STATEMENT OF DON HANCOCK

Educational Background and Work Experience: I have a B.A. degree from DePauw University in 1970, with a major in Political Science. I have worked at Southwest Research and Information Center (SRIC), a non-profit educational and technical assistance organization, since 1975. A principal activity of my work has been on nuclear waste issues, with special attention to the Waste Isolation Pilot Plant (WIPP) because of its status as first-of-its-kind facility in the United States and its location in New Mexico. I am also familiar with U.S. defense waste storage and commercial spent fuel storage facilities and the proposed Yucca Mountain, Nevada geologic repository.

My activities regarding WIPP have included: reviewing hundreds of technical documents, writing dozens of articles, making dozens of public presentations, having hundreds of interviews with academic and media representatives, submitting comments on the original WIPP Permit and Renewal Permit, submitting comments on dozens of WIPP permit modification requests, providing written and oral testimony before congressional and state legislative committees and scientific organizations, including National Academy of Sciences panels, and the Canadian Deep Geologic Repository Joint Review Panel. Additional information is provided in the Curriculum Vitae in Appendix A.

The focus of my direct testimony is on the history of WIPP, with emphasis on its capacity limits, state regulatory authority, and public involvement.

Briefly, since WIPP's original authorization in 1979 in Public Law 96-164, Section 213, Congress, the State of New Mexico, and the public have understood that WIPP has a limited mission and that other nuclear waste disposal sites would be created. While the Department of Energy (DOE) has proposed that WIPP could have broader missions, the Consultation and Cooperation (C&C) Agreement and its modifications, litigation, and the WIPP Land Withdrawal Act (LWA, Public Law 102-579, as amended) have limited the mission to defense transuranic (TRU) waste with a capacity of up to 6.2 million cubic feet/175,564 cubic meters. The LWA also provides for State of New Mexico regulatory and oversight authorities, as well as providing for various other federal and state regulatory and oversight authorities, public participation and judicial review. The Administrative Record is undisputed that Congress has limited WIPP's capacity and legislated that WIPP is not the sole disposal site for all TRU waste.

The Administrative Record is clear that the proposed Volume of Record modification is contrary to the requirements of the two primary federal laws that specifically govern the Waste Isolation Pilot Plant (WIPP) – the WIPP Authorization and the WIPP Land Withdrawal Act (LWA), as well as state statutory authorities. The Administrative Record is clear that, before the passage of the LWA and since, DOE has consistently determined compliance with the 6.2 million cubic feet capacity limit based on the gross internal volume of the outer containers. The Administrative Record is clear that historic practice of NMED to measure compliance with the LWA capacity limit is to use the gross internal volume of the outer containers. The Administrative Record is clear that WIPP currently contains less than 55 percent of the LWA capacity limit, so the modification request and Draft Permit are not needed and may never be needed. The

Administrative Record is also clear that NMED does not have the authority to relinquish the State's permitting authority, which includes capacity limits. Thus, NMED cannot legally approve the Draft Permit (AR 180804) that does not incorporate the capacity limits of the LWA nor comply with New Mexico laws, authorities, and the C&C Agreement.

Brief Historical Background

In 1972, the Atomic Energy Commission (AEC) announced that it would operate WIPP as the nation's first geologic repository. At that time, there was no Solid Waste Disposal Act, no Resource Conservation and Recovery Act, and the AEC had broad authorities with few limits, except that commercial waste disposal would be subject to licensing. Throughout the 1970s, there was public and technical debate about how and where to dispose of the growing amounts of waste from the nuclear weapons complex and the expanding commercial nuclear power industry. The Carter administration convened an Interagency Review Committee to develop a comprehensive nuclear waste strategy that included public meetings and input. In New Mexico in the late 1970s, as the public debate about WIPP intensified, the role of state government was a major issue that in 1978 led the first DOE Secretary, James Schlesinger, to promise that New Mexico could veto WIPP.

WIPP Authorization - Public Law 96-164, Section 213

In December 1979, Congress authorized WIPP "to demonstrate the safe disposal of radioactive waste resulting from the defense activities and programs of the United States exempted from regulation by the Nuclear Regulatory Commission." The law specifically designates WIPP as a "pilot plant," and to "demonstrate the safe disposal." AR 180121.09, Section 213(a). Both of those designations clearly indicate that WIPP was not the sole disposal site for all TRU waste. Congress has maintained those legal requirements and constraints for the last 39 years. Additionally, Congress has not changed the authorization in subsequent nuclear waste laws.

In 1982, Congress passed the Nuclear Waste Policy Act (NWPA) of 1982 (Public Law 97-425),

> "An Act to provide for the development of repositories for the disposal of high-level radioactive waste and spent nuclear fuel, to establish a program of research, development, and demonstration regarding the disposal of high-level radioactive waste and spent nuclear fuel, and for other purposes." Ref. 1, enactment heading.

The NWPA did not apply to WIPP, because the WIPP facility was authorized to be exempt from Nuclear Regulatory Commission (NRC) licensing, and disposal was limited to transuranic waste, while any repository for high-level defense waste would be licensed by the NRC. Ref. 1, Section 8(b)(3).

In 1987, Congress amended the NWPA to designate a single high-level waste and spent fuel repository, and discussed whether that facility should be WIPP, but again determined that WIPP would not be that facility, and instead designated Yucca Mountain, Nevada, as the repository. Ref. 1, Section 160.

Regarding New Mexico's authority, the 1979 Authorization revoked the state veto that DOE had promised. Instead, the law provides:

> "(b)(1) In carrying out such project, the Secretary shall consult and cooperate with the appropriate officials of the State of New Mexico, with respect to the public health and safety concerns of such State in regard to such project and shall, consistent with the purposes of subsection (a), give consideration to such concerns and cooperate with such officials in resolving such concerns. The consultation and cooperation required by this paragraph shall be carried out as provided in paragraph (2).
>
> (2) The Secretary shall seek to enter into a written agreement with the appropriate officials of the State of New Mexico, as provided by the laws of the State of New Mexico, not later than September 30, 1980, setting forth the procedures under which the consultation and cooperation required by paragraph (1) shall be carried out. Such procedures shall include as a minimum –
>
> (A) the right of the State of New Mexico to comment on, and make recommendations with regard to, the public health and safety aspects of such project before the occurrence of certain key events identified in the agreement;
>
> (B) procedures, including specific time frames, for the Secretary to receive, consider, resolve, and act upon comments and recommendations made by the State of New Mexico; and
>
> (C) procedures for the Secretary and appropriate officials of the State of New Mexico to periodically review, amend, or modify the agreement." AR 180121.09, Section 213(b).

No C&C Agreement was signed by September 30, 1980. In 1981, the State of New Mexico sued the DOE regarding WIPP in Federal District Court in New Mexico. Case Civil Action No. 81-0363 JB. On July 1, 1981, after discussions, the State Attorney General and U.S. Attorney filed a Joint Motion to Stay All Proceedings, which was approved that day by the Court along with a stipulated agreement. AR 180706.02, pages 9-16 of PDF. As part of the Stipulated Agreement, the Governor of New Mexico and DOE Secretary signed a Consultation and Cooperation (C&C) Agreement, as provided for by the WIPP Authorization. AR 180706.02, pages 22-30 & 51 of PDF. The C&C Agreement has been modified. AR 180706.02. The Second Modification, signed on August 4, 1987, incorporates the 6.2 million cubic feet limit into the agreement. AR 180706.02, page 56 of PDF.

<u>WIPP Land Withdrawal Act (LWA) - Public Law 102-579</u>

Because DOE wanted to open the facility in 1988, WIPP land withdrawal bills were introduced in Congress, starting in 1987. The various bills were subject to congressional hearings and debate in Washington, DC and New Mexico. The requirements that WIPP would meet before receiving wastes, the capacity of the facility, and the state and federal regulatory and oversight authorities were major issues in five years of debate leading to passage of the LWA by the House of Representatives on October 5, 1992 and the Senate on October 8, 1992. AR 180706.03.

The LWA clearly states:

> "CAPACITY OF WIPP.—The total capacity of WIPP by volume is 6.2 million cubic feet of transuranic waste." AR 180706.03, Section 7(a)(3).

Thus, Congress again determined that WIPP was to demonstrate safe disposal of a limited amount of TRU waste, not more than the specified capacity, and not all TRU waste. That fact was emphasized in the final House floor debate by one of the bill's co-sponsors, Rep. Peter Kostmayer:

> "Whether we are going to generate more nuclear waste is not the question. The question is we have got to get rid of the material we have. This facility will take only 20 percent of all the waste that we have. Still 80 percent will remain unburied. We have to deal with that." AR 180914.32B at 32552 (c. 2).

The various bills, hearings, and committee reports demonstrated that Congress recognized that the capacity limit was based on container volumes.

Senate Report 102-196 on S 1671, which was the LWA bill from the Senate Energy and Natural Resources Committee, specifically states: "According to DOE's current plans, a total of 4,525 55-gallon drums of transuranic waste would be used during the experimental program." AR 180402.34Z at 27.

The House Land Withdrawal Bill (HR 2637) version reported by the House Armed Services Committee, which had originated the WIPP Authorization, stated:

> "CAPACITY OF THE WIPP.—The total capacity of the WIPP by volume is 6.2 million cubic feet of transuranic waste. Not more than 850,000 drums (or drum equivalents) of transuranic waste may be emplaced at the WIPP." AR 180402.34BB, Section 9(a)(3).

House Report 102-241, Part 1, from the House Interior and Insular Affairs Committee, included capacity limits of 5.6 million cubic feet of contact-handled waste and 95,000 cubic feet of remote-handled waste. Section 7(a). The Report noted that the Test Phase was limited to no more than 4,250 55-gallon drums. AR 180402.34AA at 18.

House Report 102-241, Part 3 from the House Energy and Commerce Committee included a dissent opposing the capacity limits "of not more than 5.6 cubic million cubic feet of contact-handled transuranic waste and 95,000 cubic feet of remote-handled transuranic radioactive waste in WIPP." Section 7(a). The dissenters also opposed the limits of the Test Phase of 4,250 barrels or 8,500 barrels of waste. AR 180402.34CC at 42.

Clearly, Congress understood that the capacity limits for the Test Phase (that did not occur and was removed from the law in 1996) and the facility were based on 55-gallon drums (or drum equivalents): 850,000 drums times 7.3 cubic feet (55-gallon drum volume) equals 6,205,000 cubic feet.

The LWA also clearly confirms the State of New Mexico's authority under the Solid Waste Disposal Act. AR 180706.03, Section 9(a)(1)(C). Prior to the passage of the LWA, the State, SRIC and other parties had litigated and advocated for that authority for several years. In *State of New Mexico Ex. Rel. Udall v. Watkins* and *Environmental Defense Fund v. Watkins*, the State, SRIC, and other parties argued that RCRA applied to the WIPP Test Phase, a position that would prevent waste emplacement without a permit. The District Court granted summary judgment in favor of that argument. 783 F. Supp. 633 (D.D.C. 1992). That decision was reversed by the D.C. Circuit Court of Appeals. 969 F.2d 1122 (D.C.Cir. 1992). SRIC and many citizens of New Mexico advocated for the State's authority during the years of debate about the LWA.

<u>DOE's historic practice of calculating TRU waste is based on volume of the outer container</u>
Even before WIPP opened in 1999, the waste volume was measured by the size of the gross internal volume of the container, as is required by the Permit.

The WIPP design capacity was calculated based on gross internal container volumes. The 1980 FEIS stated that the design capacity was 6.2 million cubic feet. AR 180706.05 at 2-17.

The 1980 WIPP FEIS (AR 180706.05) further stated:

> "This EIS analyzes the alternatives for disposing of the readily retrievable waste expected to be stored in Idaho through 1990. This waste includes the 2.4 million cubic feet shown in Table 2-3 for 1986 plus an additional two-thirds of the 0.25 million cubic feet generated annually between 1986 and 1990. In addition, the WIPP would be designed to accommodate all defense TRU waste generated between 1990 and 2003." Page 2-18.

Those quantities total to approximately 6.2 million cubic feet. Page 2-17.

The 1980 FEIS also stated: "The data for TRU waste presently in retrievable storage are the container volume." AR 180121.05 at E-25.

The 1990 Final Supplement Environmental Impact Statement (DOE/EIS-0026-FS, January 1990 "SEIS-I") again used the volume of the waste container as the measure of the volume of emplaced waste:

> "Using a drum volume of 0.2 cubic meter gives a drum equivalent capacity of 880,000 for CH-TRU waste, about 4 percent higher than the values suggested by the commenters. This number is calculated by dividing the CH TRU waste capacity of the WIPP, 6.2 million cubic feet, by 0.2 cubic meter and 35.3 cubic feet per cubic meter. The result is then rounded up to two significant digits." Ref. 2 from SEIS-I, vol. 3 at 246.

Additionally, the Environmental Evaluation Group (EEG) pointed out in its comments on the 1989 Draft SEIS-I that in that draft DOE was erroneously calculating WIPP's capacity based on 55-gallon drums being 80 percent full. That resulted in WIPP's 6.2 million cubic feet capacity being contained in "a fictitious number of drums that cannot fit into the WIPP." Instead, the

"design capacity of the WIPP is based upon the total volume of emplaced containers and not their contents." Ref. 2. In response to the EEG comment, the final SEIS-I deleted the 80 percent fill assumption "because the calculations based on this assumption greatly overestimated the volume of waste to be emplaced in the WIPP." Ref. 3. The SEIS-I reiterates that the contact-handled (CH) waste design capacity is 6.2 million cubic feet. AR 180914.32C at 3-4.

To support the WIPP Permit application and other requirements, DOE published a WIPP Transuranic Waste Baseline Inventory Report (WTWBIR) in June 1994. Revision 2 (DOE/CAO-95-1121) included all DOE TRU waste. AR 180402.34G at xi. The document calculated all waste volumes in "Final Waste Form," which was the gross internal volume of the containers. In their Permit Application, the permittees included the gross internal volume of the containers, which were incorporated into the original Permit and remain in the current permit. Section 3.3.1.

The 1997 Disposal Phase Supplemental Environmental Impact Statement (DOE/EIS-0026-S-2, September 1997 "SEIS-II") again used the volume of the waste containers to measure the volume of emplaced waste.

> "[T]he waste volumes used for the SEIS-II analyses are estimates of "emplaced waste volumes" (the volumes of the containers that TRU wastes would be emplaced in), not actual waste volumes inside the containers, except as noted. DOE recognizes that virtually all containers would contain some void space and that some containers may be only partially filled (for instance, to meet limits on weight or thermal power for transportation)." AR 180402.48H at 2-9.
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> "With the RH-TRU waste volume limit at WIPP of 7,080 cubic meters (250,000 cubic feet), the volume disposed of was calculated using the capacity of the waste containers rather than the volume of the waste within the containers." Ref. 4.

DOE emphasized the conservatism of its measurements of waste volume:

> "CONSERVATISM OF TRU WASTE VOLUME ESTIMATES:
>
> "TRU waste inventory estimates, as used throughout SEIS-II, embody many conservative assumptions to ensure bounding analyses of maximum, reasonably foreseeable impacts. The following reflect some of the conservative assumptions.
>
> * * *
>
> "While the LWA and C&C Agreement include limits on the volume of TRU waste that can be emplaced, there is considerable uncertainty concerning how much of a container's volume is made up of TRU waste and how much is void space. Many of the containers would include a great deal of void space, particularly for RH-TRU waste; the actual volume of waste in a drum or cask, therefore, may be much less than the volume of the drum or cask. For the purposes of analysis in

SEIS-II, the volume of the drum or cask is used, as if the drum or cask were full without void space." AR 180402.48H at 3-8.

In the current modification request, the permittees admit: “At the time the Permittees prepared the Part B Permit Application, the WIPP LWA limit and the HWDU limit were considered to be the same.” AR 180121 at 7. Moreover, the Permittees have supported the original Permit with WIPP capacity limits based on those gross outer container volumes, permit modifications with WIPP capacity limits based on those gross outer container volumes, and the Permit renewal with WIPP capacity limits based on those gross outer container volumes. The permittees have not previously stated that there is any reason for a second, different system for measurement of compliance with the capacity limit. There is no adequate basis to change the capacity limit, nor to change how compliance with it is measured, nor any reason to add the proposed new Section 1.5.22. Land Withdrawal Act TRU Waste Volume of Record.

Moreover, DOE has reported to Congress how much waste is disposed of at WIPP based on the gross internal volume of the outer container. In the annual budget requests to Congress, the volume of Contact-Handled (CH) waste disposed of at WIPP is reported as the gross internal volume of the outer container. AR 180402.34H to V. Thus, DOE has been reporting to Congress each year about the amount of waste emplaced at WIPP compared with the LWA capacity limit. Those amounts for CH waste are the same as the Permit capacity limit. The modification request and the Draft Permit provide no explanation of why that established practice should be changed.

DOE is also required to report annually to the Environmental Protection Agency (EPA), including about the volume of waste emplaced. The Annual Reports, including the most recent one, calculate the CH waste volumes based on the outer container volume, the same amounts that are provided to Congress and are included in the WIPP Permit. Ref. 5 at 17.

Numerous other official DOE documents use the gross internal volume of the outer container to calculate TRU waste volumes. For example, the calculation for the total volume of legacy TRU waste planned for disposal is approximately 131,000 cubic meters, based on container volumes. AR 180402.34W at 13.

The Annual Transuranic Waste Inventory Report continues to use the “final form” volumes from the earlier Baseline Inventory Reports, though it also uses “outer container volume,” which is the same as the gross internal volume of the outer container used in the Permit. The current (2017) Annual Inventory Report states: “In this report, CH-TRU waste volume in overpacks reflects the outer container volume and the RH-TRU waste volume in overpacks reflects the inner container volume.” AR 180402.34X at 18.

Moreover, WIPP has used those container volumes from the Permit in its operating contracts, including with co-permittee Nuclear Waste Partnership (NWP). The original NWP contract from 2012 included Programmatic Goal 3: “Complete disposition of 90 percent of the legacy

transuranic waste by the end of fiscal year 2015" from the Roadmap for EM's Journey to Excellence, (AR 180402.34W at 12-13). AR 180402.34Y at C-3.

In the modification request (AR 180121) and the TID Response (AR 180706), the permittees assert that they have based waste volume on the assumption of full waste containers. That is not a true statement. To be accurate: Waste volume was calculated based on the volume of the outer container.

Thus, the AR is clear that gross internal volume of the outer container has consistently been used by DOE for calculating the WIPP legal capacity limit, as well as for numerous other purposes.

DOE has a demonstrated long-standing methodology for calculating the TRU waste volume to comply with the LWA capacity limit. DOE has not offered any reasoned explanation for the requested change in interpretation of the LWA limits. "A 'settled course of behavior embodies the agency's informed judgment that, by pursuing that course, it will carry out the policies committed to it by Congress. There is, then, at least a presumption that those policies will be carried out best if the settled rule is adhered to.'" *Atchison, T. & S. F. R. Co*. v. *Wichita Bd. of Trade*, 412 U.S. 800, 807-808 (1973). Accordingly, an agency changing its course by rescinding a rule is obligated to supply a reasoned analysis for the change beyond that which may be required when an agency does not act in the first instance. *Motor Vehicle Manufacturers Association v. State Farm Mutual Automobile Insurance Co.,* 463 U.S. 29, 41-42 (1983).

The proposed to-be-developed CBFO Management Policy, which concerns DOE's new method of calculating the volume of waste in a container and is mentioned in the TID Response (AR 180706 at 1-2), is key to calculation of waste volume under DOE's proposed change, must be part of the HWA permit, and is required to be submitted as part of the modification request and therefore subject to public notice and comment. The Management Policy is not in the AR, so the request and Draft Permit are legally deficient.

<u>In the compliance certification process, DOE and EPA have calculated the WIPP capacity limit based on outer container volumes</u>

The LWA requires that the Environmental Protection Agency (EPA) must certify "whether the WIPP facility will comply with the final disposal regulations." AR 180706.03, Section 8(c)(2). That certification is required before the DOE "may commence emplacement of transuranic waste underground for disposal at WIPP. AR 180706.03, Section 7(b)(1). The certification was subject to notice-and-comment requirements.

In its Certification Application and recertification applications, DOE has provided EPA with waste inventory data based on container volume to show compliance with the LWA. These submissions, and EPA's acceptance of the data as responsive to the Compliance Criteria requirement of data showing compliance with LWA limits (40 C.F.R. § 194.24(g)), were done pursuant to a public notice-and-comment rulemaking process and provide a controlling

interpretation of the LWA limits. See, e.g., *Seneca-Cayuga Tribe of Oklahoma v. National Indian Gaming Commission*, 327 F.3d 1019, 1036-40 (10th Cir. 2003).

The Permit has always incorporated the LWA and the capacity limit based on the outer container

The definition of the facility contained in the Permit is:

> "The WIPP facility comprises the entire complex within the WIPP Site Boundary as specified in the WIPP Land Withdrawal Act of 1992, Pub. L. 102-579 (1992), including all contiguous land, and structures, other appurtenances, and improvements on the Permittees' land, used for management, storage, or disposal of TRU mixed waste." Original (1999) Permit Module I.D.2, now Section 1.5.3.

Further, the LWA capacity limit always has been incorporated into the WIPP Permit. The limit was included in the Permittees' Part A application (AR 180914.37I), Original Permit Attachment O, now Attachment B. The capacity limit also is now included in Table 4.1.1, Attachment B, Attachment G1, Attachment G1c, Attachment H1, and Table J3. Until submittal of this request, the permittees have never publicly objected to the capacity limit, measured by gross interior container volume, being in the Permit.

Pursuant to 20 NMAC 4.1.900 (incorporating 40 CFR 270.15(a)(3)) the permittees in their Part B application (and thus in the final permit) must provide "Capacity of the containment system relative to the number and volume of containers to be stored." Those amounts have always been included in the Application, Renewal Application, and the Permit. NMED cannot surrender its RCRA authority, and responsibility, over waste volume disposed of at WIPP. Needless to say, the proposed volume cannot exceed any legal requirements, such as the LWA.

In addition, pursuant to 20 NMAC 4.1.500 (incorporating 40 CFR 264.601(a)(1)), a miscellaneous unit must be operated so as to prevent releases, taking into consideration "the volume and physical and chemical characteristics of the waste in the unit, including its potential for migration through soils, liners, or other containing structures." Again, NMED cannot surrender its RCRA authority, and responsibility, over waste volume disposed of at WIPP. Needless to say, the proposed volume cannot exceed any legal requirements, such as the LWA.

Throughout the 1999 WIPP Permit hearing, in the AR and the Record Proper, NMED reiterated its authorities under the HWA and the LWA. The Hearing Officer Report (AR 180914.37T), Findings and Fact and Conclusions of Law, as adopted by the NMED Secretary in issuing the Permit (AR 180914.37W), found that NMED did have those authorities.

NMED also has enforced the Permit capacity volumes. On August 8, 2011, the Permittees submitted a Class 1 modification to revise Table 4.1.1 to reflect final waste volumes in Panel 5. AR 180914.32H. The Permittees erroneously reported the RH volume as "5,403 ft^3 (153 m^3)." NMED did not accept those volumes and corrected them on November 9, 2011:

> "NMED changed the final volume for remote-handled (RH) waste in Panel 5 to 8,300 ft^3 (235 m^3) to maintain consistency with the calculations used to report the RH volume for Panel 4. In their submittal, the Permittees reported the RH volume based on the volume of the containers within the RH canisters emplaced in Panel 5. The corrected RH volume is based on the volume of the RH canisters (264 canisters * 0.89 m^3 per canister = 235 m^3)." AR 180914.32I.

Thus, NMED has always equated – and enforced – the LWA capacity limit and the Permit capacity limit as the same thing, measured based on the gross internal volume of the outer container.

The modification request and Draft Permit are not needed

In its first 19.5 years of operations – March 26, 1999 to September 29, 2018 – less than 54 percent of that 6.2 million cubic feet (175,564 cubic meters) volume capacity limit has been emplaced at WIPP. Ref. 6. For CH waste, 173,242 containers emplaced have 93,929 cubic meters of waste, and 728 containers of RH waste have 642 cubic meters of waste. That total of 94,571 cubic meters is less than 54 percent of the capacity limit. The request and the Draft Permit do not specifically discuss that fact, nor address why any change in the capacity limit nor a "Volume of Record" is needed now, since the existing gross internal container volume limits are adequate for years or even decades into the future.

Further, in its Fact Sheet and Draft Permit, NMED has articulated no reason or rationale to expand WIPP's capacity and to depart from the way that compliance with the capacity limit has historically been calculated, based on gross internal volume of the outer container. It is not enough for DOE to urge that it did not anticipate the extent of the required use of overpacks or that DOE now has more waste than the available disposal space. What is in issue is a capacity limit, which is a number that is intended to remain fixed and binding, regardless of future events. This limit that has always been understood to apply to the volume of the outer disposal containers. DOE cannot contest that history and that understanding. A limit is not to be exceeded. To assert that a legal limit now presents problems is not a rationale for refusing to honor it, which is the essence of DOE's request here.

DOE's motivation to expand WIPP's capacity

DOE's practice from the 1970s includes numerous proposals to expand WIPP to include more than some TRU waste disposal, and there are numerous current proposals in National Environmental Policy Act (NEPA) documents to expand WIPP. AR 180402.34B through F. Such expansions, which have not been approved by Congress, are an apparent motivation for the modification request, but the permittees have never admitted as much.

In addition, for many years, SRIC has publicly noted that the permittees' management practices, especially failing to use all of the disposal capacity of each WIPP panel and leaving much of the remote-handled (RH) waste disposal capacity unused, meant that the actual capacity of the eight (or ten) panels is much less than 6.2 million cubic feet. Ref. 7.

In 2003, the DOE Inspector General (IG) reported:

> "If current waste emplacement practices continue, by 2020, the repository, as now configured, will not be able to accommodate 980 planned shipments of remote-handled TRU waste. The Department has recognized the potential space problem and identified some alternatives, but has not yet formally planned for the resolution of this issue." Ref. 8 at 1.

In 2013 the DOE IG reported:

> "We found that while EM had made progress in meeting its operational disposal goals, it was not on track to meet its goal to dispose of 90 percent of the Department's legacy TRU waste by the end of FY 2015. In particular, EM faces a number of challenges in meeting its planned 90 percent waste disposal goal by 2015. Additionally, without further modifications to the repository or existing waste disposal practices, WIPP may not have capacity for disposal of the current RH inventory." Ref. 9 at 1-2.

In 2017, the Government Accountability Office (GAO) reported:

> "DOE does not have sufficient space at WIPP to dispose of all defense TRU waste….
> •DOE's TRU waste management plan, which includes planning for WIPP, covers a 5-year period and does not address possible expansion. Moreover, DOE's TRU waste management plan does not include a schedule for expanding DOE's disposal space before existing space is full.
> •Expanding WIPP's disposal space will require regulatory approval that is expected to take several years. However, DOE modeling that is needed to begin the regulatory approval process is not expected to be ready until 2024." Ref. 10 at inside cover.

Thus, DOE wants to expand WIPP and does not acknowledge the reality of DOE's major failures to fully comply with WIPP's mission to "start clean, stay clean," and fully use underground disposal panels. These are the unstated DOE motivations for the modification request, but they do not provide a legal basis for the modification request or the Draft Permit.

<u>NMED has authority under the LWA and New Mexico Hazardous Waste Act (HWA) to impose capacity limits, based on container volumes</u>

During the WIPP Permit hearing in 1999, NMED provided evidence and testimony regarding its authority under the LWA and the HWA to impose various conditions in the Permit. AR 180402.34A, 180914.37V. The Permit imposed capacity limits on each Hazardous Waste Disposal Unit (HWDU), based on container volumes, including overpacks, which were included in the Permit III.C.1. Thus, in law, regulation, and practice, NMED has authority to impose conditions, including capacity limits on WIPP. NMED has used its authority to specify that WIPP HWDU capacity limits are based on container volumes.

The Permit allows use of approved overpacks for storage and disposal. In some cases, the Permit may require use of an overpack. Attachment A1-1c(1), Attachment A1-1d(2), Attachment A1-1d(4), Attachment A1-1e(1), Attachment A2-2b, Attachment A4-3, Attachment D-4b, Attachment D-4e, and Attachment D-4e(3). DOE also may use its management authority to use overpacks for other reasons. However, the gross internal volume of those overpacks is the measure of waste emplaced under the Permit and the LWA.

The State of New Mexico has authority, in addition to WIPP Permit limits, to limit WIPP waste volumes:

As previously discussed, before issuance of the WIPP Permit, the C&C Agreement established capacity limits for WIPP, which were also based on container volumes. The C&C Agreement authority is recognized by the LWA, DOE, and the federal courts, is separate from HWA authorities, and is not under the Secretary of the Environment's authority. Thus, NMED has no authority to change the C&C Agreement, nor authority over other State officials who are designated by the C&C Agreement and the Stipulated Agreement in the New Mexico Federal District Court.

The Administrative Record is clear that the modification request and the Draft Permit cannot be approved because they lack both technical and legal basis.

References

1. Nuclear Waste Policy Act (NWPA) of 1982 (Public Law 97-425). Through Section 111 & Section 160 (10 pages).

2. *Final Supplement Environmental Impact Statement* (DOE/EIS-0026-FS, January 1990 "SEIS-I"), Vol. 3 of 13, page 246. (2 pages).

3. *Final Supplement Environmental Impact Statement* (DOE/EIS-0026-FS, January 1990 "SEIS-I"), Vol. 2 of 13, page B-3. (2 pages).

4. *Waste Isolation Pilot Plant Disposal Phase Final Supplemental Environmental Impact Statement* (DOE/EIS-0026-S-2, September 1997 "SEIS-II"), Vol. II, pages A-9-14. (7 pages).

5. U.S. Department of Energy. Annual Change Report 2016/2017, November 2017. (44 pages).

6. Southwest Research and Information Center. WIPP Disposal Volumes (as of September 29, 2018). (one page).

7. Southwest Research and Information Center. WIPP Permitted vs. Actual Capacity (as of September 29, 2018). (one page).

8. U.S. Department of Energy Office of Inspector General Office of Audit Services. *Disposal of Remote-Handled Transuranic Waste at the Waste Isolation Pilot Plant.* DOE/IG-0613, July 2003 (24 pages).

9. U.S. Department of Energy Office of Inspector General Office of Audit Services. *The Office of Environmental Management's Disposition of Transuranic Waste*. OAS-L-13-09, May 2013. (9 pages).

10. United States Government Accountability Office. *PLUTONIUM DISPOSITION: Proposed Dilute and Dispose Approach Highlights Need for More Work at the Waste Isolation Pilot Plant*. GAO-17-390, September 2017. (76 pages).

Appendix A

DON HANCOCK

EDUCATION:

B.A. DePauw University, Greencastle, Indiana, 1970.
Major in Political Science, junior year spent in universities in Bogota, Colombia.

Graduate work at University of the Americas, Cholula, Mexico, Summer 1972.
Intercultural Relations program sponsored by the National Conference of Christians and Jews.

CURRENT EMPLOYMENT:

September 1975 to present - Director of Nuclear Waste Program and Administrator, Southwest Research and Information Center, P.O. Box 4524, Albuquerque, NM 87196, (505) 262-1862; www.sric.org. SRIC is a nonprofit educational and technical assistance organization, working on various natural resources and environmental justice issues. Mr. Hancock has focused on policy, regulatory, legal, technical, and public information aspects of the Waste Isolation Pilot Plant (WIPP), the first U.S. geologic repository for nuclear waste, by providing public information, constant involvement in regulatory proceedings of the U.S. Environmental Protection Agency and New Mexico Environment Department, and federal policy issues. He has also followed efforts to site other nuclear waste facilities, including providing reports and making presentations to the Blue Ribbon Commission on America's Nuclear Future (BRC) and testifying before the Canadian Joint Panel on the Deep Geologic Repository.

SELECTED NUCLEAR WASTE ACTIVITIES:

March 12, 2018 - Presentation to the National Academy of Sciences Panel on Disposal of Surplus Plutonium in the Waste Isolation Pilot Plant, Albuquerque, NM.

November 29, 2017 – Presentation to the National Academy of Sciences Panel on Disposal of Surplus Plutonium in the Waste Isolation Pilot Plant, Washington, DC (by videoconference).

June 1, 2016 – Presentation on Consent and Non-Consent in Nuclear Waste Siting at the ECAST Workshop on Consent-Based Siting in Boston, MA.

May 24, 2016 – Invited Presentation by the Department of Energy at its Consent Based Siting public meeting in Denver, CO.

March 9, 2016 – Presentation to the "Reset of U.S. Nuclear Waste Management Strategy and Policy at Stanford University, CA.

September 9, 2014 - Presentation to the Canadian Joint Review Panel on "Recent Events at the Waste Isolation Pilot Plant (WIPP) and Initial Questions and Lessons for the Ontario Power Generation Proposed Deep Geologic Repository."
http://sric.org/nuclear/docs/DGR%20Hancock%20072114.pdf

September 24, 2013 – Presentation to the Canadian Joint Review Panel on "WIPP and International Experience with Deep Geologic Repositories." Kincardine, Ontario, Canada. http://sric.org/nuclear/docs/Hancock_OntarioDeepGeologicRepository.pdf

September 13, 2011 – Presentation regarding the Blue Ribbon Commission on America's Nuclear Future Draft report. Denver, CO. http://sric.org/nuclear/docs/091311%20SRIC%20Presentation.pdf

January 27, 2011 – Invited speaker to the Blue Ribbon Commission on America's Nuclear Future, regarding WIPP. Carlsbad, NM. http://brc.gov/january_26-28_meeting.html

December 7, 2010 – Speaker at International Atomic Energy Agency Workshop on Strengthening National Competencies in the Area of Stakeholder Dialogue for Radioactive Waste Disposal. Las Vegas, NV.

July 7, 2010 – Invited speaker to the Disposal Subcommittee of the Blue Ribbon Commission on America's Nuclear Future, regarding WIPP. Washington, DC. http://brc.gov/Disposal_SC/Disposal_Subcommittee_July_7_Meeting_info.html

March 26, 1999 – Testimony at the New Mexico Environment Department WIPP Permit Hearing, Santa Fe, NM.

November 7, 1991 – Testimony regarding WIPP Land Withdrawal before the Subcommittee on Energy and Power, House Committee on Energy and Commerce, Washington, DC.

April 16, 1991 – Testimony regarding WIPP before the Subcommittee on Energy and the Environment, House Committee on Interior and Insular Affairs, Washington, DC.

April 26, 1990 – Testimony regarding WIPP before the Senate Committee on Energy and natural Resources, Washington, DC.

December 8, 1987 – Testimony regarding WIPP Land Withdrawal Issues before the Subcommittee on Energy and the Environment, House Committee on Interior and Insular Affairs, Washington, DC.

October 12, 1987 – Testimony regarding WIPP Land Withdrawal Issues before the Subcommittee on Public Lands, National Parks and Forest, Senate Energy and Natural Resources Committee, Carlsbad, NM.

January 1983 – December 1987 – Consultant Technical Advisor to Serious Texans Against Nuclear Dumping (STAND) and (from January 1984 to December 1987) People Opposed to Wasted Energy Repositories (POWER) regarding proposed high-level waste repository in the Texas Panhandle.

March 1986 – April 1986 – Consultant to Lakes Environmental Association in Maine regarding draft Area Recommendation Report.

January 1986 – April 1986 – Consultant to Great Lakes Indian Fish and Wildlife Commission on draft Area Recommendation Report and socioeconomic and transportation impacts of waste disposal.

December 1985 – January 1986 – Consultant to State of Minnesota on socioeconomic issues to be considered in the area characterization plan.

August – October 1983 – Member of New Mexico Governor's Socioeconomic Task Force on WIPP.

March 1981 – Consultant to the (U.S.) State Planning Council on Radioactive Waste Management Transportation Task Force.

December 1979 – February 1981 – Member of Public Advisory Board for the University of New Mexico's study for the State of New Mexico on the socioeconomic impacts of WIPP.

October 1980 – January 1981 – Consultant to the (U.S.) State Planning Council on Radioactive Waste Management on the National Plan for Radioactive Waste Management.

June – July 1980 – Participant in the Second Keystone Conference on Public Participation in Radioactive Waste Management Decisionmaking.

1978 – present – Testimony at public hearings and written comments on more than 25 environmental impact statements regarding WIPP, nuclear waste facilities, and nuclear waste management.

1979 – 1991 - Testimony at more than a dozen congressional hearings on the federal government's nuclear waste management and the Waste Isolation Pilot Plant (WIPP), and before state legislative committees in New Mexico and Texas. Testimony in federal court cases and in regulatory proceedings regarding federal facilities.

Speaker at academic symposiums at various universities and before the National Academy of Sciences on federal nuclear facilities and nuclear waste policies.

Author of dozens of articles on WIPP and nuclear waste issues.