



**SOUTHWEST RESEARCH AND INFORMATION CENTER**

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April 3, 2018

Ricardo Maestas  
New Mexico Environment Department (NMED)  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87505

via email

RE: Class 2 Modification Request – TRU Mixed Waste Disposal Volume Reporting

Dear Ricardo:

Southwest Research and Information Center (SRIC) provides the following comments on the Class 2 permit modification request package that was submitted by the permittees on January 31, 2018, according to their public notice.

SRIC appreciates that the permittees provided a draft of the proposed request and that representatives of the permittees as well as NMED met with SRIC and other citizen group representatives on January 9, 2018. SRIC continues to believe that such pre-submittal meetings are useful and supports continuing that “standard” practice in the future.

However, given the strong objections to the modification request at the pre-submittal meeting and comments from SRIC and other groups’ representatives that the request was not properly a Class 2 modification, it is very disappointing that the permittees persisted in submitting any request or that it was not submitted as a Class 3 request.

NMED must deny the request because it violates federal laws

Pursuant to 20 NMAC 4.1.900 (incorporating 40 CFR 270.42(b)(6)(i)(B)) and its historic practices, NMED may deny Class 2 modification requests. The modification request 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).

A. WIPP Authorization - Public Law 96-164, Section 213

In December 1979, Congress authorized WIPP in southeastern New Mexico “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.” Both of those designations clearly indicate that WIPP was not the disposal site for all transuranic (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), “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.”

The law did not apply to WIPP because the facility was authorized as being exempt from Nuclear Regulatory Commission (NRC) licensing, while any repository only for high-level defense waste would be licensed by the NRC. 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.

#### B. WIPP Land Withdrawal Act (LWA)

In 1992, Congress passed and President George H.W. Bush signed, Public Law 102-579 that established many requirements for WIPP, including that it was subject to the Solid Waste Disposal Act. Section 9(a)(1)(C).

The LWA clearly states:

“CAPACITY OF WIPP.—The total capacity of WIPP by volume is 6.2 million cubic feet of transuranic waste.” 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 capacity, and not all TRU waste. Congress recognized that the limit was based on gross internal container volumes, which the request does not discuss.

The modification request ignores those legal requirements and states that the capacity limit: “constrains the DOE from achieving the goal of removing the inventory of TRU mixed waste from the generator/storage sites.” Page 9. In fact, the capacity limits are integral to the mission of WIPP to focus on legacy TRU waste, not on expanding the facility’s capacity. The permittees’ request is an attempt to circumvent the legal capacity limit, and it includes no specific limit.

NMED cannot approve a Permit modification that is contrary to the LWA. NMED is well aware of the LWA. In its written Direct Testimony Regarding Regulatory Process and Imposed Conditions for the original permit, the “Statutory Background” began with the WIPP Authorization and LWA. Page 1 of 9. NMED’s permit writer testified extensively about the LWA. Hearing, p. 2586-2617.

The WIPP Permit has always incorporated the LWA and the capacity limit. The definition of the facility 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, 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 opposed the capacity limit, measured by gross interior container volume, being in the Permit.

Although the permittees apparently do not want to comply with the WIPP legal capacity limits, NMED must ensure compliance with the federal law and cannot approve a Permit modification that is contrary to federal laws. Indeed, the history of the Permit includes occasions when the permittees strongly objected to the Permit including provisions that they deemed contrary to legal requirements.

In November 1999, the permittees sued NMED in federal and state courts regarding several provisions of the original WIPP Permit, including the financial assurance conditions, that were alleged to be contrary to federal law. On August 9, 2000, the NMED Secretary withdrew the financial assurance conditions because of changed federal law that prohibited such contractor financial assurance requirements. In 2003-2005, there was a prolonged permit modification process regarding Energy and Water Development Appropriations Acts “Section 310 and 311” requirements, in which because of federal law changes, NMED agreed to certain waste characterization and related requirements to be included in the Permit.

NMED has a practice and obligation to ensure that provisions of the Permit must comply with federal law. This current request is contrary to the intent and specific provisions of laws, and NMED must deny the request.

The request must be denied because it is not needed

The New Mexico Hazardous Waste Act (HWA) and its regulations, 20 NMAC 4.1.900 (incorporating 40 CFR 270.42(b)(1)(iii)(B)), require a request to “explain[s] why the modification is needed.” The request includes a section 3 purportedly to explain the need (pages 6-11), but the explanation is grossly inadequate and does not explain why the modification is needed.

In its first 19 years of operations – March 26, 1999 to March 26, 2018 – less than 55 percent of that 6.2 million cubic feet (175,564 cubic meters) volume capacity limit has been emplaced at WIPP. The request does not specifically discuss that fact, nor address why any change in the capacity limit nor a “Volume of Record” is needed now or at any time in the future since the existing gross internal container volume limits are adequate for years or even decades into the future.

SRIC's conclusion is that the reason for the request now is because it is part of the Department of Energy (DOE) efforts to expand WIPP for several missions that are also not allowed by the LWA.

- High-Level Tank Waste. The permittees proposal for bringing high-level tank waste resulted in the Excluded Waste Permit Section 2.3.3.8 in 2004. Nevertheless, the *Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington*, DOE/EIS-0391, November 2012, continues to include WIPP as a reasonable alternative disposal site. Further, DOE’s current Notice of Preferred Alternative states:  
 “DOE’s preferred alternative is to retrieve, treat, package, and characterize and certify the wastes for disposal at the Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico, a geologic repository for the disposal of mixed TRU waste generated by atomic energy defense activities.”

<https://www.energy.gov/sites/prod/files/EIS-0391-FEIS-NoticeofPreferredAlternative-2013.pdf>

- Greater-Than-Class C Commercial Waste. *Final Environmental Impact Statement for the Disposal of Greater-Than-Class C (GTCC) Low-Level Radioactive Waste and GTCC-Like Waste*, DOE/EIS-0375 states that WIPP is the preferred geologic disposal alternative and that the “WIPP Vicinity” is a reasonable alternative for Intermediate-Depth Borehole disposal, Enhanced Near-Surface Trench disposal, and Above-Ground Vault disposal.

[https://www.energy.gov/sites/prod/files/2017/02/f34/EIS-0375-FEIS\\_NOA-DOE-2016.pdf](https://www.energy.gov/sites/prod/files/2017/02/f34/EIS-0375-FEIS_NOA-DOE-2016.pdf)

- West Valley Commercial Waste. *Final Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center*, (DOE/EIS-0226), states that WIPP is the preferred alternative for disposal of its commercial TRU waste. Because of SRIC’s objections to the FEIS, DOE has deferred a TRU waste disposal decision, but has not changed that alternative.

<https://www.gpo.gov/fdsys/pkg/FR-2005-06-16/pdf/05-11882.pdf>

- Elemental Mercury storage. *Final Long-Term Management and Storage of Elemental Mercury Environmental Impact Statement Supplemental Environmental Impact Statement*, DOE/EIS-0423-S1 states that WIPP is a reasonable alternative for elemental mercury storage.

<https://www.energy.gov/sites/prod/files/2013/09/f3/EIS-0423-S1-FEIS-Summary-2013.pdf>

- Surplus Weapons Plutonium. The National Academy of Sciences currently has a panel examining DOE’s proposal to bring 34 metric tons or more of surplus weapons plutonium to WIPP.

<http://dels.nas.edu/Study-In-Progress/Disposal-Surplus-Plutonium/DELS-NRSB-17-03?bname=nrsb>

- Surface storage at WIPP. On September 29, 2016, the permittees submitted a Class 3 Modification Request for Addition of a Concrete Overpack Container Storage Unit. SRIC has strongly objected to the request as being contrary to the LWA, among other things.

The permittees desire to expand WIPP, including for missions contrary to federal laws (for some of the expansions even DOE admits are contrary to the LWA), does not meet the regulatory need requirement. The modification is not needed, and NMED must deny the request.

Gross internal container volume is the historic practice of determining the capacity limit

Even before WIPP opened in 1999, the waste volume is measured by the size of the gross internal volume of the container, as included in the Permit. 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. Page xi. The document calculated all waste volumes in “Final Waste Form,” which was the gross internal container volume. In their Permit Application, the permittees included the gross internal container volume amounts, which were incorporated into the original Permit and remain in the current permit. Section 3.3.1.

In their 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.” Page 7. Moreover, the Permittees have supported the original Permit with WIPP capacity limits based on those gross internal container volumes, Permit modifications with WIPP capacity limits based on those gross internal container volumes, and the Permit renewal with WIPP capacity limits based on those gross internal container volumes. The permittees have not previously stated that there is a reason for a second measurement regarding the capacity limit. There is no basis to change the capacity limit, nor any reason to add the proposed new Section 1.5.22. Land Withdrawal Act TRU Waste Volume of Record.

Not only is the WIPP capacity limit appropriately based on those gross internal container volumes, that is the way that DOE has reported to Congress how much waste is disposed at WIPP.

In the annual budget requests to Congress, the volume of waste disposed at WIPP is reported as the gross internal container volumes. See page 17 (and others) of the Fiscal Year 2005 Request.

<https://www.energy.gov/sites/prod/files/FY05Volume5.pdf>

See page 15 (and others) of the Fiscal Year 2006 Request.

<https://www.energy.gov/sites/prod/files/FY06Volume5.pdf>

See page 32 (and others) of the Fiscal Year 2007 Request.

<https://www.energy.gov/sites/prod/files/FY07Volume5.pdf>

See page 33 (and others) of the Fiscal Year 2008 Request.

<https://www.energy.gov/sites/prod/files/FY08Volume5.pdf>

See page 98 (and others) of the Fiscal Year 2009 Request.

<https://www.energy.gov/sites/prod/files/FY09Volume5.pdf>

See page 97 (and others) of the Fiscal Year 2010 Request.

<https://www.energy.gov/sites/prod/files/FY10Volume5.pdf>

See page 94 (and others) of the Fiscal Year 2011 Request.

<https://www.energy.gov/sites/prod/files/FY11Volume5.pdf>

See page 45 (and others) of the Fiscal Year 2012 Request.

<https://www.energy.gov/sites/prod/files/FY12Volume5.pdf>

See page 88 (and others) of the Fiscal Year 2013 Request.

<https://www.energy.gov/sites/prod/files/FY13Volume5.pdf>

See page EM-52 (and others) of the Fiscal Year 2014 Request.

<https://www.energy.gov/sites/prod/files/2013/04/f0/Volume5.pdf>

See page 90 (and others) of the Fiscal Year 2015 Request.

<https://www.energy.gov/sites/prod/files/2014/04/f14/Volume%205%20EM.pdf>

See page 101 (and others) of the Fiscal Year 2016 Request.

<https://www.energy.gov/sites/prod/files/2015/02/f19/FY2016BudgetVolume5.pdf>

See page 91 (and others) of the Fiscal Year 2017 Request.

[https://www.energy.gov/sites/prod/files/2016/02/f29/FY2017BudgetVolume5\\_3.pdf](https://www.energy.gov/sites/prod/files/2016/02/f29/FY2017BudgetVolume5_3.pdf)

See page 102 (and others) of the Fiscal Year 2018 Request.

<https://www.energy.gov/sites/prod/files/2017/06/f34/FY2018BudgetVolume5.pdf>

See page 117 (and others) of the Fiscal Year 2019 Request.

[https://www.energy.gov/sites/prod/files/2018/03/f49/DOE-FY2019-Budget-Volume-5\\_0.pdf](https://www.energy.gov/sites/prod/files/2018/03/f49/DOE-FY2019-Budget-Volume-5_0.pdf)

Thus, DOE has been reporting to Congress each year about the amount of waste emplaced at WIPP compared with the LWA and Permit capacity limit. Those amounts are the same. The modification request provides no explanation of why that historic practice should be changed.

Numerous other official DOE documents use the gross internal container volume 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. See page 13 of:

[https://www.energy.gov/sites/prod/files/2014/03/f8/Roadmap\\_Journey\\_to\\_Excellence\\_2010.pdf](https://www.energy.gov/sites/prod/files/2014/03/f8/Roadmap_Journey_to_Excellence_2010.pdf)

The *Annual Transuranic Waste Inventory Report* continues to use the “final form” volumes from the earlier *Baseline Inventory Reports*, though it also uses other terms, including “the volume the waste container occupies in the repository” or “payload container volume” or Contact-Handled “outer container volume,” which are the same as the gross internal container volume of the Permit. See, for example, Page 18 of the current 2017 Inventory.

[http://www.wipp.energy.gov/library/TRUwaste/DOE-TRU-17-3425\\_Rev\\_0.pdf](http://www.wipp.energy.gov/library/TRUwaste/DOE-TRU-17-3425_Rev_0.pdf)

(SRIC has consistently objected to the calculated RH volume amounts, and DOE has annually provided RH volumes based on gross internal container volume.)

Moreover, WIPP has used those container volumes in 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*, cited above. Page C-3 of:

[http://www.wipp.energy.gov/library/foia/NWP\\_M&OContract/NWP\\_M&O\\_Contract.pdf](http://www.wipp.energy.gov/library/foia/NWP_M&OContract/NWP_M&O_Contract.pdf)

Not only goals, but performance awards (bonuses) have been provided based on container volumes.

Clearly, gross internal container volumes have consistently been used for calculating the WIPP legal capacity limit, as well as for numerous other reasons. The modification request does not discuss that plethora of documents, nor why those documents should now be considered inaccurate or should be changed. There is no legal basis to change the Permit capacity limits, which are those provided by the LWA.

NMED has the authority to deny the request, or alternatively consider it under Class 3 procedures  
While SRIC strongly supports the decision to deny the request, pursuant to 20 NMAC 4.1.900 (incorporating 40 CFR 270.42(b)(6)(i)(C)), NMED does have the authority to determine that Class 3 modifications procedures should be used.

Those Class 3 procedures are required if there is significant public concern or because of the complex nature of the proposed changes. Both of those reasons are currently present.

There is significant public concern, not only represented by SRIC and its supporters, but also by many other organizations and individuals that have commented on the request. As described above, the change also is complex, so much so that the permittees cannot explain why it is needed and why the historic practice of measuring the capacity based on gross internal container volume should not continue.

Moreover, other regulatory requirements do not permit the request to be considered as a Class 2 modification. “Class 3 modifications substantially alter the facility or its operations.” 20 NMAC 4.1.900 (incorporating 40 CFR 270.42(d)(2)(iii). The change would substantially alter the facility’s waste capacity and therefore its operations in the future, and is a Class 3 request.

20 NMAC 4.1.900 (incorporating 40 CFR 270.42, Appendix I.F.1.a requires a Class 3 modification for changes “Resulting in greater than 25% increase in the facility’s container storage capacity” [with exceptions that do not apply to this request].

According to the request,

“...the volume of contact-handled TRU mixed waste disposed as of December 6, 2017, based on the outermost container volumes is 3,238,673 ft<sup>3</sup> (91,709 m<sup>3</sup>) while the volume based on the innermost container volumes, which would more accurately reflect the LWA TRU waste volume of record, is 2,307,708 ft<sup>3</sup> (65,347 m<sup>3</sup>).” Page 9.

Thus, the amount of waste now disposed would be reduced by 930,965 cubic feet (26,362 cubic meters). That is a more than 28.7 percent decrease in the measured amount of waste in the underground. Thus, the request proposes an increase of at least 28.7 percent of container storage capacity. Since the reduction would also apply to future waste volumes, the overall future increase would likely to be significantly more than that 28 percent. In either case, the request is a Class 3 modification.

Therefore, if the request is not denied, it must be a Class 3 request and subjected to those procedures, including additional public comment and an opportunity for public hearing. SRIC requests those procedures if the request is not denied. SRIC also requests a public hearing.

The request is not “true, accurate, and complete”

The permittees, through Todd Shrader, DOE WIPP Manager, and Bruce C. Covert, NWP Project Manager, state on the cover page of the submittal:

“Based on our inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of our knowledge and belief, true, accurate, and complete.”

As discussed above, the information is not “complete” when it comes to the annual budget requests to Congress, the Annual Waste Inventory Reports, other DOE reports, and WIPP contracts and performance bonuses. The request is not “true, accurate, and complete” in disclosing the increased facility container storage capacity that would result if the request were to be implemented. The statement on page 1 of the request is not true, accurate, and complete when it asserts that the Permit capacity “is not based on the LWA total capacity limit of 6.2 million cubic feet (ft<sup>3</sup>) (175,564 cubic meters (m<sup>3</sup>)) of TRU waste as authorized by Congress in the WIPP LWA of 1992 (Public Law 102-579 as amended by Public Law 104-201).” That assertion is not supported by adequate evidence in the request, especially when viewed in light of these comments.

In fact, Congress was well aware of container volume as the basis for the WIPP capacity limits that were in the land withdrawal bills. Senate Report 102-196 on the WIPP LWA from the 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.” Page 27. The House Land Withdrawal Bill (HR 2637) version reported by the House Armed Services Committee 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.” Section 9(a)(3).  
House Report 102-241, Part 2.

House Report 102-241, Part 1 from the 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. Page 18. House Report 102-241, Part 3 from the 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. Page 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). For the permittees to not discuss that legislative history is not “true, accurate, and complete.”

Further, on page 8, the request includes a quotation from page 3-8 of the September 1997 *Waste Isolation Pilot Plant Disposal Phase Final Supplemental Environmental Impact Statement*, DOE/EIS-0026-S-26. The request then states: “As stated in the SEIS-II, containers would be totally full.”

However, the discussion of the SEIS-II is not true, accurate, and complete. The SEIS-II also states: “the 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). ” Page 2-9.

The SEIS-II also states:

“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.” Pages A-13 and 14.

The permittees’ very selective use of citations from the SEIS-II is not “true, accurate, and complete.” The quoted selection is highly misleading in light of other statements in the document. The assertion that the SEIS-II stated that “containers would be totally full” is clearly false.

SRIC requests that, at a minimum, NMED admonish the permittees for stating that the request is “true, accurate, and complete,” when the principals should have known the submittal does not meet those standards. NMED action is necessary so that the permittees understand that untrue, inaccurate, and incomplete modification requests cannot be submitted in the future.

In summary, NMED has the authority to deny the request, and that is the appropriate decision. SRIC would object to NMED using its authority to proceed with the request under Class 3 procedures, but acknowledges NMED has that authority. If NMED so uses its authority, it should provide additional public comment opportunities and public discussions with the permittees about the request prior to proceeding to a draft permit or the notice of opportunity for public hearing.

Thank you very much for your careful consideration of these comments and all others received.

Sincerely,

A handwritten signature in black ink, appearing to read "Don Hancock". The signature is fluid and cursive, with the first name "Don" being more prominent than the last name "Hancock".

Don Hancock

cc: John Kieling