million cubic feet of defense-generated transuranic waste.
  The 2024 date was an early estimate of when closing activities could commence at WIPP. However, there were many unknowns at the time that could not be planned for. Subsequently, additional planning and schedules have been developed and DOE has determined the previous date is not possible. This date was an early estimate for planning purposes, as the Land Withdrawal Act does not specify a time but rather a volume limit of 6.2 million cubic feet of defense-generated transuranic waste.

  WIPP is currently at approximately 40% capacity according to the capacity limit set by the Land Withdrawal Act.

  The WIPP Annual TRU Waste Inventory Report (ATWIR) includes volume and generation date estimates for TRU waste destined for WIPP, as well as for waste that MAY be classified as TRU waste and may eventually be eligible for disposal at WIPP. While these are the best estimates,

based on current and planned inventories, some variation in the actual volumes and date of generation is anticipated. The ATWIR is made available to the public annually near the end of January each year.

Although there is no estimated closure date, based on the information in the ATWIR and historical shipping rates, completion of waste emplacement activities is between 2050-2085.

- Why are we looking at 2032 when the DOE gave their contractual agreement over 20 years ago to close WIPP in 2024?
  The 1992 WIPP Land Withdrawal Act, passed by Congress, limits WIPP to 6.2 million cubic feet of defense related transuranic waste. It does not specify a closure date, only the volume the repository can hold. The original date of 2024 mentioned in the state permit was a preliminary estimate based on a higher anticipated volume of waste.

  WIPP is currently at approximately 40% capacity according to the capacity limit set by the Land Withdrawal Act.

  The WIPP Annual TRU Waste Inventory Report (ATWIR) includes volume and generation date estimates for TRU waste destined for WIPP, as well as for waste that MAY be classified as TRU waste and may eventually be eligible for disposal at WIPP. While these are the best estimates, based on current and planned inventories, some variation in the actual volumes and date of generation is anticipated. The ATWIR is made available to the public annually near the end of January each year.

  Although there is no estimated closure date, based on the information in the ATWIR and historical shipping rates, completion of waste emplacement activities is between 2050-2085.

- How is it that you can extend a contract/covenant as was drawn up? Who gave CONSENT?
  The 1992 WIPP Land Withdrawal Act, passed by Congress, limits WIPP to 6.2 million cubic feet of defense related transuranic waste. It does not specify a closure date, only the volume the repository can hold. The original date of 2024 mentioned in the state permit was a preliminary estimate based on a higher anticipated volume of waste.

  DOE has and continues to fulfill its remaining obligations in the Consultation and Cooperation Agreement. There is no planned expansion of the WIPP facility. There is no planned expansion of the WIPP facility. WIPP is subject to the waste volume limits stipulated in the Congressionally approved Land Withdrawal Act and DOE is not proposing to expand the authorized volume capacity of 6.2 million cubic feet. Both the U.S. Environmental Protection Agency (EPA) and the State of New Mexico regulate various aspects of WIPP operations. Changes to the configuration of WIPP that may impact the performance of the repository over a 10,000 year horizon are submitted to the EPA for review and approval. Changes to WIPP that require a change to the Hazardous Waste Facility Permit or to the Groundwater Permit are submitted to the New Mexico Environmental Department (NMED) for review and approval. Additionally, DOE is required to submit a Hazardous Waste Facility Permit renewal application to NMED every 10 years. Currently, NMED is reviewing WIPP's second 10-year renewal application and a request to authorize TRU waste emplacement in Panels 11 and 12. Panels 11 and 12 replace emplacement volumes lost due to operational conditions in Panels 1-9.

- Is there a particular problem with ground control for panel 7?
  No, only that Panel 7 has been opened for 12 years and additional ground control is necessary when areas are open for an extended period of time. Logistically, it is difficult to conduct ground control activities in the same area as waste emplacement. Emplacement in Panel 7 is expected to be completed late this summer.

- How can we help the DOE change the game it has been playing with the citizens of New Mexico? What you are saying is that you are going to do this regardless of past agreements or promises you have made.
  With meaningful involvement in mind, DOE conducts a number of activities for stakeholders and host communities near our sites. Our intent with these activities can be described as follows: To give our stakeholders the opportunities to participate in DOE decision making to the greatest degree possible, to give our stakeholders the tools to participate in DOE decision making and to give our host communities technical assistance to help them strengthen their economies to the greatest extent possible.

- What were the inefficiencies that caused you to lose progress?
  There are several examples that resulted in WIPP requiring additional disposal space in the underground. The best examples are as follows:
    - The type of containers emplaced in disposal rooms. Originally, it was assumed that waste would be in 55-gallon drums. The drums would be in 7-packs and stacked 3-high (21 drums in a column). This is not the case today. Several types of containers are emplaced at WIPP. A standard waste box, for example, is used to over pack four 55-gallon drums. This means that instead of 21 drums in a column, we only emplace 12 drums. The loss of efficiency drives the need for more waste rooms and panels in the underground.
    - Another example pertains to the loss of emplacement capacity in Panels 1-7 and Panel 9. These areas were lost for waste emplacement as a result of ground control issues that made it unsafe to enter these areas. An operational decision was made not to risk worker safety to recover the areas. Instead, Panels 11 & 12 are proposed to replace the lost capacity.

- Why is the SSCVS needed by 2027?
  To ensure worker safety while meeting the emplacement and mining rates necessary to maintain shipping rates.

- Who gave permission for the extension? Why were the people of NM not consulted?
  The WIPP Land Withdrawal Act (Public Law 102-579) authorizes the WIPP facility to dispose of 6.2 million cubic feet of defense-generated transuranic waste. This law does not stipulate a time by which this mission must completed, or the amount of space that may be used within the WIPP boundary.

  DOE has and continues to fulfill its remaining obligations in the Consultation and Cooperation Agreement. There is no planned expansion of the WIPP facility. WIPP is subject to the waste volume limits stipulated in the Congressionally approved Land Withdrawal Act and DOE is not proposing to expand the authorized volume capacity of 6.2 million cubic feet. Both the U.S. Environmental Protection Agency (EPA) and the State of New Mexico regulate various aspects of

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- On June 27, DOE provided to the Environment Department a new end date for WIPP to take nuclear waste: 2083. This has not been presented to the residents of New Mexico, nor have they agreed to it. Why did you not present this new end date to the public tonight and what will you do if they oppose this extension/expansion?

  The WIPP Land Withdrawal Act (Public Law 102-579) authorizes the WIPP facility to dispose of 6.2 million cubic feet of defense-generated transuranic waste. This law does not stipulate a time by which this mission must completed or limit the amount of disposal space that may be used within the 16 square mile WIPP land withdrawal area. The WIPP Annual TRU Waste Inventory Report (ATWIR) includes volume and generation date estimates for TRU waste destined for WIPP, as well as for waste that MAY be classified as TRU waste and may eventually be eligible for disposal at WIPP. While these are the best estimates, based on current and planned inventories, some variation in the actual volumes and date of generation is anticipated. The ATWIR is made available to the public annually near the end of January each year.

  Although there is no estimated closure date, based on the information in the ATWIR and historical shipping rates, completion of waste emplacement activities is between 2050-2085.

- What is the "Land Withdrawal Act?" What does it do? What does it obligate NM to do?
  The WIPP Land Withdrawal Act passed by Congress in 1992 reserved 16 sections of land in southeast New Mexico for the first deep-geologic repository for disposal of defense-generated transuranic (TRU) waste. It also outlines disposal operations, regulations, mine safety, authorizations and decommissioning. The full act can be found at https://wipp.energy.gov/library/CRA/CRA%202019/T%20-%20W/USC%20%201996%20%20LWA%20Public%20Law%20102-579.pdf

- Please speak to expected 2024 closure of WIPP.
  The 2024 date was an early estimate for closing WIPP. However, there were many unknowns at the time. Subsequently, planning and schedules have been updated and the site has gained significant operational experience. Additionally, the Land Withdrawal Act does not specify a time but rather a volume limit of 6.2 million cubic feet of defense-generated transuranic waste.

  WIPP is currently at approximately 40% capacity according to the capacity limit set by the Land Withdrawal Act.

  DOE has and continues to fulfill its remaining obligations in the Consultation and Cooperation Agreement. There is no planned expansion of the WIPP facility. WIPP is subject to the waste

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When did the Waste Isolation Pilot Plant become the only permanent disposal facility for transuranic waste?
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If TRU waste volumes in excess of the Land Withdrawal Act volume of 6.2 million cubic feet, DOE will need to look at other options for TRU waste disposal. Congressional actions is required to exceed the Land Withdraw Act volume.

- In 1999, we were told that there would not be more WIPP shipments/ obviously, that has changed so how can we depend on your promises.
  WIPP shipments began in 1999 and the Department is working within the WIPP limit established by the Land Withdrawal Act.

- DOE has now provided to the environmental department a new end date for WIPP to take nuclear waste: 2083. This has not been to the residents of New Mexico, nor have they agreed to it. Why did you not present this new end date to the public tonight and what will you do if they oppose this extension/expansion?
  The WIPP Land Withdrawal Act (Public Law 102-579) authorizes the WIPP facility to dispose of 6.2 million cubic feet of defense-generated transuranic waste. This law does not stipulate a time by which this mission must completed, or limit the amount of disposal space that may be used within the 16 square mile WIPP land withdrawal area. The WIPP Annual TRU Waste

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Although there is no estimated closure date, based on the information in the ATWIR and historical shipping rates, completion of waste emplacement activities is between 2050-2085.

- Why is the lifespan of WIPP being extended? My understanding is that WIPP was to cease accepting waste in 2024. I thought that entailed an acceptable risk for buying property in Eldorado. WIPP's receiving waste for a further 60 years — or in perpetuity— is not an acceptable risk.
  The WIPP Land Withdrawal Act (Public Law 102-579) authorizes the WIPP facility to dispose of 6.2 million cubic feet of defense-generated transuranic waste. This law does not stipulate a time by which this mission must completed, or limit the amount of disposal space that may be used within the 16 square mile WIPP land withdrawal area. The WIPP Annual TRU Waste Inventory Report (ATWIR) includes volume and generation date estimates for TRU waste destined for WIPP, as well as for waste that MAY be classified as TRU waste and may eventually be eligible for disposal at WIPP. While these are the best estimates, based on current and planned inventories, some variation in the actual volumes and date of generation is anticipated. The ATWIR is made available to the public annually near the end of January each year.

  Although there is no estimated closure date, based on the information in the ATWIR and historical shipping rates, completion of waste emplacement activities is between 2050-2085.

- Why is WIPP still the only repository for nuclear-weapons waste? The first "P" in WIPP stands for "pilot" which implies that other plants (in other states) would follow it. I think that is the proposition to which New Mexico agreed when WIPP was built.
  With the WIPP facility currently at 40% of waste volume limit authorized by the Land Withdrawal Act, there is no current need for additional disposal capacity for transuranic (TRU) waste at this time. WIPP is just one of several federal and commercial disposal facilities for radioactive wastes across the country. These disposal facilities include the Nevada National Security Site (DOE), Energy Solutions (commercial), Waste Control Specialists (commercial) as well as on-site disposal facilities at DOE sites like Oak Ridge, Portsmouth, Fernald (closed), Weldon Springs (closed), Hanford and Savanah River. The types of radioactive waste that can be disposed in those facilities depends on their waste acceptance criteria. WIPP has been designated for disposal of certain types of waste, specifically TRU waste. WIPP does not dispose of spent nuclear fuel or high-level wastes. Non-TRU wastes are disposed of elsewhere. As an example, LANL ships its low-level and mixed low-level wastes to out-of-state disposal facilities.

- Many people bought property near WIPP transportation in corridors with the knowledge that WIPP would close and its transportation risks would end in 2024. Changing the plans for WIPP is a bait-and-switch that puts these property owners at risk for something they couldn't plan for. Does the federal government understand how citizens see this as a betrayal of their trust?

The 2024 date was an early estimate for closing WIPP. However, there were many unknowns at the time. Subsequently, planning and schedules have been updated and the site has gained significant operational experience. Additionally, the Land Withdrawal Act does not specify a time but rather a volume limit of 6.2 million cubic feet of defense-generated transuranic waste.

WIPP is currently at approximately 40% capacity according to the capacity limit set by the Land Withdrawal Act.

B. Questions requiring National Nuclear Security Administration (NNSA) input

- I have testified against WIPP since its inception and it's never been about if there will be an accident, but when. It only took three years for an accident that closed it down for a time. Now you are making it even more dangerous with transportation plans sending waste back and forth across the country and from what I understand, not in TRUPACT containers. Is this true?
  All TRU waste shipments to WIPP are made in Nuclear Regulatory Commission Certified Type B packages (TRUPACT-II, TRUPACT-III, HalfPACT or RH-72B) all of which are designed and tested to ensure they can withstand the rigors of routine transportation as well as hypothetical accident conditions, without release of contents. A small number of inter-site transfer shipments (approximately 1% of overall shipping) of TRU waste have been made in TRUPACT containers following WIPP transportation protocols. Since 1999, WIPP has safely traveled over 15.7 million loaded miles with no significant events and no release of radioactive contamination during shipment. Details on TRUPACT construction and testing can be found at Transuranic Waste Transportation Containers – Fact Sheet (energy.gov).
  Questions on non-WIPP shipments referenced in your statement should be referred to Mr. Harris Walker with the National Nuclear Security Agency (NNSA) at harris.walker@nnsa.doe.gov.

- Powdered plutonium is the most dangerous form of plutonium because it is inhaled and remains in the lungs. Why would DOE plan to ship this most dangerous form of radioactive plutonium over 11 states? And why is New Mexico the only state in the US to take on the responsibility of storing all nuclear waste for the country?
  All of your questions are important. Please contact Mr. Harris Walker with the National Nuclear Security Administration at harris.walker@nnsa.doe.gov for questions about the NNSA mission in New Mexico. WIPP only transports defense-generated transuranic waste that meets the WIPP Waste Acceptance Criteria and uses routes that have chosen in conjunction with states and tribal nations that are on those routes.

- Given the severity of toxicity of plutonium in that even a microscopic amount inhaled can cause cancer, how could there be any adequate protection of persons and property given an unexpected accident?
  WIPP only transports defense-generated transuranic waste that meets the WIPP Waste Acceptance Criteria and uses routes that have chosen in conjunction with states and tribal nations that are on those routes. Questions related to powered plutonium shipments should be directed to Mr. Harris Walker with the National Nuclear Security Administration at harris.walker@nnsa.doe.gov.

- Please speak specifically about the Plutonium waste and what specifically is being done to manipulate it - in Los Alamos and on the East Coast. Why does it need to travel over 11 states?

This is not part of WIPP's mission, so we are unable to address this. We recommend you contact Mr. Harris Walker with the National Nuclear Security Administration at harris.walker@nnsa.doe.gov.

- Are there hearings in all the states that shipments go through? I am with Interfaith Power and Light and I know that people of faith in Georgia and elsewhere are concerned. Can hearings be in all communities?
  Public hearings are required under specific regulations, and usually occur when a facility is requesting to make a substantial change to the facility. Hearings are usually held in the state where the facility is located. The WIPP transportation routes were selected in the 1980's in conjunction with all states and tribal nations that are located on a WIPP route. WIPP does conduct public roadshows along the transportation routes. This allows the public to come see an actual WIPP truck and the transportation casks, additionally WIPP officials are present to answer any questions members of the public have.

- Proposed WIPP shipping includes a leg from Los Alamos to Savannah River Site, and then another leg from SRS to WIPP. This amounts to a 3,000-mile round trip through a dozen states, including shipping plutonium in ultra-hazardous, respirable powder form. How can such a high-risk shipping and processing scheme be justified as safe, secure, and protective of health and the environment?
  This question involves a project of the National Nuclear Security Administration and not WIPP. Please contact Mr. Harris Walker with the National Nuclear Security Administration at harris.walker@nnsa.doe.gov.

- Isn't the United States of America obligated, under its Nuclear Nonproliferation Treaty commitments, to abolishing its nuclear weapons arsenal? How is expanded plutonium pit production at Los Alamos, and unprecedented Pu pit production at SRS, for new nuclear weapons, in compliance with our NPT obligations? I ask because it seems WIPP is significantly connected to DOE's new Pu pit production schemes.
  WIPP's mission is to safely dispose of the nation's defense-generated transuranic waste. The WIPP Land Withdrawal Act specifically identifies the amount and type of waste WIPP can dispose of.

- Why does the plutonium need to be managed and blended at Savanah River? It seems insane to be transporting plutonium across 11 states twice. Please, what is the rationale? Aren't the experts at LANL capable of doing this?
  WIPP is not involved in managing or blending plutonium, therefore, an answer cannot be provided to this question. We recommend you contact Mr. Harris Walker with the National Nuclear Security Administration at harris.walker@nnsa.doe.gov

- Why are you going to ship dangerous powdered plutonium oxide on our roads when powdered plutonium was considered too dangerous to transport before?
  This is not part of WIPP's mission, so we are unable to address this. We recommend you contact Mr. Harris Walker with the National Nuclear Security Administration at harris.walker@nnsa.doe.gov.

- How will DOE compensate workers (and citizens) that get exposed to plutonium air pollution should an accident occur? Has an escrow fund been set up to take care of future medical needs

of exposed workers? Or will they be left to fend for themselves as was done with the thousands of New Mexico citizens that were showered with plutonium dust created by the Nevada Test site - i.e. no RECA protection for average citizens.
In the event of an accident involving a WIPP shipment, the transportation carrier is responsible for any damage that might occur. In the event of an incident involving WIPP, the management and operating contactor is responsible for any damage that might occur. The Price-Anderson Act provides a system of financial protection for injury resulting from a nuclear incident.

- Have you researched the possibility of dismantling pits, oxidizing and diluting the plutonium either at the Amarillo site or onsite at WIPP, rather than shipping plutonium thousands of miles?
  This question falls under the National Nuclear Security Administration. Please contact Mr. Harris Walker with NNSA at harris.walker@nnsa.doe.gov.

- What is the community evacuation plan in case of a release of plutonium oxide near an inhabited area? Can you assert that any level of exposure to plutonium oxide isn't deadly?
  Please contact Mr. Harris Walker with the National Nuclear Security Administration at harris.walker@nnsa.doe.gov, for additional information.

- What is the adulterant used to dilute the Plutonium oxide at Savannah River Site.
  The specific composition of the adulterant remains classified. However, it is non-hazardous (RCRA); the composition has been made available to cleared representatives of U.S. EPA and NMED. Please contact Mr. Harris Walker with the National Nuclear Security Administration at harris.walker@nnsa.doe.gov.

- Does the DOE know that many of us in Santa Fe are concerned about our health & safety with trucks full of nuclear waste/dust form!
  DOE takes very seriously the health and safety of all stakeholders. That is why safety measures are in place to protect residents including robust transportation containers, transportation bypasses around cities like Santa Fe, highly qualified drivers, and more. For more detail, see the responses in Section D of this document. DOE does recognize that there are concerned citizens in the Santa Fe area, and because of that chose to hold a public meeting there.

- What if a truck tips over & the wind blows it across Santa Fe? (Nuclear Dust)
  The shipments of the down-blended plutonium oxide that WIPP receives remain very safe. The testing the TRUPACT-II and other Type B shipping packages go through is a series of tests to ensure that the materials within the shipping package are not released. Please contact Mr. Harris Walker with the National Nuclear Security Administration at harris.walker@nnsa.doe.gov for questions about the NNSA mission in New Mexico.

- We want to speak about surplus plutonium coming to WIPP and being processed at Los Alamos and hear you come.
  Please contact Mr. Harris Walker with the National Nuclear Security Administration at harris.walker@nnsa.doe.gov.

- Misconception to WIPP expansion. What other plans were considered before deciding on a WIPP expansion with transportation of waste across the southern U.S. twice for the acceptance of the new type of waste?
  The WIPP Land Withdrawal Act (Public Law 102-579) authorizes the WIPP facility to dispose of 6.2 million cubic feet of defense-generated transuranic waste. The Department continues to work within that limit.

  Questions related to powered plutonium shipments should be directed to Mr. Harris Walker with the National Nuclear Security Administration at harris.walker@nnsa.doe.gov.

- According to Sandia Labs, a release of powdered plutonium oxide would be impossible to clean up if released over lands. Ranchers and farmers along Interstate 40 face the loss of their land, businesses, and health. Since WIPP is the end point in this plan it bears responsibility for allowing it. Why put New Mexican farmers and ranchers at risk?
  Questions related to powered plutonium shipments should be directed to Mr. Harris Walker with the National Nuclear Security Administration at harris.walker@nnsa.doe.gov.

- It is often said that WIPP provides jobs and a strong economy for New Mexicans in southeastern NM. This new mission jeopardizes jobs and businesses like ranches in northern and central NM. Will DOE stop claiming to reward one part of the state while it jeopardizes another part?
  Shipments of TRU wastes occur along designated routes. With regard to the down-blended plutonium oxide, the shipments will only New Mexico in the southeastern portion of New Mexico. For more information on the route please see slide #29 from the Santa Fe Community Forum presentation.

- Powdered plutonium is the most dangerous form of plutonium because it is inhaled and remains in the lungs. Why would DOE plan to ship this most dangerous form of radioactive plutonium over 11 states?
  WIPP only transports defense-generated transuranic waste that meets the WIPP Waste Acceptance Criteria and uses routes that have chosen in conjunction with states and tribal nations that are on those routes. Questions related to powered plutonium shipments should be directed to Mr. Harris Walker with the National Nuclear Security Administration at harris.walker@nnsa.doe.gov.

  The shipments of the down-blended plutonium oxide that WIPP receives remain very safe. The testing the TRUPACT-II and other Type B shipping packages go through is a series of tests to ensure that the materials within the shipping package are not released. Please contact Mr. Harris Walker with the National Nuclear Security Administration at harris.walker@nnsa.doe.gov for questions about the NNSA mission in New Mexico.

- The Santa Fe Emergency Response coordinator for Santa Fe County has not been told about this new mission. He cannot plan, train, or buy equipment without that knowledge. Why has DOE not told all emergency responders about the new mission so they can prepare?

WIPP works closely with the State of New Mexico who provides training and equipment to first responders along the WIPP routes. These first responders are aware of WIPP shipments through the 1-year waste shipping projections WIPP provides to New Mexico on a semi-annual basis and many have access to TRANSCOM, allowing them to track the status of WIPP shipments through their jurisdictions in near real time. Training and equipment are made available through the State of New Mexico and are used to ensure first responders along WIPP transportation corridors are prepared and able to respond to an event involving a WIPP shipment. Other DOE shipments that may pass through or around Santa Fe are not part of WIPP's mission and we are unable to speak for other DOE organizations. Any questions related to the Surplus Plutonium Shipments should be directed to Mr. Harris Walker with the National Nuclear Security Administration, harris.walker@nnsa.doe.gov

C. Future TRU waste repositories

- Is it true that this nuclear waste is not only to be accepted into New Mexico from across the U.S., but also from certain overseas nations as well?
  WIPP is only authorized to receive U.S. defense-generated transuranic waste. Any changes to the types of waste that can be accepted for disposal at WIPP would require Congressional action.

- What work is being conducted to find other locations for this waste?
  With the WIPP facility currently at 40% of waste volume limit authorized by the Land Withdrawal Act, there is no current need for additional disposal capacity for transuranic (TRU) waste at this time. WIPP is just one of several federal and commercial disposal facilities for radioactive wastes across the country. These disposal facilities include the Nevada National Security Site (DOE), Energy Solutions (commercial), Waste Control Specialists (commercial) as well as on-site disposal facilities at DOE sites like Oak Ridge, Portsmouth, Fernald (closed), Weldon Springs (closed), Hanford and Savanah River. The types of radioactive waste that can be disposed in those facilities depends on their waste acceptance criteria. WIPP has been designated for disposal of certain types of waste, specifically TRU waste. WIPP does not dispose of spent nuclear fuel or high-level wastes. Non-TRU wastes are disposed of elsewhere. As an example, LANL ships its low-level and mixed low-level wastes to out-of-state disposal facilities.

  However, with regard to TRU wastes, DOE has and continues to fulfill its remaining obligations in the Consultation and Cooperation Agreement. There is no planned expansion of the WIPP facility. WIPP is subject to the waste volume limits stipulated in the Congressionally approved Land Withdrawal Act and DOE is not proposing to expand the authorized volume capacity of 6.2 million cubic feet. Both the U.S. Environmental Protection Agency (EPA) and the State of New Mexico regulate various aspects of WIPP operations. Changes to the configuration of WIPP that may impact the performance of the repository over a 10,000 year horizon are submitted to the EPA for review and approval. Changes to WIPP that require a change to the Hazardous Waste Facility Permit or to the Groundwater Permit are submitted to the New Mexico Environmental Department (NMED) for review and approval. Additionally, DOE is required to submit a Hazardous Waste Facility Permit renewal application to NMED every 10 years. Currently, NMED is reviewing WIPP's second 10-year renewal application and a request to authorize TRU waste

emplacement in Panels 11 and 12. Panels 11 and 12 replace emplacement volumes lost due to operational conditions in Panels 1-9.

- What plan does DOE have to site and build another transuranic waste repository? If you don't have a plan, what will it take for that to happen?
  The DOE Carlsbad Field Office (CBFO) is responsible for the management and oversight of TRU waste operations at the WIPP facility. With WIPP at 40% of the waste volume limit authorized by the Land Withdrawal Act, there is no current need for additional disposal capacity for TRU waste. As WIPP gets closer to fulfilling its original intended mission by reaching its capacity limit as set by the Land Withdrawal Act, the Department of Energy (DOE) will continue to investigate alternatives for the disposal of any remaining TRU waste beyond WIPP's authorized capacity. Congressional action is required to exceed the Land Withdrawal Act volume.

- The 2020 National Academies of Science report showed that there is and will be more transuranic waste than the WIPP capacity. When will DOE start planning for an additional TRU waste repository?
  Based on current projections, WIPP has sufficient volume capacity for defense-generated TRU waste currently planned for disposal at the facility. The Annual Transuranic Waste Inventory Report (ATWIR) for 2021 that is referenced by the NAS committee includes both waste already planned for disposal at WIPP and waste that could potentially be classified as TRU in the future. Past experience suggests that a significant fraction of that waste, once excavated and characterized, may be classified as low-level radioactive waste and therefore would not be eligible for disposal at WIPP. After approximately 22 years of operation WIPP has emplaced approximately 40% of the TRU waste capacity authorized by the Land Withdrawal Act.

- Is there anyone or anything that can stop this expansion to accept plutonium waste at WIPP? You are proud of being the nation's only deep repository for TRU waste. Do you think it makes sense to have only one?
  The WIPP Land Withdrawal Act (Public Law 102-579) authorizes the WIPP facility to dispose of 6.2 million cubic feet of defense-generated transuranic waste. The Department continues to work within that limit.

  The DOE Carlsbad Field Office (CBFO) is responsible for the management and oversight of TRU waste operations at the WIPP facility. With WIPP at 40% of the waste volume limit authorized by the Land Withdrawal Act, there is no current need for additional disposal capacity for TRU waste. As WIPP gets closer to fulfilling its original intended mission by reaching its capacity limit as set by the Land Withdrawal Act, the Department of Energy (DOE) will continue to investigate alternatives for the disposal of any remaining TRU waste beyond WIPP's authorized capacity. Congressional action is required to exceed the Land Withdrawal Act volume.

  DOE has and continues to fulfill its remaining obligations in the Consultation and Cooperation Agreement. There is no planned expansion of the WIPP facility. WIPP is subject to the waste volume limits stipulated in the Congressionally approved Land Withdrawal Act and DOE is not proposing to expand the authorized volume capacity of 6.2 million cubic feet. Both the U.S.

Environmental Protection Agency (EPA) and the State of New Mexico regulate various aspects of WIPP operations. Changes to the configuration of WIPP that may impact the performance of the repository over a 10,000 year horizon are submitted to the EPA for review and approval. Changes to WIPP that require a change to the Hazardous Waste Facility Permit or to the Groundwater Permit are submitted to the New Mexico Environmental Department (NMED) for review and approval. Additionally, DOE is required to submit a Hazardous Waste Facility Permit renewal application to NMED every 10 years. Currently, NMED is reviewing WIPP's second 10-year renewal application and a request to authorize TRU waste emplacement in Panels 11 and 12. Panels 11 and 12 replace emplacement volumes lost due to operational conditions in Panels 1-9.

- What Happened to the "pilot" in Pilot Plant? Why is WIPP still the only waste repository for nuclear weapons' waste in the nation?
  With the WIPP facility currently at 40% of waste volume limit authorized by the Land Withdrawal Act, there is no current need for additional disposal capacity for transuranic (TRU) waste at this time. WIPP is just one of several federal and commercial disposal facilities for radioactive wastes across the country. These disposal facilities include the Nevada National Security Site (DOE), Energy Solutions (commercial), Waste Control Specialists (commercial) as well as on-site disposal facilities at DOE sites like Oak Ridge, Portsmouth, Fernald (closed), Weldon Springs (closed), Hanford and Savanah River. The types of radioactive waste that can be disposed in those facilities depends on their waste acceptance criteria. WIPP has been designated for disposal of TRU waste. WIPP does not dispose of spent nuclear fuel or high-level wastes. Non-TRU wastes are disposed of elsewhere. As an example, LANL ships its low-level and mixed low-level wastes to out-of-state disposal facilities.

D. WIPP transportation system safety

- How is transportation safety "enabled?"
  Since 1999, WIPP has safely traveled over 15.7 million loaded miles.

  DOE has a robust safety culture and the WIPP Transportation System is among the safest in the United States. Slides 13 through 20 from the July 7 Public meeting presentation show some of the key components of the WIPP transportation system, including packaging requirements, special driver requirements, shipment tracking and inspections, all of which were designed and developed to help ensure the overall safety of TRU waste shipments moving to WIPP. All WIPP shipments are inspected to the Commercial Vehicle Safety Alliance (CVSA) Level VI criteria and must be defect free before departure (North American Standard Level VI Inspection Program - CVSA – Commercial Vehicle Safety Alliance). Also, all TRU waste shipments to WIPP are made in Nuclear Regulatory Commission Certified Type B packages (TRUPACT-II, TRUPACT-III, Half PACT or RH-72B) all of which are designed and tested to ensure they can withstand the rigors of routine transportation as well as hypothetical accident conditions, without release of contents. Details on TRUPACT construction and testing can be found at Transuranic Waste Transportation Containers – Fact Sheet (energy.gov).
  In addition, the WIPP transportation program was recognized by the "Blue Ribbon Commission on America's Nuclear Future" and by the National Academies of Science publication "Going the Distance" as a model program and benchmark for other nuclear transportation programs.

- We have friends who have watched WIPP trucks with what appears, very unstable loads.
  WIPP TRU waste shipments are some of the most secure and safest materials transported. Additionally, the trucks are designed and configured to ensure safe and stable transportation of TRU waste to WIPP. Please see slides 13 through 20 from the July 7 Public meeting presentation show some of the key components of the WIPP transportation system, including packaging requirements, special driver requirements, shipment tracking and inspections, all of which were designed and developed to help ensure the overall safety of the program. All WIPP shipments are inspected to the Commercial Vehicle Safety Alliance (CVSA) Level VI criteria and must be defect free before departure. Also, TRU waste shipments to WIPP are made in Nuclear Regulatory Commission Certified Type B packages (TRUPACT-II, TRUPACT-III, Half PACT or RH-72B) all of which are designed and tested to ensure they can withstand the rigors of routine transportation as well as hypothetical accident conditions, without release of contents. Details on TRUPACT construction and testing can be found at Transuranic Waste Transportation Containers – Fact Sheet (energy.gov).

- Who exactly bears liability for any radioactive spills at facility or any transportation route?
  The Department of Energy is responsible for ensuring the proper cleanup of any incident or accident that could potentially impact the WIPP facility or the environment. While a "radioactive spill" during transport is extremely unlikely, cleanup of hazardous constituents, such as diesel fuel, following an incident or accident involving a TRU waste shipment enroute to WIPP would be the responsibility of the transportation carrier. Ultimate liability for incidents or accidents involving DOE programs rests with the US government with long term financial protection to US citizens provided by the Price-Anderson Amendment Act.

- DOE and its contractors will be moving the surplus plutonium from old weapons 3,300-miles across 11 states. This will last until at least 2083. Although DOE will attempt to do this as safely as possible, absolutely no accidents or mistakes can occur over this long time and distance. An accident would be catastrophic to the community where it occurs. How can DOE make this project simpler and safer?
  Since 1999, WIPP has safely traveled over 15.7 million loaded miles transporting TRU waste from the generator sites to WIPP for disposal.

  DOE has a robust safety culture and the WIPP Transportation System is among the safest in the United States. Slides 13 through 20 from the July 7 Public meeting presentation show some of the key components of the WIPP transportation system, including packaging requirements, special driver requirements, shipment tracking and inspections, all of which were designed and developed to help ensure the overall safety of TRU waste shipments moving to WIPP. All WIPP shipments are inspected to the Commercial Vehicle Safety Alliance (CVSA) Level VI criteria and must be defect free before departure (North American Standard Level VI Inspection Program - CVSA – Commercial Vehicle Safety Alliance). Also, all TRU waste shipments to WIPP are made in Nuclear Regulatory Commission Certified Type B packages (TRUPACT-II, TRUPACT-III, Half PACT or RH-72B) all of which are designed and tested to ensure they can withstand the rigors of routine transportation as well as hypothetical accident conditions, without release of contents. Details on TRUPACT construction and testing can be found at Transuranic Waste Transportation Containers – Fact Sheet (energy.gov).
  In addition, the WIPP transportation program was recognized by the "Blue Ribbon Commission

on America's Nuclear Future" and by the National Academies of Science publication "Going the Distance" as a model program and benchmark for other nuclear transportation programs.

- You state that DOE's transportation is the "safest in the world". Please provide the data and references to back this up.
  Since 1999, WIPP has safely traveled over 15.7 million loaded miles.

  DOE has a robust safety culture and the WIPP Transportation System is among the safest in the United States. Slides 13 through 20 from the July 7 Public meeting presentation show some of the key components of the WIPP transportation system, including packaging requirements, special driver requirements, shipment tracking and inspections, all of which were designed and developed to help ensure the overall safety of TRU waste shipments moving to WIPP. All WIPP shipments are inspected to the Commercial Vehicle Safety Alliance (CVSA) Level VI criteria and must be defect free before departure (North American Standard Level VI Inspection Program - CVSA – Commercial Vehicle Safety Alliance). Also, all TRU waste shipments to WIPP are made in Nuclear Regulatory Commission Certified Type B packages (TRUPACT-II, TRUPACT-III, Half PACT or RH-72B) all of which are designed and tested to ensure they can withstand the rigors of routine transportation as well as hypothetical accident conditions, without release of contents. Details on TRUPACT construction and testing can be found at Transuranic Waste Transportation Containers – Fact Sheet (energy.gov).
  In addition, the WIPP transportation program was recognized by the "Blue Ribbon Commission on America's Nuclear Future" and by the National Academies of Science publication "Going the Distance" as a model program and benchmark for other nuclear transportation programs.

- Why should we trust an agency that has allowed multiple casks (or drums) of highly toxic waste at LANL to deteriorate to such an extent that they cannot be moved yet are a present danger - with no plans for how to address the issue?
  Waste drums that are sent to WIPP for permanent disposal are required to meet specific integrity requirements, before they can be shipped to WIPP. If the drums do not meet the requirements, they must be either be over packed or the waste repackaged into a new container. We recommend you contact LANL directly with questions related to their waste management program.

- Could it be transported by train?
  Rail was studied as an option to transport radioactive waste to WIPP. However, the decision was made to transport waste using tractor trailers and Nuclear Regulatory Commission-approved transportation casks.

- Given the severity of toxicity of plutonium in that even a microscopic amount inhaled can cause cancer, how could there be any adequate protection of persons and property given an unexpected accident?
  WIPP only transports defense-generated transuranic waste that meets the WIPP Waste Acceptance Criteria and uses routes that have chosen in conjunction with states and tribal nations that are on those routes. Questions related to powered plutonium shipments should be directed to Mr. Harris Walker with the National Nuclear Security Administration at harris.walker@nnsa.doe.gov

- What are the security requirements for WIPP-bound Type B shipping containers? Are they designed to withstand anti-tank weaponry? Shaped charges? High explosives? Incendiaries?
  The Nuclear Regulatory Commission has required tests that a package must pass to meet the Type B criteria. These tests include a 30-foot drop test, a puncture test, a burn test and a pressure test. There are no requirements for packages to undergo any type of ballistics testing. Please refer to Slides 13 through 20 from the July 7 Public meeting presentation and the Transuranic Waste Transportation Containers – Fact Sheet (energy.gov).

- Why was the SLB2 shipping container not shown?
  The SLB2's are certified Type A containers and are shipped in the TRUPACT-III. A picture is provided below. Also refer the Transuranic Waste Transportation Containers – Fact Sheet (energy.gov).

- What does the funding cover in case of a severe accident will property damage and personal injury costs be covered? For how long will coverage of losses from an accident be covered?
  In the event of an accident involving a WIPP shipment, the transportation carrier is responsible for any damage that might occur.

- NRC QA on transport containers? Holtec containers violate QA badly
  The Nuclear Regulatory Commission has required tests that a package must pass to meet the Type B criteria. These tests include a 30-foot drop test, a puncture test, a burn test and a pressure test. Please refer to Slides 13 through 20 from the July 7 Public meeting presentation and the WIPP transportation fact sheet.

- What happens if weather conditions change dramatically after shipment has left the location and is halfway to its destination? Do they travel during the day or night?
  Shipments come directly from the generator site to WIPP using a driver team consisting of two drivers, stopping for inspections, fuel and driver comfort. WIPP is very conscious of possible weather events our trucks may encounter on their route to WIPP. Trucks will stop for bad weather at a secure location, such as a military base; a forecast of severe weather along the route will delay departure of the shipment.

- Have there ever been any terrorist threats against shipments? What kind of attack could they withstand?
  No, WIPP has not experienced terrorist threats for any shipment.

- What is the worst-case scenario of an accident at WIPP or enroute? What is the mitigation plan for those scenarios?
  All transportation casks used to transport TRU waste to WIPP are NRC-certified Type B casks. Type B casks must meet stringent NRC design, fabrication, and operation and maintenance requirements. Designs for the Type B casks must withstand normal transportation conditions, such as exposure to high and low temperatures, varying external pressure, and impact from debris.

  In addition, NRC certification requires Type B casks to withstand a series of hypothetical accident scenarios without failing. The NRC regulations (10 Code of Federal Regulations Part 71) allow computer-simulated, scale model or full-scale model testing to demonstrate a transportation cask's suitability for certification. A combination of these methods is commonly used. Extensive full-scale model testing was conducted at Sandia National Laboratories. Additional information on the containers can be found at Transuranic Waste Transportation Containers – Fact Sheet (energy.gov)

- How many accidents have occurred at WIPP or with transportation to the site since WIPP started operating in 1999 and catalogue the types and seriousness of the accidents?
  The safety and health of our employees, the public and the environment are WIPP's number one priority. There have been two emergency events at WIPP, both occurring in 2014. One involved a piece of mining equipment catching fire in the underground, the second was a radiological release in the underground. Trace levels of radiological components did reach the surface during the second event, however, no exposure above allowed limits occurred. Additional details of the events can be found on the WIPP website here. Only minor traffic accidents have occurred with loaded WIPP shipments; none challenged the containment integrity of the Type B shipping containers. Additionally, none have impacted human health of the environment due to, or resulted in, a release of radioactive material. All shipments occur in Nuclear Regulatory Commission Certified Type B packages (TRUPACT-II, TRUPACT-III, HalfPACT or RH-72B). DOE has a robust safety culture and the WIPP Transportation System is among the safest in the United States. Slides 13 through 20 from the July 7 Public meeting presentation
  show some of the key components of the WIPP transportation system, including packaging requirements, special driver requirements, shipment tracking and inspections, all of which were designed and developed to help ensure the overall safety of TRU waste shipments moving to WIPP.

- Are these shipments on US 285 in NM?
  Yes. Portions of US 285 are designated routes for WIPP shipments. Please see slide 29 from the July 7 public meeting for designated WIPP routes.

- DOE has demonstrated its lax safety culture, even while it claims to put safety first. How can the public trust DOE to improve safety to the point that no accident with a release will occur during these shipment over the rest of the century and the tens of thousands of additional shipments?
  Since 1999, WIPP has safely traveled over 15.7 million loaded miles.

DOE has a robust safety culture and the WIPP Transportation System is among the safest in the United States. Slides 13 through 20 from the July 7 Public meeting presentation show some of the key components of the WIPP transportation system, including packaging requirements, special driver requirements, shipment tracking and inspections, all of which were designed and developed to help ensure the overall safety of TRU waste shipments moving to WIPP. All WIPP shipments are inspected to the Commercial Vehicle Safety Alliance (CVSA) Level VI criteria and must be defect free before departure (North American Standard Level VI Inspection Program - CVSA – Commercial Vehicle Safety Alliance). Also, all TRU waste shipments to WIPP are made in Nuclear Regulatory Commission Certified Type B packages (TRUPACT-II, TRUPACT-III, Half PACT or RH-72B) all of which are designed and tested to ensure they can withstand the rigors of routine transportation as well as hypothetical accident conditions, without release of contents. Details on TRUPACT construction and testing can be found at Transuranic Waste Transportation Containers – Fact Sheet (energy.gov).
In addition, the WIPP transportation program was recognized by the "Blue Ribbon Commission on America's Nuclear Future" and by the National Academies of Science publication "Going the Distance" as a model program and benchmark for other nuclear transportation programs.

E. Authorized waste volume for WIPP

- DOE's new plans will expand WIPP to more than twice the volume that it currently is. That is much more than the space needed to replace what was lost due to the 2014 explosion. What new waste will take up that space?
  DOE has and continues to fulfill its remaining obligations in the Consultation and Cooperation Agreement. There is no planned expansion of the WIPP facility. There is no planned expansion of the WIPP facility. WIPP is subject to the waste volume limits stipulated in the Congressionally approved Land Withdrawal Act and DOE is not proposing to expand the authorized volume capacity of 6.2 million cubic feet. Both the U.S. Environmental Protection Agency (EPA) and the State of New Mexico regulate various aspects of WIPP operations. Changes to the configuration of WIPP that may impact the performance of the repository over a 10,000 year horizon are submitted to the EPA for review and approval. Changes to WIPP that require a change to the Hazardous Waste Facility Permit or to the Groundwater Permit are submitted to the New Mexico Environmental Department (NMED) for review and approval. Additionally, DOE is required to submit a Hazardous Waste Facility Permit renewal application to NMED every 10 years. Currently, NMED is reviewing WIPP's second 10-year renewal application and a request to authorize TRU waste emplacement in Panels 11 and 12. Panels 11 and 12 replace emplacement volumes lost due to operational conditions in Panels 1-9.

  While the number of panels in the underground has increased, the total volume of transuranic waste authorized for disposal by the Land Withdrawal Act is not changing.

  The WIPP facility is currently at 40% of its waste volume limit as authorized by the Land Withdrawal Act,

- Containers -
  How is DOE counting these container deliveries to WIPP?

Is it drum equivalents?
Is it the outer container that you are counting?
How many containers remain to meet WIPP's capacity?
DOE tracks waste in a variety of different ways, depending on the applicable requirement or purpose.

- When DOE discusses shipments, this is the number of trucks shipping waste from a generator site to WIPP. One shipment is any truck delivering TRU waste to WIPP, regardless the number of Type B shipping packages (e.g., TURPACT-II, HalfPACT, TRUPACT-III and RH-72B) on the trailer or volume of waste in the Type B shipping package.
- When calculating the volume of waste for compliance against the LWA, DOE uses the volume of the inner most waste container.
- When calculating the volume of waste for the purpose of reporting in the permit, the volume of the outermost waste container is used.
- DOE also tracks the total number of containers disposed of in each panel or room.

Given the different container types (e.g., 55-gallon drums, 85-gallon drums, 100-gallon drums, standard waste boxes, ten-drum over packs, standard large box 2's, or shielded container assemblies) it is not possible to give an accurate estimate on the number of containers remaining to meet WIPP's LWA authorized volume of 6.2m ft^3. Currently, WIPP is 40% full and has emplaced over 190,000 containers of TRU waste in the underground.

- In your listing of number of shipment containers that have been placed, you did not indicate on the slide or the narrative that you have painstakingly recorded an inventory of all the containers (where from, when placed, what room, etc.). Why?
  That was not discussed, as the presentation was intended to be a general WIPP overview. You are correct, WIPP carefully documents where each drum is placed in the underground. This includes the panel, the room in the panel, the row and the location in that specific row. As such, WIPP is able to track where each waste container is in the underground and what site it is from, until waste is permanently entombed.

- Has a Full Environmental Impact Statement been prepared prior to the "mining drifts to the west", on slide 22?
  In compliance with the NEPA regulations for the proposed action to excavate and use Replacement Panels 11 and 12 (which includes drifts and other mining activities), DOE completed a NEPA Supplement Analysis in 2021. The 2021 Supplement Analysis specifically evaluated the potential environmental impacts of the mining and TRU waste disposal involved for Replacement Panels 11 and 12 to replace the disposal capacity in Panels 1-9 that is not being used for waste emplacement. The 2021 Supplement Analysis documented the DOE's determination that the proposed action to excavate and use two Replacement Panels 11 and 12 (and activities, such as the drifts, associated with excavation of the replacement panels) in the underground at the WIPP facility do not represent a substantial change and do not impact the environment in a significant manner not already evaluated.

- Is it true that space for LANL material is limited because of the strategy to fill the space with waste from elsewhere and inefficiencies so that WIPP could be expanded?
  No. DOE has and continues to fulfill its remaining obligations in the Consultation and Cooperation Agreement. There is no planned expansion of the WIPP facility. There is no planned expansion of the WIPP facility. WIPP is subject to the waste volume limits stipulated in

the Congressionally approved Land Withdrawal Act and DOE is not proposing to expand the authorized volume capacity of 6.2 million cubic feet. Both the U.S. Environmental Protection Agency (EPA) and the State of New Mexico regulate various aspects of WIPP operations. Changes to the configuration of WIPP that may impact the performance of the repository over a 10,000-year horizon are submitted to the EPA for review and approval. Changes to WIPP that require a change to the Hazardous Waste Facility Permit or to the Groundwater Permit are submitted to the New Mexico Environmental Department (NMED) for review and approval. Additionally, DOE is required to submit a Hazardous Waste Facility Permit renewal application to NMED every 10 years. Currently, NMED is reviewing WIPP's second 10-year renewal application and a request to authorize TRU waste emplacement in Panels 11 and 12. Panels 11 and 12 replace emplacement volumes lost due to operational conditions in Panels 1-9.

- How is expanding the type of waste accepted at WIPP not a violation of past promises as well as a violation of environmental justice principles?
  DOE has and continues to fulfill its remaining obligations in the Consultation and Cooperation Agreement. There is no planned expansion of the WIPP facility. There is no planned expansion of the WIPP facility. WIPP is subject to the waste volume limits stipulated in the Congressionally approved Land Withdrawal Act and DOE is not proposing to expand the authorized volume capacity of 6.2 million cubic feet. Both the U.S. Environmental Protection Agency (EPA) and the State of New Mexico regulate various aspects of WIPP operations. Changes to the configuration of WIPP that may impact the performance of the repository over a 10,000-year horizon are submitted to the EPA for review and approval. Changes to WIPP that require a change to the Hazardous Waste Facility Permit or to the Groundwater Permit are submitted to the New Mexico Environmental Department (NMED) for review and approval. Additionally, DOE is required to submit a Hazardous Waste Facility Permit renewal application to NMED every 10 years. Currently, NMED is reviewing WIPP's second 10-year renewal application and a request to authorize TRU waste emplacement in Panels 11 and 12. Panels 11 and 12 replace emplacement volumes lost due to operational conditions in Panels 1-9. Only TRU waste that meets the WIPP Waste Acceptance Criteria (WAC) can be disposed of at WIPP.

- Why are the increased shipments not being placed in new repositories?
  WIPP is just one of several federal and commercial disposal facilities for radioactive wastes across the country. These disposal facilities include the Nevada National Security Site (DOE), Energy Solutions (commercial), Waste Control Specialists (commercial) as well as on-site disposal facilities at DOE sites like Oak Ridge, Portsmouth, Fernald (closed), Weldon Springs (closed), Hanford and Savanah River. The types of radioactive waste that can be disposed in those facilities depends on their waste acceptance criteria. WIPP has been designated for disposal of certain types of waste, specifically TRU waste. WIPP does not dispose of spent nuclear fuel or high-level wastes. Non-TRU wastes are disposed of elsewhere. As an example, LANL ships its low-level and mixed low-level wastes to out-of-state disposal facilities.

- What is the lifespan of containers containing plutonium?
  DOE does not rely on the integrity of its emplaced containers to ensure the long-term performance of WIPP. DOE only relies on the integrity of the container while the waste disposal room is open. Once a disposal room is closed, the salt begins the process of safely encapsulating the waste forever.

- What are the warranties on each type of container and what happens if they fail? How will they be replaced?
  DOE does not rely on the integrity of its emplaced containers to ensure the long-term performance of WIPP. DOE only relies on the integrity of the container while the waste disposal room is open. Once a disposal room is closed, the salt begins the process of safely encapsulating the waste forever.

- Outfitting and Certification of Panel 8 is scheduled to be completed by May 2022
  Panel 8 was mined taller than the previous panels. Will Panel 8 hold more waste?
  What becomes of the extra space?
  Will Panel 8 take more MgO?
  No, Panel 8 will not hold more waste and more MgO will not be required. This is restated in WIPP's Hazardous Waste Permit. Panel 8 was mined taller than previous panels due to the events of 2014. Panel 8 was being mined in 2014, and minimal ground control had been installed at the time the events occurred. When mining resumed, the decision was made to increase the height of the panel. This allowed us to re-mine the panel in a new salt layer that had not previously been disturbed.

- Are you considering the Utility Shafts reasons for expanding the mission of WIPP?
  The Utility Shaft is part of the overall new permanent ventilation system at WIPP, it will work in conjunctions with the SSCVS to provide additional airflow to the WIPP underground, allowing to safely complete the permanent disposal of 6.2 million cubic feet of transuranic waste authorized by the WIPP Land Withdrawal Act.

- What other plans were considered before deciding on a WIPP expansion over the acceptance of the new type of waste?
  DOE has and continues to fulfill its remaining obligations in the Consultation and Cooperation Agreement. There is no planned expansion of the WIPP facility. There is no planned expansion of the WIPP facility. WIPP is subject to the waste volume limits stipulated in the congressionally approved Land Withdrawal Act and DOE is not proposing to expand the authorized volume capacity of 6.2 million cubic feet. Both the U.S. Environmental Protection Agency (EPA) and the State of New Mexico regulate various aspects of WIPP operations. Changes to the configuration of WIPP that may impact the performance of the repository over a 10,000 year horizon are submitted to the EPA for review and approval. Changes to WIPP that require a change to the Hazardous Waste Facility Permit or to the Groundwater Permit are submitted to the New Mexico Environmental Department (NMED) for review and approval. Additionally, DOE is required to submit a Hazardous Waste Facility Permit renewal application to NMED every 10 years. Currently, NMED is reviewing WIPP's second 10-year renewal application and a request to authorize TRU waste emplacement in Panels 11 and 12. Panels 11 and 12 replace emplacement volumes lost due to operational conditions in Panels 1-9.

  While the number of panels in the underground has increased, the total volume of transuranic waste authorized for disposal by the Land Withdrawal Act is not changing.

  WIPP has been designated for disposal of TRU waste. WIPP does not dispose of spent nuclear fuel or high-level wastes. Non-TRU wastes are disposed of elsewhere. As an example, LANL ships its low-level and mixed low-level wastes to out-of-state disposal facilities.

- Does DOE have unilateral decision power on the WIPP expansion or does it need NM approval?
  DOE has and continues to fulfill its remaining obligations in the Consultation and Cooperation Agreement. There is no planned expansion of the WIPP facility. There is no planned expansion of the WIPP facility. WIPP is subject to the waste volume limits stipulated in the Congressionally approved Land Withdrawal Act and DOE is not proposing to expand the authorized volume capacity of 6.2 million cubic feet. Both the U.S. Environmental Protection Agency (EPA) and the State of New Mexico regulate various aspects of WIPP operations. Changes to the configuration of WIPP that may impact the performance of the repository over a 10,000 year horizon are submitted to the EPA for review and approval. Changes to WIPP that require a change to the Hazardous Waste Facility Permit or to the Groundwater Permit are submitted to the New Mexico Environmental Department (NMED) for review and approval. Additionally, DOE is required to submit a Hazardous Waste Facility Permit renewal application to NMED every 10 years. Currently, NMED is reviewing WIPP's second 10-year renewal application and a request to authorize TRU waste emplacement in Panels 11 and 12. Panels 11 and 12 replace emplacement volumes lost due to operational conditions in Panels 1-9.

  While the number of panels in the underground has increased, the total volume of transuranic waste authorized for disposal by the Land Withdrawal Act is not changing.

- Was there a public notice, hearing or public input to making WIPP "permanent?"
  During the process that originally selected WIPP as a disposal facility for the 6.2 million cubic feet of defense transuranic waste, several other alternatives were considered. This process was compliant with the National Environmental Policy Act and other federal regulations, multiple public meetings were conducted during the original siting process for WIPP.

- It appears as though you have already expanded the WIPP site beyond its 2024 closure date. What public processes have you followed to gain legal authorization for this new mission?
  DOE has and continues to fulfill its remaining obligations in the Consultation and Cooperation Agreement. There is no planned expansion of the WIPP facility. There is no planned expansion of the WIPP facility. WIPP is subject to the waste volume limits stipulated in the Congressionally approved Land Withdrawal Act and DOE is not proposing to expand the authorized volume capacity of 6.2 million cubic feet. Both the U.S. Environmental Protection Agency (EPA) and the State of New Mexico regulate various aspects of WIPP operations. Changes to the configuration of WIPP that may impact the performance of the repository over a 10,000 year horizon are submitted to the EPA for review and approval. Changes to WIPP that require a change to the Hazardous Waste Facility Permit or to the Groundwater Permit are submitted to the New Mexico Environmental Department (NMED) for review and approval. Additionally, DOE is required to submit a Hazardous Waste Facility Permit renewal application to NMED every 10 years. Currently, NMED is reviewing WIPP's second 10-year renewal application and a request to authorize TRU waste emplacement in Panels 11 and 12. Panels 11 and 12 replace emplacement volumes lost due to operational conditions in Panels 1-9.

  While the number of panels in the underground has increased, the total volume of transuranic waste authorized for disposal by the Land Withdrawal Act is not changing.

- What percent of waste from Los Alamos is transuranic?

The percentage of legacy Los Alamos shipments for fiscal year 2022 is 56% transuranic waste and 44% mixed/low-level waste.

- I thought scientist follow the science does not seem so in this case. How is it possible that the waste will increase in volume, in only one state—here in N.M. despite the promise this would be temporary
  WIPP is designed as a permanent disposal facility for U.S. defense generated transuranic waste. The WIPP Land Withdrawal Act (Public Law 102-579) authorizes the WIPP facility to dispose of 6.2 million cubic feet of defense-generated transuranic waste. The Department continues to work within that limit.

  WIPP is just one of several federal and commercial disposal facilities for radioactive wastes across the country. These disposal facilities include the Nevada National Security Site (DOE), Energy Solutions (commercial), Waste Control Specialists (commercial) as well as on-site disposal facilities at DOE sites like Oak Ridge, Portsmouth, Fernald (closed), Weldon Springs (closed), Hanford and Savanah River. The types of radioactive waste that can be disposed in those facilities depends on their waste acceptance criteria. WIPP has been designated for disposal of certain types of waste, specifically TRU waste. WIPP does not dispose of spent nuclear fuel or high-level wastes. Non-TRU wastes are disposed of elsewhere. As an example, LANL ships its low-level and mixed low-level wastes to out-of-state disposal facilities

- New plutonium pit production at LANL for new nuclear warheads will produce a huge new waste stream. Will that waste stream, combined with the original waste planned for WIPP and the additional surplus plutonium waste, fit in the space that WIPP is allowed to fill?
  Yes, current projections show that these wastes are within the LWA authorized volume of 6.2 million cubic feet. DOE publishes annual updates to its volume estimates in the Annual Transuranic Waste Inventory Report. The WIPP Annual TRU Waste Inventory Report (ATWIR) includes volume and generation date estimates for TRU waste destined for WIPP, as well as for waste that MAY be classified as TRU waste and may eventually be eligible for disposal at WIPP. While these are the best estimates, based on current and planned inventories, some variation in the actual volumes and date of generation is anticipated. The ATWIR is made available to the public annually near the end of January each year.

F. WIPP's important national mission

- Are there concerns with global warming, that radioactive colloids will be passed into drinking water?
  WIPP is located in the middle of a 2,000-foot-thick salt formation that has remained stable for millions of years. Salt deposits demonstrate the absence of flowing fresh water that could move radionuclides to the surface. The WIPP performance assessment, reviewed and approved by the US Environmental Protection Agency, demonstrate compliance that the transuranic waste emplaced at WIPP will remain within applicable compliance parameters over a 10,000-year period of performance.

- Are you aware that over 1,100 New Mexican residents signed a petition asking the Governor to protect them from the proposed expansion of WIPP? Are you interested in their concerns?
  Yes, we are aware of the petition, and we are interested in these concerns. This is part of the reason we are conducting Community Forum meetings across New Mexico. WIPP considers open and honest public engagement a cornerstone of its mission and will continue to make strides to have discussions with all interested stakeholders about their concerns.

- Why has the TRU from LANL not having priority for removal? We cannot continue to produce uranium/plutonium waste when we don't have a repository. Why do you think WIPP in New Mexico is the repository for all kinds of TRU and high-level waste?
  WIPP continues to work with LANL to increase the number of shipments for their site. WIPP is currently shipping waste from LANL as it becomes certified and available for shipment. The WIPP Land Withdrawal Act specifies that WIPP can only dispose of defense-generated TRU waste. High Level Waste is not permitted for disposal at WIPP.

- Would it not be safer to leave the nuclear pollution on the sites where it is rather than transporting? Also, perhaps less expensive?
  No, WIPP is designed to permanently isolate and safely dispose of TRU waste.

- How much does all this construction cost taxpayers?
  The most recent estimates put the cost of the Safety Significant Confinement Ventilation System at about $500 million and the Utility Shaft is at $200 million. Supply chain issues due to COVID are being evaluated to determine cost increases. The site also has almost two dozen infrastructure improvement projects. In all, DOE will spend approximately $1 billion over the next 10 years to improve infrastructure so WIPP can continue to safely and reliably operate until its mission is fulfilled as specified in the Land Withdrawal Act.

- How long does the waste at WIPP remain radioactive?
  All TRU waste disposed at WIPP is long-lived, which is why DOE made the decision to dispose of this material in a deep-geologic repository. For example, plutonium waste has a half-life of 24,000 years, meaning it takes that long for half of the material to decay into a more stable substance. As a general rule, it takes about 10 half-lives for material to fully decay. Additional information can be found at https://www.epa.gov/sites/default/files/2015-05/documents/402-k-10-008.pdf.

- Why do we continue to spend billions on weapons of war instead of addressing the need of the citizens?
  WIPP serves a critical function to the citizens of the United States of America by disposing of transuranic wastes at DOE facilities across the nation. As a result, WIPP removes the risks associated with TRU waste at these DOE sites and their surrounding communities, safely transports the waste to WIPP using the safest method of transportation in the United States so that the waste can be permanently disposed and encapsulated within salt half a mile below the surface.

- Why do our congressional representatives approve of this direction in spite of our Archbishop John C. Wester asking that we work for peace instead of preparing for war?

WIPP serves a critical function to the citizens of the United States of America by disposing of transuranic wastes at DOE facilities across the nation. As a result, WIPP removes the risks associated with TRU waste at these DOE sites and their surround communities, safely transports the waste to WIPP using the safest method of transportation in the United States so that the waste can be permanently disposed and encapsulated within salt half a mile below the surface.

- We would not need to expand WIPP if stopped producing waste!
  WIPP serves a critical function to the citizens of the United States of America by disposing of transuranic wastes at DOE facilities across the nation. As a result, WIPP removes the risks associated with TRU waste at these DOE sites and their surround communities, safely transports the waste to WIPP using the safest method of transportation in the United States so that the waste can be permanently disposed and encapsulated within salt half a mile below the surface.

- What obligates NM to receive plutonium pit waste?
  DOE has and continues to fulfill its remaining obligations in the Consultation and Cooperation Agreement. There is no planned expansion of the WIPP facility. There is no planned expansion of the WIPP mission. WIPP is subject to the waste volume limits stipulated in the congressionally approved Land Withdrawal Act and DOE is not proposing to expand the authorized volume capacity of 6.2 million cubic feet. Both the U.S. Environmental Protection Agency (EPA) and the State of New Mexico regulate various aspects of WIPP operations. Changes to the configuration of WIPP that may impact the performance of the repository over a 10,000 year horizon are submitted to the EPA for review and approval. Changes to WIPP that require a change to the Hazardous Waste Facility Permit or to the Groundwater Permit are submitted to the New Mexico Environmental Department (NMED) for review and approval. Additionally, DOE is required to submit a Hazardous Waste Facility Permit renewal application to NMED every 10 years. Currently, NMED is reviewing WIPP's second 10-year renewal application and a request to authorize TRU waste emplacement in Panels 11 and 12. Panels 11 and 12 replace emplacement volumes lost due to operational conditions in Panels 1-9.

  While the number of panels in the underground has increased, the total volume of transuranic waste authorized for disposal by the Land Withdrawal Act is not changing.

- What legal recourse does DOE have if NM refuses to receive additional plutonium waste?
  DOE would be required to work with New Mexico stakeholders and regulating agencies to resolve any issues and disagreement do that legal remedies would not be necessary.

- Does DOE believe that the environment department has the authority to deny the new end date?
  WIPP works very closely with the New Mexico Environment Department (NMED), who has regulatory oversight of the WIPP facility. WIPP's permit with NMED is for the hazardous components associated with the waste and given to states by the Resource Conservation and Recovery Act. WIPP values its partnership with NMED and strives to work together on all aspects of the project.

  The WIPP Land Withdrawal Act (Public Law 102-579) authorizes the WIPP facility to dispose of 6.2 million cubic feet of defense-generated transuranic waste. This law does not stipulate a

time by which this mission must completed, or limit the amount of disposal space that may be used within the 16 square mile WIPP land withdrawal area. The WIPP Annual TRU Waste Inventory Report (ATWIR) includes volume and generation date estimates for TRU waste destined for WIPP, as well as for waste that MAY be classified as TRU waste and may eventually be eligible for disposal at WIPP. While these are the best estimates, based on current and planned inventories, some variation in the actual volumes and date of generation is anticipated. The ATWIR is made available to the public annually near the end of January each year.

G. Expected number of WIPP shipments

- Why have extra shipment capacity shown in the graph on pg 25?
  The graph on slide 25 shows potential capacity of WIPP shipments increasing after the new permanent ventilation system goes into operations. It is meant to show with the increased airflow in the underground, WIPP could support more than 680 shipments/year (~ 17 shipments/week) if there was a need by generator sites. You can find the presentation at https://wipp.energy.gov/Library/documents/2022/WIPP_Community_Forum_Santa_Fe.pdf

- 10-12 shipments per week. Where to Where?
  Shipments come from DOE generator sites throughout the nation along designated transportation routes; most current shipments come from Los Alamos, Idaho, Oak Ridge in Tennessee and the Savannah River Site in Aiken, SC.

- What is the expected number of shipments per week in FY32, FY42, and FY52?
  The number of shipments for these timeframes is still being calculated; however, they are expected to be lower than the shipping rates planned over the next 10 years due to the volume of available TRU waste. The WIPP Annual TRU Waste Inventory Report (ATWIR) includes volume and generation date estimates for TRU waste destined for WIPP, as well as for waste that MAY be classified as TRU waste and may eventually be eligible for disposal at WIPP. While these are the best estimates, based on current and planned inventories, some variation in the actual volumes and date of generation is anticipated. The ATWIR is made available to the public annually near the end of January each year.

- Will the number of shipments per week grow, shrink, or remain stable over the next 60 years?
  Once WIPP resumes steady state shipments, shipping rates are expected to remain consistent with the date on slide #25 for approximately 10 years and then shipments begin to decrease.

H. Radioactive waste disposal nationwide

- What are DOE's plans to address long-term disposition of high-level waste created by the nuclear weapons complex?
  Since 2016 DOE has been working on re-evaluating the definition of High-Level Waste (HLW) and conducting an Environmental Assessment on the impacts of disposing of some of the lower activity forms of HLW in commercial low-level radioactive waste disposal facilities. More detailed information can be found at High-Level Radioactive Waste (HLW) Interpretation | Department of Energy.

The definition of transuranic waste from the WIPP Land Withdrawal Act (LWA) is as follows:
The term "transuranic waste" means waste containing more than 100 nanocuries of alpha-emitting transuranic isotopes per gram of waste, with half-lives greater than 20 years, except for—
(A) high-level radioactive waste;
(B) waste that the Secretary has determined, with the concurrence of the Administrator, does not need the degree of isolation required by the disposal regulations; or
(C) waste that the Nuclear Regulatory Commission has approved for disposal on a case-by-case basis in accordance with part 61 of title 10, Code of Federal Regulations.

As indicated in the definitions found in section 2 and the specific prohibition in section 12 of the LWA, waste classified as HLW is prohibited from being disposed of at WIPP. Any changes to the types of waste that can be accepted for disposal at WIPP would require Congressional action.

- Why is New Mexico the only state with a nuclear waste repository? Taking radioactive waste from all over the country and possibly other countries?
  With the WIPP facility currently at 40% of waste volume limit authorized by the Land Withdrawal Act, there is no current need for additional disposal capacity for transuranic (TRU) waste at this time. WIPP is just one of several federal and commercial disposal facilities for radioactive wastes across the country. These disposal facilities include the Nevada National Security Site (DOE), Energy Solutions (commercial), Waste Control Specialists (commercial) as well as on-site disposal facilities at DOE sites like Oak Ridge, Portsmouth, Fernald (closed), Weldon Springs (closed), Hanford and Savanah River. The types of radioactive waste that can be disposed in those facilities depends on their waste acceptance criteria. WIPP has been designated for disposal of certain types of waste, specifically TRU waste. WIPP does not dispose of spent nuclear fuel or high-level wastes. Non-TRU wastes are disposed of elsewhere. As an example, LANL ships its low-level and mixed low-level wastes to out-of-state disposal facilities.

- The government has a long history of breaking promises that are sacred trusts. Our Indigenous brothers and sisters know this well. Colonization continues through this process to bring all nuclear waste to New Mexico after people of this state were promised that the current WIPP site would be it. Our state is a sacrifice zone… Why is New Mexico continually chosen? Is it because we have so many people of color and are one of the poorest states in the country?

  WIPP is just one of several federal and commercial disposal facilities for radioactive wastes across the country. These disposal facilities include the Nevada National Security Site (DOE), Energy Solutions (commercial), Waste Control Specialists (commercial) as well as on-site disposal facilities at DOE sites like Oak Ridge, Portsmouth, Fernald (closed), Weldon Springs (closed), Hanford and Savanah River. The types of radioactive waste that can be disposed in those facilities depends on their waste acceptance criteria. WIPP has been designated for disposal of certain types of waste, specifically TRU waste. WIPP does not dispose of spent nuclear fuel or high-level wastes. Non-TRU wastes are disposed of elsewhere. As an example, LANL ships its low-level and mixed low-level wastes to out-of-state disposal facilities

  With the WIPP facility currently at 40% of waste volume limit authorized by the Land Withdrawal Act, there is no current need for additional disposal capacity for transuranic (TRU) waste at this time.

- I remember in the 50s, NM was designated on a map as the National Sacrifice Area… this still seems true and its Environmental Injustice because we are a poor state of Native and Brown populations. Is this still a behind the scenes observation of our position - the one stop shop for all things nuclear?
  WIPP is just one of several federal and commercial disposal facilities for radioactive wastes across the country. These disposal facilities include the Nevada National Security Site (DOE), Energy Solutions (commercial), Waste Control Specialists (commercial) as well as on-site disposal facilities at DOE sites like Oak Ridge, Portsmouth, Fernald (closed), Weldon Springs (closed), Hanford and Savanah River. The types of radioactive waste that can be disposed in those facilities depends on their waste acceptance criteria. WIPP has been designated for disposal of certain types of waste, specifically TRU waste. WIPP does not dispose of spent nuclear fuel or high-level wastes. Non-TRU wastes are disposed of elsewhere. As an example, LANL ships its low-level and mixed low-level wastes to out-of-state disposal facilities

  With the WIPP facility currently at 40% of waste volume limit authorized by the Land Withdrawal Act, there is no current need for additional disposal capacity for transuranic (TRU) waste at this time.

- What are other alternatives for storing the waste other than salt mines? Is the criteria allow for the development of a fair and diversified economy to different areas?
  Several alternatives that were discussed during the scoping process for the 1997 WIPP Disposal Phase Final SEIS-II (DOE/EIS-0026-S2), are described in Chapter 3 in this 1997 NEPA document. The other alternatives included but were not limited to transmutation, disposal in space, sub seabed disposal, deep borehole disposal, and geologic repositories at sites other than WIPP. These and other alternatives are described in Chapter 3 of the 1997 WIPP Final SEIS-II (DOE/EIS-0026-S2) and depending on the alternative and generally speaking a determination was made that they were not technically viable, would not adequately or economically meet DOE's need to safely dispose of TRU waste in a timely manner, involve additional environmental and policy concerns that would need to be accommodated, or were otherwise unreasonable in the present context.

- Is NM being setup to receive all nuclear weapons waste?
  With the WIPP facility currently at 40% of waste volume limit authorized by the Land Withdrawal Act, there is no current need for additional disposal capacity for transuranic (TRU) waste at this time. WIPP is just one of several federal and commercial disposal facilities for radioactive wastes across the country. These disposal facilities include the Nevada National Security Site (DOE), Energy Solutions (commercial), Waste Control Specialists (commercial) as well as on-site disposal facilities at DOE sites like Oak Ridge, Portsmouth, Fernald (closed), Weldon Springs (closed), Hanford and Savanah River. The types of radioactive waste that can be disposed in those facilities depends on their waste acceptance criteria. WIPP has been designated for disposal of certain types of waste, specifically TRU waste. WIPP does not dispose of spent nuclear fuel or high-level wastes. Non-TRU wastes are disposed of elsewhere. As an example, LANL ships its low-level and mixed low-level wastes to out-of-state disposal facilities.

- When will DOE begin fair placement of permanent repositories across the country?
  With the WIPP facility currently at 40% of waste volume limit authorized by the Land Withdrawal Act, there is no current need for additional disposal capacity for transuranic (TRU)

waste at this time. WIPP is just one of several federal and commercial disposal facilities for radioactive wastes across the country. These disposal facilities include the Nevada National Security Site (DOE), Energy Solutions (commercial), Waste Control Specialists (commercial) as well as on-site disposal facilities at DOE sites like Oak Ridge, Portsmouth, Fernald (closed), Weldon Springs (closed), Hanford and Savanah River. The types of radioactive waste that can be disposed in those facilities depends on their waste acceptance criteria. WIPP has been designated for disposal of certain types of waste, specifically TRU waste. WIPP does not dispose of spent nuclear fuel or high-level wastes. Non-TRU wastes are disposed of elsewhere. As an example, LANL ships its low-level and mixed low-level wastes to out-of-state disposal facilities.

- What happened to your promise to end this project in 2024? How did NM become the nuclear waste dump for the whole country?
  The WIPP Land Withdrawal Act (Public Law 102-579) authorizes the WIPP facility to dispose of 6.2 million cubic feet of defense-generated transuranic waste. This law does not stipulate a time by which this mission must completed or limit the amount of disposal space that may be used within the 16 square mile WIPP land withdrawal area. The WIPP Annual TRU Waste Inventory Report (ATWIR) includes volume and generation date estimates for TRU waste destined for WIPP, as well as for waste that MAY be classified as TRU waste and may eventually be eligible for disposal at WIPP. While these are the best estimates, based on current and planned inventories, some variation in the actual volumes and date of generation is anticipated. The ATWIR is made available to the public annually near the end of January each year.
  WIPP is just one of several federal and commercial disposal facilities for radioactive wastes across the country. These disposal facilities include the Nevada National Security Site (DOE), Energy Solutions (commercial), Waste Control Specialists (commercial) as well as on-site disposal facilities at DOE sites like Oak Ridge, Portsmouth, Fernald (closed), Weldon Springs (closed), Hanford and Savanah River. The types of radioactive waste that can be disposed in those facilities depends on their waste acceptance criteria. WIPP has been designated for disposal of certain types of waste, specifically TRU waste. WIPP does not dispose of spent nuclear fuel or high-level wastes. Non-TRU wastes are disposed of elsewhere. As an example, LANL ships its low-level and mixed low-level wastes to out-of-state disposal facilities.

- All 50 states have benefited from the nuclear arsenal. Why is New Mexico the only state with a disposal site for nuclear weapons' waste?
  WIPP is just one of several federal and commercial disposal facilities for radioactive wastes across the country. These disposal facilities include the Nevada National Security Site (DOE), Energy Solutions (commercial), Waste Control Specialists (commercial) as well as on-site disposal facilities at DOE sites like Oak Ridge, Portsmouth, Fernald (closed), Weldon Springs (closed), Hanford and Savanah River. The types of radioactive waste that can be disposed in those facilities depends on their waste acceptance criteria. WIPP has been designated for disposal of certain types of waste, specifically TRU waste. WIPP does not dispose of spent nuclear fuel or high-level wastes. Non-TRU wastes are disposed of elsewhere. As an example, LANL ships its low-level and mixed low-level wastes to out-of-state disposal facilities.

- Why is New Mexico the only state with a nuclear waste repository? We want to protect our state just like the other 49 want to protect theirs.

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The safety of the workforce, community and environment remain DOE's top priority. WIPP makes every effort to ensure the protection of the precious natural resources and the environment within the State of New Mexico.

I. Type of waste disposed at WIPP, certification process

- Since WIPP is defense; will you be storing the spent fuel rods for the Department of Navy in the future?
  The WIPP Land Withdrawal Act (Public Law 102-579) authorizes the WIPP facility to dispose of 6.2 million cubic feet of defense-generated transuranic waste. The transport and disposal of spent nuclear fuel is specifically prohibited by section 12 of the LWA. Any changes to the types of waste that can be accepted for disposal at WIPP would require Congressional action.

- How are you going to avoid workers being exposed to radioactive substances, carbon tetrachloride and nitrogen and sulfur dioxides that occurred in 2013, 2014, 2015, and 2018?
  WIPP conducts routine air monitoring for personnel working in the underground, including monitoring for airborne radioactive particulates and monitoring for hazardous constituents from TRU waste and from operation of diesel equipment. This includes monitoring of general work areas as well as personnel monitors for individuals. WIPP workers participate in a comprehensive radiation protection program that includes area monitoring as well as individual personnel monitoring devices and periodic bioassays to detect potential exposure to radioactivity.

  In recent years DOE has enhanced worker protections by lowering concentration limits for hazardous constituents and reducing potential exposure to the workforce. WIPP responded, providing individual personnel "breathing zone" monitoring for individuals working in the underground where the potential for exposure is the greatest. Increased air flow, provided in part through use of the 700C fan, and transition to zero-emission battery electric and electric/diesel hybrid equipment and Tier IV low emission diesel equipment in the WIPP underground has helped meet these new lower standards and ensure that concentrations of air particulate contaminants remain below regulatory limits for occupational exposure.

- You aren't using cat litter anymore, are you? How well trained are those who package the stuff?
  All TRU waste shipped to WIPP from DOE waste generator sites, including LANL, must be characterized by a WIPP-certified program, in compliance with WIPP's disposal, packaging and transportation requirements, as outlined in WIPP's waste acceptance criteria (WAC).

  To demonstrate compliance with the transportation and disposal requirements, information about the physical, chemical and radiological properties and packaging of the waste must be known and verified prior to release from a DOE waste generator site. The primary basis for waste characterization is a process known as Acceptable Knowledge (AK). AK is the documentation of all known information on how a TRU waste stream was created and managed and that information is then compiled and documented.
  Following the 2014 radiological event, an enhanced AK process has been implemented to meet new WAC requirements and includes chemical compatibility evaluations and a basis of knowledge document to ensure appropriate measures are taken to prevent hazard-characteristic wastes such as ignitable waste.
  Confirmation methods of AK waste characterization may include:
  - Radiological characterization using non-destructive assay or dose-to-curie methods
  - Visual confirmation of items using real-time radiography or visual examination methods
  - Flammable gas analysis to meet transportation requirements

- Are your experts packing radioactive material in cat litter anymore?
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  - Visual confirmation of items using real-time radiography or visual examination methods
  - Flammable gas analysis to meet transportation requirements

- Did the exploding drum(s) from LANL go through the DOE Acceptance Criteria? And were the exploding drum(s) accepted by DOE/WIPP? If yes, did DOE rely upon assurances by the generator or did DOE/WIPP independently validate that the exploding drum(s) met the WIPP Acceptance criteria? What assurances do New Mexicans have that someone other than the generator meets any proposed acceptance criteria for the 50 + metric tons of weapons grade Pu proposed to come to WIPP: Amarillo to LANL to Savannah River to WIPP, 3,000+ miles.

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Confirmation methods of AK waste characterization may include:

- Radiological characterization using non-destructive assay or dose-to-curie methods
- Visual confirmation of items using real-time radiography or visual examination methods
- Flammable gas analysis to meet transportation requirements

- How can you be sure that the material is characterized properly?
  All TRU waste shipped to WIPP from DOE waste generator sites, including LANL, must be characterized by a WIPP-certified program, in compliance with WIPP's disposal, packaging and transportation requirements, as outlined in WIPP's waste acceptance criteria (WAC).

  To demonstrate compliance with the transportation and disposal requirements, information about the physical, chemical and radiological properties and packaging of the waste must be known and verified prior to release from a DOE waste generator site. The primary basis for waste characterization is a process known as Acceptable Knowledge (AK). AK is the documentation of all known information on how a TRU waste stream was created and managed and that information is then compiled and documented.
  Following the 2014 radiological event, an enhanced AK process has been implemented to meet new WAC requirements and includes chemical compatibility evaluations and a basis of knowledge document to ensure appropriate measures are taken to prevent hazard-characteristic wastes such as ignitable waste.
  Confirmation methods of AK waste characterization may include:
  - Radiological characterization using non-destructive assay or dose-to-curie methods
  - Visual confirmation of items using real-time radiography or visual examination methods
  - Flammable gas analysis to meet transportation requirements

- How is expanding the type of waste accepted at WIPP NOT a violation of past promises as well as a violation of environmental justice principles?
  The WIPP Land Withdrawal Act (Public Law 102-579) authorizes the WIPP facility to dispose of 6.2 million cubic feet of defense-generated transuranic waste. This law does not stipulate a time by which this mission must completed, or the amount of space that may be used within the WIPP boundary. Only TRU waste that meets the WIPP Waste Acceptance Criteria (WAC) can be disposed of at WIPP. There has been no change in the WAC or in the definition of what can be accepted for disposal at WIPP.

- How many generating stations and where are they?
  WIPP has accepted or continues to accept defense-generated TRU waste from government facilities across the country. Please use the following link to view a map of where these facilities are located (https://wipp.energy.gov/pdfs/Transportation.pdf).

- How will you protect public health and the environment from another radioactive release happening such as the February 2014 accident at WIPP? How will workers be protected from powdered plutonium, which is incredibly dangerous if inhaled?
  Numerous safety improvements have occurred since the 2014 radiological event including changes to the waste characterization/certification process, upgrades to the WIPP safety program and the addition of improved infrastructure like the Safety Significant Confinement Ventilation System. WIPP is only authorized to dispose of defense-generated transuranic waste and all waste coming to WIPP for disposal must meet the WIPP Waste Acceptance Criteria.

- Given the long history of lying and keeping secrets by the nuclear weapons industry, how can you be sure the people loading containers are being truthful when they characterize the contents being sent to WIPP?
  All TRU waste shipped to WIPP from DOE waste generator sites, including LANL, must be characterized by a WIPP-certified program, in compliance with WIPP's disposal, packaging and transportation requirements, as outlined in WIPP's waste acceptance criteria (WAC).

  To demonstrate compliance with the transportation and disposal requirements, information about the physical, chemical and radiological properties and packaging of the waste must be known and verified prior to release from a DOE waste generator site. The primary basis for waste characterization is a process known as Acceptable Knowledge (AK). AK is the documentation of all known information on how a TRU waste stream was created and managed and that information is then compiled and documented.
  Following the 2014 radiological event, an enhanced AK process has been implemented to meet new WAC requirements and includes chemical compatibility evaluations and a basis of knowledge document to ensure appropriate measures are taken to prevent hazard-characteristic wastes such as ignitable waste.
  Confirmation methods of AK waste characterization may include:
  - Radiological characterization using non-destructive assay or dose-to-curie methods
  - Visual confirmation of items using real-time radiography or visual examination methods
  - Flammable gas analysis to meet transportation requirements

  Generator site certification programs are audited on a regular basis by CBFO and NMED. These programs must show that they are meeting all of the requirements for characterizing waste and are following the required processes and procedures.

- The first speaker mentioned comprehensive protocols to ensure WIPP barrels meet all regulatory requirements for safety, etc. So how then did the Valentine's Day, 2014 barrel burst in the WIPP underground happen? Obviously, the protocols in place at that time were not adequately safe. How have such protocols been improved since, to ensure such barrel bursts can never happen again? What if that barrel burst had occurred not in the underground, but rather during transport, say in Santa Fe? Are the remaining potentially bursting barrels stuck at Waste Control Specialists near Eunice, NM, also at risk of bursting? If the underground burst cost $2 billion+ to recover from, what would a surface barrel burst at WCS cost to cleanup?

Numerous safety improvements have occurred since the 2014 radiological event including changes to the waste characterization/certification process, upgrades to the WIPP safety program and the addition of improved infrastructure like the Safety Significant Confinement Ventilation System. WIPP is only authorized to dispose of defense-generated transuranic waste and all waste coming to WIPP for disposal must meet the WIPP Waste Acceptance Criteria.

Waste similar to the container involved in the 2014 event remains at the Waste Control Specialists site in Andrews, Texas. DOE continues to work closely with the state of Texas and the state of New Mexico to expeditiously and safely remove that waste so it can be permanently disposed of within the WIPP underground.

- Southeast New Mexico not only has nuclear materials of all types, but is also home to one of the largest oil and gas production areas in the world. There are environmental justice concerns since frontline communities in the region have a large percentage of Hispanic and new immigrants and great economic disparity. Soon no one will be able to live there because of pollution. Recently when I was in Hobbs some of the Hispanic families said that the white people who had money were moving because of pollution. Carlsbad has changed dramatically over the past 20 years because of pollution and a number of folks have moved. How is the human impact of such a large concentration of polluting industries in one location taken into account in this decision and others? Cumulative impacts must need to be considered.
  There is no migration of radioactive or hazardous materials from the WIPP underground. As such, WIPP is accomplishing its mission of safely and permanently disposing of transuranic waste. WIPP cannot speak to the impacts from other industries.

- Who has given the DOE permission to put powdered plutonium oxide at WIPP in NM
  WIPP is only authorized to dispose of defense-generated transuranic waste and all waste coming to WIPP for disposal must meet the WIPP Waste Acceptance Criteria. "Powdered plutonium oxide" is not being disposed at WIPP. As part of the surplus plutonium dilute and dispose activities, DOE and NNSA are treating the plutonium oxide with a non-hazardous adulterant that prevents the future reuse of this material. All waste streams authorized for disposal at WIPP are approved by DOE, NMED and the EPA.

- At the nuclear sites, who is responsible for "packing up" the nuclear waste materials? What is their title? What is their training? What are the "double-checks" to make sure everything is correctly "packaged"?
  All TRU waste shipped to WIPP from DOE waste generator sites, including LANL, must be characterized by a WIPP-certified program, in compliance with WIPP's disposal, packaging and transportation requirements, as outlined in WIPP's waste acceptance criteria (WAC).

  To demonstrate compliance with the transportation and disposal requirements, information about the physical, chemical and radiological properties and packaging of the waste must be known and verified prior to release from a DOE waste generator site. The primary basis for waste characterization is a process known as Acceptable Knowledge (AK). AK is the documentation of all known information on how a TRU waste stream was created and managed and that information is then compiled and documented.

  Following the 2014 radiological event, an enhanced AK process has been implemented to meet new WAC requirements and includes chemical compatibility evaluations and a basis of

knowledge document to ensure appropriate measures are taken to prevent hazard-characteristic wastes such as ignitable waste.
Confirmation methods of AK waste characterization may include:

- Radiological characterization using non-destructive assay or dose-to-curie methods
- Visual confirmation of items using real-time radiography or visual examination methods
- Flammable gas analysis to meet transportation requirements

- WIPP was never meant to dispose of powdered plutonium oxide, the waste involved in this new mission. Who in New Mexico has given DOE permission to emplace powdered plutonium oxide at WIPP?
  "Powdered plutonium oxide" is not being disposed at WIPP. As part of the surplus plutonium dilute and dispose activities, DOE and NNSA are treating the plutonium oxide with a non-hazardous adulterant that prevents the future reuse of this material. All waste streams authorized for disposal at WIPP are approved by DOE, NMED and the EPA. All TRU waste shipped to WIPP from DOE waste generator sites, must be characterized by a WIPP-certified program, in compliance with WIPP's disposal, packaging and transportation requirements, as outlined in WIPP's waste acceptance criteria (WAC).

- Is there a plan to dispose of LANL legacy waste when the new plutonium pit factory begins generating waste?
  LANL legacy TRU waste continues to be permanently disposed at WIPP. Shipments to WIPP occur weekly.

J. Why additional disposal space is needed at WIPP

- New Plutonium pit production at LANL for new nuclear warheads will produce a huge new waste stream. Will that waste stream combined with the original waste planned for WIPP and the additional surplus plutonium waste, fit in the space that WIPP is allowed to fill?
  Yes, current projections show there is ample space for this material if it meets the characterization/certification under the WIPP Waste Acceptance Criteria. DOE has and continues to fulfill its remaining obligations in the Consultation and Cooperation Agreement. There is no planned expansion of the WIPP facility. WIPP is subject to the waste volume limits stipulated in the Congressionally approved Land Withdrawal Act and DOE is not proposing to expand the authorized volume capacity of 6.2 million cubic feet. Both the U.S. Environmental Protection Agency (EPA) and the State of New Mexico regulate various aspects of WIPP operations. Changes to the configuration of WIPP that may impact the performance of the repository over a 10,000 year horizon are submitted to the EPA for review and approval. Changes to WIPP that require a change to the Hazardous Waste Facility Permit or to the Groundwater Permit are submitted to the New Mexico Environmental Department (NMED) for review and approval. Additionally, DOE is required to submit a Hazardous Waste Facility Permit renewal application to NMED every 10 years. Currently, NMED is reviewing WIPP's second 10-year renewal application and a request to authorize TRU waste emplacement in Panels 11 and 12. Panels 11 and 12 replace emplacement volumes lost due to operational conditions in Panels 1-9.

- Since the New Filtration Building will give you all the air you need underground at WIPP, isn't the new so-called ventilation shaft solely for WIPP expansion since it's not needed for ventilation and can't work at all without the New Filtration Building?
  The Utility Shaft (US) will is part of the overall new ventilation system at WIPP, it will work in conjunction with the Safety Significant Confinement Ventilation System (SSCVS). With the SSCVS and US both functioning, WIPP will have two separate air circuits (air flow pathways) in the underground. The SSCVS will provide air the area of the underground where waste is emplaced and the US will provide a separate air circuit in the underground dedicated to mining activities. This air circuit will reduce the salt in the air circuit dedicated for waste emplacement, thereby reducing the salt loading in the air leading to the SSCVS.

- Is the future you are talking about in line with the agreements you made with NM when WIPP was originally built? If not, specifically how does is depart from that agreement?
  DOE has and continues to fulfill its remaining obligations in the Consultation and Cooperation Agreement. As such, WIPP works closely with the New Mexico Environment Department and the New Mexico Energy Minerals and Natural Resources Department to ensure all safety and regulatory requirements are met to protect human health and the environment.

K. Environmental justice responses

- How are you protecting the Indigenous in the area and State who have already - past and present - suffered from and are presently suffering from uranium, nuclear processes, testing, nuclear waste - and this concern is for all people of New Mexico?
  The Department of Energy's Environmental Justice Program is fully committed to the goals and objectives of Executive Order 1298, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. The fundamental principal of environmental justice (EJ) is that all residents should have meaningful and intelligent participation in all aspects of environmental decision-making that could affect their community. Impacted communities must have the resources and ability to effectively marshal data and other information in order to make informed and intelligent decisions. Traditionally, many low-income, minority, American Indians and Alaska Native communities have lacked access to the required information, decision-makers, and technical advisers to make informed decisions with respect to various risks that accompany waste management. EJ requires that all people have access to these resources. To combat this situation, the Department of Energy (DOE) has established a number of community capacity building projects to provide disadvantaged communities with training and technical assistance, workshops, grant opportunities, and collaborative partnerships with Historically Black Colleges and Universities, Tribal Colleges and Universities, Hispanic Serving Institutions, and other Minority Serving Institutions. These efforts offer citizens the opportunity to explore environmental information, gain technical assistance, provide comments to decisions-makers and to meaningfully participate early-on in environmental decision-making at all levels.

- The Biden administration often invokes the phrase "Environmental Justice," as a top priority, including at the Department of Energy. How does FOREVER WIPP in New Mexico, a majority minority state (the Latinx and Indigenous population is a majority of the state), which ranks towards the bottom of many socio-economic measures as compared to other states, comport with Environmental Justice?

President Biden reinforced the importance of EJ with Executive Order 13985, Advancing Racial Equity and Support for Underserved Communities through the Federal Government and Executive Order 14008, Tackling the Climate Crisis at Home and Abroad. These Executive orders do not merely reaffirm the federal government's commitment to identify and address EJ concerns, they also offer new principles, commitments, and guidance, especially in the domains of climate change and racial equity.

The Department's Environmental Justice Five Year Implementation Plan reflects a solid commitment to EOs 12898, 13985, 14008, and the Memorandum of Understanding signed by 17 federal agencies, in August 2011, that recommitted and prioritized EJ throughout the federal government.

The goals and activities in the Plan are based on clear priorities and tangible benefits that consider programmatic, legislative, and regulatory responsibilities. They emphasize community participation and empowerment, and stakeholder involvement. In addition, they encourage new approaches to occupational and environmental science research for high-risk communities and workers, embrace interagency coordination to facilitate EJ, and heighten the sensitivity of managers and staff to EJ within the Department.

Environmental Waste Management Education and Community Involvement Public Participation is one of the cornerstones of EJ. Public participation and community involvement strategies must include an initiative-taking public involvement process that provides complete information, timely public notice, full public access to key decisions, and support early and continuing public involvement in developing plans, programs, and research. This activity has created a model for community involvement and public accountability that can be replicated nationally. Through this partnership, the voices of traditionally disenfranchised communities have been successfully brought to DOE's decision-making and planning table. The project made it possible for grassroots working people to become involved with a difficult and complex set of issues and activities. This partnership has made strides in promoting academic excellence. Students have been trained in research internships. A new course, "Radiation in the Environment," was introduced as a core course for environmental science majors, and two state-of-the-art laboratories were established. The community outreach activity, "Teaching Radiation, Energy, and Technology" (TREAT) workshop goal is to educate kindergarten through 12th grade mathematics and science teachers and local community leaders who reside near the DOE facility about related topics. This is one example of DOE's EJ Program Community Capacity Building Activities.

- Given New Mexico's past and present Environmental Justice burdens -- as, for example, to be commemorated on July 16th, re: the 1945 Trinity plutonium bomb "test blast", and the 1979 uranium tailings spill into the Puerco River near Church rock — how can WIPP be justified by the Biden DOE? How can WIPP be justified when the Biden administration Nuclear Regulatory Commission is poised to rubber-stamp the 173,600 metric ton irradiated nuclear fuel consolidated interim storage facility proposed by Holtec International, just 16 miles from WIPP?
  The 1992 WIPP Land Withdrawal Act, passed by Congress, limits WIPP to 6.2 million cubic feet of defense related transuranic waste. It does not specify a closure date, only the volume the repository can hold. WIPP cannot speak to any issues surrounding Holtec as those issues lie outside of WIPP's purview.

- That close up map showing WIPP in southeastern NM, with surrounding areas of west TX also shown, is itself a case study in Environmental Justice violations. Within that narrow frame, there is WIPP, URENCO (uranium enrichment in Eunice, NM), Waste Control Specialists, LLC (a national dump-site for commercial and DOE "low" level radioactive wastes), two proposed consolidated interim storage facilities for a grand total of 213,600 metric tons of highly radioactive waste (173,600 MT at Holtec in s.e. NM, just 16 miles from WIPP; 40,000 MT at Interim Storage Partners, LLC in Andrews County, TX, just several miles from Eunice, NM, just 0.37 miles from the NM state line, and upstream from NM), and even nuclear weapons test blast sites. Future nuclear facilities, such as International Isotopes, are also planned. Then there are the fossil fuel hazards in the Permian Basin. So how can WIPP be justified from an Environmental Justice perspective, given all this EJ burden?
  Elected officials from Carlsbad and Eddy County invited the Atomic Energy Commission to consider siting a deep-geologic repository in southeast New Mexico after a site in Lyons, Kansas was determined to be unsuitable. Congress passed the Land Withdrawal Act in 1992 authorizing DOE to dispose of 6.2 million cubic feet of defense transuranic waste at WIPP. WIPP is only 40% full so there is not a current need for another repository for TRU waste at this time.

- Could you address environmental justice and ethical concerns?
  Please reach out to DOE PA for information related to DOE and the Biden Administration's Environmental Justice efforts. DOENews@hq.doe.gov.

L. WIPP Land Withdrawal limits

- Given that WIPP is oversubscribed for volume, how can WIPP possibly accommodate a huge amount of TRU from the three big DOE plutonium projects: 1) plutonium pits for new nuclear weapons, 2) down blending at SRS of 34+ MT of surplus plutonium to be disposed of as waste, and 3) TRU from fabrication of 34 MT of plutonium into fuel for the Versatile Test Reactor? Please clarify the volume to WIPP from these projects - or to a new TRU repository - and on what schedule.
  Based on current projections, WIPP has sufficient space for defense-generated TRU waste currently planned for disposal at the facility. The Annual Transuranic Waste Inventory Report (ATWIR) for 2021 that is referenced by the NAS committee includes both waste already planned for disposal at WIPP and waste that could potentially be classified as TRU in the future. Past experience suggests that a significant fraction of that waste, once excavated and characterized, may be classified as low-level radioactive waste and therefore would not be eligible for disposal at WIPP. After approximately 22 years of operation WIPP has emplaced approximately 40% of the TRU waste capacity authorized by the Land Withdrawal Act.

M. Outreach along WIPP transportation routes

- Surely the hundreds of thousands of communities along this new route have the same concerns that we New Mexicans do. Has the DOE done outreach to tell them what to expect?
  DOE works with department of transportation experts around the country to determine the best and safest routes for all WIPP shipments. DOE also provides funding to states along the transportation routes, so local community first responders are trained in the off chance there is an incident with a WIPP shipment. WIPP also offers training to local first responders along the transportation routes. WIPP is not currently evaluating any new routes for WIPP shipments.

The existing routes were chosen by working with states and tribal nations to ensure safety and agreement with the approved WIPP routes.

- Have all Indigenous communities and tribes along the transport routes been consulted?
  Yes, before any of the current WIPP transportation were approved, all states and tribal nations were consulted and involved in identifying the routes. Communications with these groups continue to this day on a regular basis.

- I wrote in a question and asked it be read as written not edited by your team- Broadcast team. When will you have another meeting in Santa Fe that is more of a dialogue? Who is the Broadcast Team? Who pays for them? What made you decide on this way to run a community forum?
  A date for a follow-up WIPP Community Forum has been scheduled for October 24 at the Buffalo Thunder Resort and Casino. The meeting format has been revised to allow an expanded question and answer session.

  The format used at the previous town hall was chosen as a way to try and ensure virtual attendees had the same opportunities as in person attendees. We have since had conversations with various stakeholders and elected officials from the Santa Fe region who have voiced their frustrations. We have taken these concerns in stride and deeply appreciate the feedback. It is only through continuous engagement and feedback that we can learn how to best communicate with the communities we serve.

- Concerned citizens have asked DOE to attend a public meeting where they will commit to answer the questions the public is concerned about. Why does DOE refuse to do this?
  DOE continues to offer multiple avenues to allow the public to ask questions. For example, an additional WIPP Community Forums will be at Buffalo Thunder Resort and Casino on October 24. A change in the meeting format has been made to offer an expanded question and answer session. Additionally, WIPP offered one-on-one sessions with WIPP leadership during our recent public forum in Santa Fe. This allowed members of the public to raise their concerns directly with WIPP leadership and participate in a back and forth dialogue to ensure their concerns were addressed. A similar opportunity will be provided on October 24.

- Will DOE commit to attending a public meeting that allows the public to ask the questions it wants to ask in the format it finds most helpful?
  DOE continues to offer multiple avenues to allow the public to ask questions. For example, an additional WIPP Community Forums will be at Buffalo Thunder Resort and Casino on October 24. A change in the meeting format has been made to offer an expanded question and answer session. Additionally, WIPP offered one-on-one sessions with WIPP leadership during our recent public forum in Santa Fe. This allowed members of the public to raise their concerns directly with WIPP leadership and participate in a back and forth dialogue to ensure their concerns were addressed. A similar opportunity will be provided on October 24.

- With all due respect, we find this “outreach” by DOE to be inadequate. Instead of hearing how wonderful things are going at WIPP, we want to discuss the changes planned for it. We are being

put at risk; we should be able to ask questions that aren't rejected as not "falling within the purview of WIPP."
WIPP cannot answer questions that do not pertain to WIPP and its mission. If you have questions that lie outside of the purview of WIPP, those questions must be addressed by the appropriate entity. If you are unsure of who your question should be directed to, please feel free to reach out to DOE Public Affairs, who can route your question to the appropriate entity. DOENews@hq.doe.gov.

N. Reasons for WIPP's location

- Given Climate Change characterized by severe climate events like storms and severe rains what measures are being taken to provide additional safety measures?
  The WIPP facility does not lie within the 100-year flood plain, and the surface facilities are approximately 3,400 feet above sea level. The WIPP underground disposal area is about 500 feet above the Pecos River, and 400 feet above the 100-year flood plain. Protection from flooding or ponding caused by probable maximum precipitation events is provided by the diversion of water away from the WIPP facility by a system of peripheral interceptor diversions. Additionally, grade elevations of roads and surface facilities are designed so that storm water will not collect on the site under the most severe conditions.

- I am from Kansas and Kansas has a lot of salt. They do not have nuclear waste? Why?
  In 1970, the US Atomic Energy Commission (AEC), predecessor of the US Department of Energy, selected a salt mine near Lyons, Kansas to determine if the area was suitable to site a deep-geologic repository, as recommended in 1955 by the National Academy of Sciences. The AEC withdrew from the Lyons site over concerns that previous drilling in the area compromised the proposed repository's integrity.

- How is the salt near Carlsbad different from the salt reserves near Lyons, KS -- one of the earlier candidates for nuclear wastes? How does it differ from the salt reserves at the Yucca Mountain site?
  The WIPP repository is located in Salado bedded salt formation, which is the same salt formation that extends into Kansas. Details on why salt was chosen can be found at https://wipp.energy.gov/pdfs/Why_Salt.pdf. The proposed Yucca Mountain site has very different geology - welded tuff or ignimbrite, which is a rock created by volcanic eruptions. Additional details on the geology of Yucca Mountain can be found in United State Geological Survey reports at Geology of the Yucca Mountain site area, southwestern Nevada | U.S. Geological Survey (usgs.gov).

- As we experience climate change more and more in our state with unprecedented effects, what might the effects of climate change be on this old thinking way to address nuclear pollution?
  The WIPP facility does not lie within the 100-year flood plain, and the surface facilities are approximately 3,400 feet above sea level. The WIPP underground disposal area is about 500 feet above the Pecos River, and 400 feet above the 100-year flood plain. Protection from flooding or ponding caused by probable maximum precipitation events is provided by the diversion of water away from the WIPP facility by a system of peripheral interceptor diversions. Additionally, grade elevations of roads and surface facilities are designed so that storm water will not collect on the site under the most severe conditions.

- This is a highly engineered site, why only in salt mines why not engineer other sites for storage?
  In the 1950's, the National Academy of Sciences conducted a nationwide search for geological formations stable enough to contain radioactive wastes for thousands of years. Since then, bedded salt has been one of the leading candidates for the permanent disposal of radioactive waste. Salt offers a number of advantages, including:
    - Most deposits of salt are found in stable geological areas with very little earthquake activity, assuring the stability of a waste repository.
    - Salt deposits demonstrate the absence of flowing fresh water that could move waste to the surface. Water, if it had been or were present, would have dissolved the salt beds.
    - Salt is relatively easy to mine.
    - Rock salt heals its own fractures because of its plastic quality. That is, salt formations will slowly and progressively move in to fill mined areas and safely seal the waste from the environment.

- What are the radiation levels at the surface of the site?
  Radiation levels on the surface of the site are no different than the natural radiation levels found within the surrounding area (e.g., there is no measurable radiation levels above normal background).

- The first speaker said the WIPP area is geologically stable. This seems deceptive, given the very widespread, intensive fossil fuel industry related activities happening nearby in the Permian Basin. Don't such activities significantly increase the frequency of earthquakes in the area? Why was this not mentioned?
  Seismic activity poses no threat to the WIPP repository. This is because while earthquakes can cause considerable damage on the surface to buildings, roads, etc., damage to underground facilities such as working mines and WIPP is not experienced nor expected. The impact (or lack thereof) of earthquakes upon mines and underground facilities is well researched and documented. A few such references are below:
    - "Surface operations are much more likely to be affected by earthquakes than underground workings." - W.A. Lenhardt, "The Impact of Earthquakes on Mining Operations" Article in BHM Berg- und Hüttenmännische Monatshefte · June 2009
    - "In general, the study showed that moderate earthquakes (up to 0.41 g) did not cause instability of the tunnel or major fracturing of the rock mass." - Wahi, K.K. et al. "Numerical simulations of earthquake effects on tunnels for generic nuclear waste repositories." December 1980
    - "No damage occurred when peak ground acceleration (PGA) is < 0.19 g, minor damage when PGAs were < 0.5 g." Shrestha, G.L. "Earthquake effects and other risks to underground structures." Conference Paper: Nepal Tunneling Conference 2017.

- Subsidence due to potash mining is a significant risk at the Holtec consolidated interim storage facility site, midway between Hobbs and Carlsbad, just 16 miles from WIPP. Is potash mining related subsidence a risk at WIPP?
  No, there are not potash mines located within the WIPP boundary and WIPP's underground disposal location is significantly deeper than any potash mines in the area.

- Salt is corrosive to concrete. What is the lifespan of the concrete in the salt? So much engineering of the facility demonstrates that this type of facility can be built elsewhere. Why the artificial barrier of salt instead of using other geological features for repositories.
  As early as the 1950s, the National Academy of Sciences identified bedded salt as an ideal medium for permanently isolation long-lived radioactive wastes from the environment. At the depth of the WIPP repository, 2,150 feet underground, the salt will encapsulate the buried waste in the stable rock over a period of decades and seal the waste from the biosphere. The same natural barriers and self-sealing properties that kept the salt intact for millions of years will also safely isolate the waste.

- How big is the salt pile? What is its effect on the environment?
  It is difficult to estimate how large the salt tailings pile is. The salt pile is managed in accordance with the regulations set forth by the New Mexico Groundwater Quality Bureau and the WIPP DP-831 permit.

- If salt reduction to the air is needed, why is the waste placed in salt formations.
  WIPP removes salt from the exhaust air so as to not clog filters in the new ventilation system, saving taxpayer dollars. TRU waste is emplaced in salt because the salt creeps or moves to encapsulate the waste over time.

O. Safety

- If nearly two-dozen workers at WIPP suffered alpha particle inhalation doses at the surface, due to the Valentine's Day 2014 barrel burst, what would have happened if the underground had been full of workers, not wearing respiratory protection? The only reason this did not happen was because the barrel burst was -- by a fluke, by sheer luck -- preceded days earlier by an underground mine fire. How many workers would have suffered ultra-hazardous alpha particle inhalation doses, had this "fortuitous" (if two accidents in a short period of time can be called “fortuitous”), if the underground had been filled with workers not wearing respiratory protection?
  Numerous safety improvements have occurred since the 2014 radiological event including changes to the waste characterization/certification process and upgrades to the WIPP safety program.

- There is a large sinkhole hazard on the south side of WIPP, putting a state highway at risk of collapse. It is due to salt dissolution mining, creating a huge void underground. The surface is now at risk of collapsing into the sinkhole. Are there risks of such sinkholes near or at FOREVER WIPP? What safeguards have been put in place to prevent such risks now, and for the next 240,000 years (the hazardous persistence of Plutonium-239)? South side of Carlsbad, not WIPP, I had meant to write above
  There are no known risks of potential sinkholes at or near WIPP. Additionally, there is no oil or gas drilling allowed inside the WIPP boundary, which consists of 10,240 acres.

- Why aren't you making the air better for WIPP workers now by switching to electric vehicles and doing other things while you're waiting many years for the Filtration Building and Shaft to come online?

Project personnel are modernizing underground equipment to zero-emission battery-electric vehicles or, where full electrification is not currently feasible, very low emission Tier IV Final diesel-powered equipment. This is an ongoing activity at the WIPP site.

- Are the shipping containers double walled?
  Yes, the TRUPACT-II consists of an inner containment vessel and an outer confinement assembly.

- How many megawatts does the site use? How much diesel back up power do we have? KW/Hr.
  Site power consumption on an average day in 2021 was 2,748 kilowatts. WIPP has on-location backup diesel generators, 2 X 1,100 kilowatts. The Safety Significant Confinement Ventilation System (SSCVS) will have its own backup diesel generators, 2 X 3,000 kilowatts.

- What are the plans if there is a power outage?
  In the event of an outage at the Xcel substation, WIPP has first-use priority of another Xcel substation located several miles south. In the event that is not available, WIPP has on-location backup diesel generators, 2 X 1,100 kilowatts. The Safety Significant Confinement Ventilation System (SSCVS) will have its own backup diesel generators, 2 X 3,000 kilowatts.

- Has any analysis been done of the carbon cost affecting our climate crisis of WIPP—construction—concrete, metal, fuel for transport and ventilation?
  No such study or analysis has been completed.

- Who tracks the health of WIPP workers in Carlsbad? Specifically, the earliest workers — how is their health and where is that information available?
  The Department of Energy and our contractor at WIPP maintain records for their employees. While the health information of our employees is private and not available generally to the public, former and current employees can contact the WIPP facility with questions about receiving their records.

- What keeps you up at night?
  As the CBFO manager, I am always focused on the health and safety of our workforce, ensuring that WIPP's operations remain protective of human health and the environment. Given the operational controls and lessons learned from the events in 2014, the hazards associated with traditional mine safety (ground control, fire prevention) continue to be a daily focus for me and my staff. That being said, I also recognize that many stakeholders are concerned about the safe transport of TRU waste through their communities. However, the WIPP transportation program is among the safest in the United States. For more info on the WIPP transportation system, please refer to the answers in "Section D."

- New Mexico's radioactive site must be secure forever, who here, tonight can guarantee that responsible guardianship of this area, WIPP can be sustained? What company, what government, will be here to be safeguarded what must be isolated from all other life forms, from the water, from escaping into the air? What language will be understood 100,000 years hence? Finland has chosen a skull & cross bones to mark the spot and what about New Mexico?

The Department of Energy has identified a conceptual design for the WIPP site that is expected to communicate the location, design and contents of the disposal system during the regulatory timeframe of 10,000 years. That includes archives stored in various locations around the world. Warning signs at the site will be in multiple languages including Navajo. More info at https://wipp.energy.gov/closure-institutional-control.asp