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Ricardo,

I am submitting comments on the August 6, 2018 draft Permit (**draft Permit**) issued by the New Mexico Environment Department (**NMED**) for the Waste Isolation Pilot Plant (**WIPP**) Hazardous Waste Facility Permit (**Permit**). The draft Permit is based upon the January 31, 2018 Class 2 permit modification request (**PMR**), "Clarification of TRU Mixed Waste Disposal Volume Reporting," submitted by the US Department of Energy (**DOE**) Carlsbad Field Office and Nuclear Waste Partnership (**Permittees**), which was subsequently elevated after the close of the previous comment period by the NMED Secretary to be processed as a Class 3 modification.

I am also requesting a public hearing as specified in the August 6, 2018 public notice and fact sheet on the draft Permit. I have included my request at the end of my comments, and have provided all required information for a complete request

I oppose NMED's draft permit for the same reasons given in my comments submitted on April 3, 2018 on the Permittees' January 31, 2018 Class 2 PMR, which I incorporate by reference for purposes of this comment period for the draft Permit. These additional comments on the draft Permit may expand on my previous comments, but should not be viewed as replacing or eliminating them. From my review of the draft Permit, it appears that there have been no significant changes from the language proposed in the PMR, with the exception of some minor wordsmithing by NMED and a few edits proposed by the Permittees in their July 12, 2018 response to NMED's June 27, 2018 Technical Incompleteness Determination (**TID**) that have been incorporated.

I found the "Basis for the Draft Permit" portion of the final Fact Sheet (20.4.1.901.D(2)(c) NMAC) issued on August 6, 2018 to be less than helpful, as it failed to identify any NMED-imposed conditions and language that were different from the original PMR and whether those changes were based on public comment on the Class 2 PMR, the Permittees' responses to the TID, or NMED's whim. Thus, the public was left with the task of comparing the PMR with the draft Permit on a line-by-line basis and trying to determine the source of any difference. NMED must come prepared to the hearing to identify and justify all agency-imposed changes from the PMR, as well as the basis for their full support of the modifications proposed by the Permittees.

In my comments below, I will provide reasons why I oppose this draft Permit and recommend that the NMED Secretary deny it, and instead have the Permit either remain in the unmodified state in which it existed at the time of the hearing, or be changed in a manner consistent with my April 3, 2018 comments already in the administrative record.

1. Proposed Permit Section 1.5.22, “Land Withdrawal Act TRU Waste Volume,” is vague and unenforceable

NMED has incorporated the definition from the Class 2 PMR with some minor editorial changes, but the definition remains vague, unenforceable, and unsuitable for inclusion in the Permit. As written, it states,

“ ‘Land Withdrawal Act TRU Waste Volume (LWA TRU Waste Volume)’ means the volume of TRU waste inside a disposal container. This volume is tracked and reported by the DOE internally relative to the WIPP Land Withdrawal Act total capacity limit of 6.2 million ft³ (175,564 m³) (Pub. L. 102-579, as amended). For informational purposes, the LWA TRU Waste Volume is included in Table 4.1.1.”

As mentioned in my April 3 comments (p 9, item #3), all containers in Permit Section 4.3.1 are “disposal containers,” yet the Permittees and NMED have failed to include any clarifying language in the draft Permit to explain how to understand what “the volume of TRU waste inside a disposal container” means or how it is calculated. Further, while it may be deduced from the PMR and the response to the TID that NMED and the Permittees may intend the term “disposal containers” to include a larger universe of “containers” (e.g., “authorized containers per the WIPP WAC”) than in Permit Section 4.3.1, there are no criteria in the draft Permit to determine compliance. Hence, the definition in Permit Section 1.5.22 is useless and must be rewritten to eliminate all uncertainty and confusion.

2. Volume calculations for certain containers in TID response are unverified

The TID response includes Table 1 (p. 2) listing authorized containers per the WIPP WAC proposed for use in calculating LWA VOR volume. While many of the containers listed are already described in the Permit sufficiently to verify their internal volumes, the containers listed below have no volume calculations available in the record:

- 12-in Standard Pipe Overpack Container (POC)
- Type S100 POC
- Type S200-A POC
- Type S200-B POC
- Type S300 POC
- Criticality Control Overpack
- NS15 Neutron Shielded Canister
- NS30 Neutron Shielded Canister

The calculations to verify the volume of these containers must be provided in the record.

3. The DOE management policy identified in the TID response must be made publicly available before any action is taken on the draft Permit

NMED has consented to remove all enforceable references to the WIPP LWA total capacity limit of 6.2 million ft³ of TRU waste from the draft Permit, and DOE is promising to create a management policy outside of the Permit that “will establish the methodology for implementing a tracking method” for this capacity limit. Apart from the vagueness and uncertainty over the definition of LWA TRU waste volumes discussed above, DOE is not proposing to have this management policy undergo any external regulatory review or oversight, and to date it has not been made available to the public. DOE’s attempt to provide details on how their plan or mechanism would track and report waste volumes pursuant to the LWA is unsatisfactory.

For example, the TID response to NMED’s question #1 uses the following terms, sometimes interchangeably, sometimes not:

- “waste containers”
- “those that are overpacked” (presumably called “overpacked waste containers”)
- “those that are... direct loaded (presumably called “direct-loaded waste containers”)
- “innermost waste container”
- “approved containers”
- “authorized containers”
- “overpack containers” (presumably a container overpacking another container)

Unfortunately, with imprecise language, this can lead to unintended consequences. Consider this statement (TID response 1.a, p. 1):

“The policy will distinguish between two categories of waste containers: Those that are overpacked and those that are not overpacked (i.e., direct loaded). The DOE will consider the volume of TRU waste to be the volume of the innermost waste container being disposed of for overpacked containers.”

Where is this “innermost waste container”? Is it the overpacked container, or is it inside the overpacked container, which is then in the overpack container holding everything else? This is not an unlikely scenario... a standard pipe overpack can be direct loaded with “Solids, large objects (e.g., metal cans containing waste).”¹ Can a can be an “innermost waste container being disposed of for overpacked containers”? It conjures up images of a Russian nesting doll. If this language is supposed to represent the clarity of thinking by DOE in preparing their management policy, I am doubtful that it will be any better than the vague language in the original Class 2 PMR itself.

The proposed DOE Management Policy, or at least an intelligible draft of it, must be placed into the record and made publicly available before any further action is taken on the draft Permit.

¹ CH-TRAMPAC Document, Revision 4, December 2012, Table 2.9-9 – Standard Pipe Overpack: Material Content Forms Authorized for Transport, p. 2.9-9,
<https://www.energy.gov/sites/prod/files/2015/04/f22/CH-TRAMPAC.pdf>

4. Table 4.1.1 as proposed in the draft Permit is incomplete

NMED has proposed to slightly modify Table 4.1.1, Underground HWDUs, in the draft Permit from how it was proposed in the PMR. Besides changing one of the two column headings (“Maximum **TRU Mixed Waste** Capacity” and “Final **TRU Mixed** Waste Volume”), NMED has added a new column with the heading “**Final LWA TRU Waste Volume.**” This new column is apparently intended to report in the Permit, for “informational purposes,” the final LWA volumes of CH and RH TRU waste in each Panel after closure. However, there are no final LWA volumes reported in the table for Panels 1 through 6, and the table is thus incomplete. NMED should either calculate the values themselves, or the Permittees must provide them to NMED for inclusion in the draft Permit for completeness. The Permittees provided a summary number in the Class 2 PMR (p. 9, pdf p. 13), so a means of calculation by individual Panel should not be difficult. If NMED intends to approve the draft Permit, I object to this column being left blank.

In addition, the volumes in “Final TRU Mixed Waste Volume” and “Final LWA TRU Waste Volume” should be totaled at the bottom of the table, as I specified in my April 3, 2018 comments (Recommended Action, Item 7, p. 14-15). Although my comment was applicable to the existing “Final Waste Volume” column, the same rationale holds true for the proposed “Final LWA TRU Waste Volume” column as well.

5. The Permittees are breaking their long-term pledge to manage all TRU waste in the same manner

During the initial application by DOE for a hazardous waste permit at WIPP in 1995, it was important to NMED that all waste managed, stored, and disposed of at WIPP be uniformly regulated by that permit. This was important because of DOE’s history of self-regulation (see following comment #6) and the potential for two different “classes” of waste (in this case, non-mixed TRU waste regulated under 40 CFR §§191 and 194 by EPA and mixed TRU waste regulated under 40 CFR §§260 to 270 by NMED) to be managed, stored, and disposed of at WIPP in different and potentially incompatible ways.

During negotiations in the development of the RCRA Part B Permit Application, DOE and their M&O contractor agreed to the following language, as included in the RCRA Part B Permit Application (specifically, in the RCRA Part A Application, XII.PROCESS-CODES AND DESIGN CAPACITIES (continued)) and incorporated in the first draft Permit issued May 15, 1998 (pdf p. 1842)²

“For purposes of this application, all TRU waste is managed as though it were mixed.”

Through all revisions of the Permit since then, up to and including the most current version of the WIPP Permit at the time of these comments, that language has remained unchanged. During that time, the RCRA Part A Permit Application has gone from Amendment #7

² NMED, Hazardous Waste Facility Draft Permit, Waste Isolation Pilot Plant, EPA No. NM4890139088, May 15, 1998, https://hwbdocuments.env.nm.gov/Waste_Isolation_Pilot_Plant/980543.pdf

(signed by George Dials and Joseph Epstein on May 29, 1996)³ to #32 (signed by Todd Shrader and Bruce Covert on June 12, 2017).⁴

One other thing has remained nearly unchanged on the Part A Permit Application during this time – the maximum volume of waste specified under “Process Codes and Design Capacities” for Process Code “X04 Geologic Repository,” expressed in cubic meters.

- For Amendment #7, May 29, 1996, the Process Design Capacity states, “175,600 TOTAL (54,064 in ten years)” for 10 Process Total Number of Units
- For Amendment #32, June 12, 2017, the Process Design Capacity states, “175600.00” for 10 Process Total Number of Units

However, this has been replaced in the draft Permit with Process Design Capacities expressed for each individual HWDU, and the LWA total capacity limit has been removed.

For over 20 years, the WIPP LWA total capacity limit of 6.2 million ft³ (175,600 m³) of TRU waste has been enshrined in the Permit.⁵ By attempting to remove this limit in the Permittees’ PMR and successfully convincing NMED to remove it from the draft Permit, DOE is essentially breaking this long-standing pledge to manage all waste in the same manner:

- Waste volume subject to regulation under the Permit will be calculated in the same manner as has been done since at least 1994 (and possibly as early as 1982) in the annual Integrated Data Base Reports, Transuranic Waste Baseline Inventory Reports, and Annual Transuranic Waste Inventory Reports by DOE.
- Waste volume subject to DOE’s unique interpretation of the LWA limit will be calculated in new, different, and more liberally construed way that is inconsistent with at least 24 years of precedent.

6. The Permittees have made a weak case for their “mandate” to self-regulate at WIPP with respect to the LWA total capacity limit

The Permittees, through the authority vested in the DOE Secretary, bluntly asserted in the PMR (p. 10) that they alone have the responsibility to redefine how waste volume is calculated

“The changes proposed in this PMR are appropriate because it is DOE’s responsibility to manage the waste in a manner that assures that the mission of the WIPP facility is fulfilled. Congress has authorized the DOE to regulate TRU waste under its control.”

³ *ibid.* Note that dates of other Part A Submittals are referenced under the XIX. Comments: “Additional data were submitted on Jul 9 1991; November 12, 1992; January 29 1993; March 2, 1995; May 26, 1995; and April 12, 1996. Part A originally signed on January 18, 1991, and submitted on January 22, 1991.” The January 1991 Part A was submitted after NMED received authorization from EPA to regulate mixed waste.

⁴ NMED, Hazardous Waste Facility Permit, Waste Isolation Pilot Plant, EPA No. NM4890139088, March 2018, Attachment B, https://hwbdocuments.env.nm.gov/Waste_Isolation_Pilot_Plant/180300/180300_WIPP_Permit_PDF/Attachment_B_03-2018.pdf

⁵ See Zappe April 3, 2018 comments, pp 6-7, for discussion of NMED’s intent in retaining the LWA limit in the Permit.

They cite Section 203(a)(8)(G) of the Department of Energy Organization Act (Pub. L. 95-91, August 4, 1977; 42 U.S.C §7133(a)), which in context says:

SEC. 203. (a) There shall be in the Department eight Assistant Secretaries... The functions which the Secretary shall assign to the Assistant Secretaries include, but are not limited to, the following:

... [omitted for brevity]

(8) Nuclear waste management responsibilities, including—

(A) the establishment of control over existing Government facilities for the treatment and storage of nuclear wastes, including all containers, casks, buildings, vehicles, equipment, and all other materials associated with such facilities;

(B) the establishment of control over all existing nuclear waste in the possession or control of the Government and all commercial nuclear waste presently stored on other than the site of a licensed nuclear power electric generating facility, except that nothing in this paragraph shall alter or effect title to such waste;

(C) the establishment of temporary and permanent facilities for storage, management, and ultimate disposal of nuclear wastes;

(D) the establishment of facilities for the treatment of nuclear wastes;

(E) the establishment of programs for the treatment, management, storage, and disposal of nuclear wastes;

(F) the establishment of fees or user charges for nuclear waste treatment or storage facilities, including fees to be charged Government agencies; and

(G) the promulgation of such rules and regulations to implement the authority described in this paragraph, [emphasis added]

except that nothing in this section shall be construed as granting to the Department regulatory functions presently within the Nuclear Regulatory Commission, or any additional functions than those already conferred by law.

DOE further claims in the PMR (p. 10):

“This mandate... would include the development of a method by which the DOE tracks the TRU waste volume that has been disposed against the WIPP LWA total capacity limit.”

It can be agreed that Congress, in 1977, vested the management responsibilities and authorities in the newly minted Department of Energy, and particularly related to the management of nuclear waste, as specified in Section 203(a)(8) of the DOE Organization Act. For example, the establishment of WIPP clearly falls within the purview of DOE as specified in Section 203(a)(8)(C).

However, it is much less convincing for DOE to claim a “mandate” to redefine how waste volumes are calculated. Note again this key portion of Section 203(a)(8):

(G) the promulgation of such rules and regulations to implement the authority described in this paragraph
except that nothing in this section shall be construed as granting to the Department regulatory functions presently within the Nuclear Regulatory Commission, or any additional functions than those already conferred by law.
[emphasis added]

DOE may have had authority to exercise full regulatory control over the radioactive constituents in TRU waste in 1977, but the status of mixed waste, such as TRU mixed waste, was not a settled matter at that time. This clarity of these issues changed as the understanding of the Resource Conservation and Recovery Act (**RCRA**) evolved, along with passage of the Federal Facility Compliance Act (**FFCA**) and Waste Isolation Pilot Plant Land Withdrawal Act (**WIPP LWA**) in 1992. Let's consider first DOE's resistance to external regulation under RCRA, and then to each of these two subsequent laws.

DOE resistance to external regulation

From the beginning of the Manhattan Project until the mid-1970s, DOE and its predecessor agencies were not subject to external regulation. However, by the time DOE became operational on October 1, 1977, RCRA had already been in effect for nearly a year after enactment on October 21, 1976 (Pub. L. 94-580, 42 U.S.C. §6901 *et seq.*). RCRA not only predates DOE, but it specifically grants authority and functions to the Environmental Protection Agency (**EPA**) and authorized states. Any additional functions granted to DOE must be conferred explicitly by law, and not extrapolated from the responsibilities listed in Section 203(a)(8) identified above.

Even though the original language in RCRA regarding the application of Federal, State, and Local law to Federal facilities was implemented in Sec. 6001, DOE was unwilling to allow application of RCRA regulations to its nuclear production and weapons facilities. For example, DOE took the position in 1984 that §1006(a) of RCRA [42 U.S.C. §6905(a)], which provides that RCRA does not apply to "activit[ies] ... subject to... the Atomic Energy Act of 1954 ... except to the extent such application (or regulation) is not inconsistent with the requirements of such Act[.]" exempted its Atomic Energy Act (**AEA**) facilities from all RCRA regulation.⁶

DOE reiterated this position in *Legal Environmental Assistance Foundation v. Hodel*, 586 F. Supp. 1163 (E.D. Tenn. 1984) when it argued that the Y-12 Plant at Oak Ridge was totally excluded from RCRA regulations. However, the court concluded that application of RCRA to Y-12 was not inconsistent with the AEA. The restriction upon RCRA found in 42 U.S.C. §6961 merely clarified the Congressional intent to exclude nuclear wastes from coverage

⁶ Olson, Theodore B., "Application of the Resource Conservation and Recovery Act to the Department of Energy's Atomic Energy Act Facilities," Memorandum Opinion for the Assistant Attorney General, Land and Natural Resources Division, February 9, 1984, <https://www.justice.gov/file/23586/download>

by RCRA. The AEA still provided exclusive regulation of nuclear wastes.⁷ This decision established the precedent for other states to require DOE's compliance with applicable hazardous waste laws at all of its nuclear production and weapons facilities.

Even with DOE grudgingly conceding to external regulation, another issue arose in the aftermath of this decision – the inability of both state and federal regulators to effectively enforce environmental laws against federal polluters such as DOE.⁸ Note that the following discussion is an evaluation of DOE as a federal entity, and is not intended to target the administrative record related to WIPP. However, I have included this discussion to highlight the ongoing tendency of DOE in general, and in their PMR and this draft Permit specifically, to chip away at external regulation in favor of self-regulation.

From the mid 1980s into the early 1990s, there were three factors hampering state and federal enforcement at DOE facilities:⁹

1. Considerations of ***national security and secrecy*** regarding weapons production contributed to keeping environmental neglect by federal facilities out of sight. A study conducted by the congressional Office of Technology Assessment showed that DOE noncompliance with RCRA resulted from a "history of emphasizing the urgency of weapons production for national security, to the neglect of health and environmental considerations...; and decades of self-regulation, without independent oversight or meaningful public scrutiny."¹⁰
2. DOE's ***history of self-regulation*** and its inability to perform meaningful oversight of its own facilities, coupled with a Department of Justice position that EPA could not sue another federal agency in court, resulted in the general concern that EPA could not effectively enforce RCRA at federal facilities.¹¹
3. ***Sovereign immunity*** claims by the federal government successfully blocked states' efforts to take enforcement action at DOE facilities, particularly by challenging state authority to assess civil penalties for past environmental liability. In *Department of Energy v. Ohio*, 503 U.S. 607 (1992), the US Supreme Court upheld DOE's position that "Congress has not waived the National Government's sovereign immunity from liability for civil fines imposed by a State for past violations of... RCRA."¹²

⁷ Legal Environmental Assistance Foundation v. Hodel, April 13, 1984,

<https://law.justia.com/cases/federal/district-courts/FSupp/586/1163/1903257/>

⁸ Nelson D. Cary, "Primer On Federal Facility Compliance With Environmental Laws: Where Do We Go From Here?," 50 Wash. & Lee Law Review 801 (1993), p. 803,

<https://scholarlycommons.law.wlu.edu/wlulr/vol50/iss2/15/>

⁹ McMichael, Susan M., "RCRA Permitting Deskbook," Environmental Law Institute, 2011. Excerpt available at http://lscdesignva.com/graphics/books/RCRA_Permitting_Handbook.pdf (relevant pages 7-9), and Table of Contents available at https://www.eli.org/sites/default/files/book_pdfs/rcra_dbook_toc.pdf.

¹⁰ U.S. Congress, Office of Technology Assessment, Complex Cleanup-the Environmental Legacy of Nuclear Weapons Production, OTA-O-484, p. 15, <https://www.princeton.edu/~ota/disk1/1991/9113/9113.PDF>

¹¹ McMichael, at p. 8.

¹² Department of Energy v. Ohio, 503 U.S. 607 (1992),

<https://supreme.justia.com/cases/federal/us/503/607/>

Federal Facility Compliance Act

In light of the foregoing factors and growing concerns over the fate of mixed waste, Congress enacted the FFCA to amend the Solid Waste Disposal Act (**SWDA**), and specifically portions of RCRA, that clarified provisions concerning the application of certain requirements and sanctions to Federal facilities.¹³ It brought all federal facilities into compliance with applicable federal and state hazardous waste laws, specifically waived federal sovereign immunity under those laws, and allowed the imposition of fines and penalties for violations of those laws and their implementing regulations through a variety of mechanisms, such as administrative orders, civil penalties, and civil actions. The FFCA also required DOE to submit an inventory of all its mixed waste to the EPA and authorized states, and to develop site treatment plans for those mixed wastes.

For example, consider this portion of RCRA in 42 U.S. Code in §6961, “Application of Federal, State, and local law to Federal facilities” as amended and reaffirmed by the FFCA:

(a) In general

Each department, agency, and instrumentality of the executive, legislative, and judicial branches of the Federal Government

(1) having jurisdiction over any solid waste management facility or disposal site, or

(2) engaged in any activity resulting, or which may result, in the disposal or management of solid waste or hazardous waste

shall be subject to, and comply with, all Federal, State, interstate, and local requirements, both substantive and procedural (including any requirement for permits or reporting or any provisions for injunctive relief and such sanctions as may be imposed by a court to enforce such relief), respecting control and abatement of solid waste or hazardous waste disposal and management in the same manner, and to the same extent, as any person is subject to such requirements, including the payment of reasonable service charges...

I will parse out this legal requirement to make it clear to whom it applies and under what circumstances it applies:

Each department, agency, and instrumentality of the executive, legislative, and judicial branches of the Federal Government

- This means the Department of Energy

having jurisdiction over any solid waste management facility or disposal site

- This means the WIPP facility

or engaged in any activity resulting, or which may result, in the disposal or management of solid waste or hazardous waste

- This means disposal of TRU mixed waste at WIPP

shall be subject to, and comply with, all Federal, State, interstate, and local requirements, both substantive and procedural (including any requirement for

¹³ An excellent overview of the FFCA by the DOE Office of Health, Safety and Security is available at <https://public.ornl.gov/sesa/environment/policy/ffca.html>. It provides an “historical” perspective leading up to its enactment and the mixed waste requirements, and is reproduced as an attachment to these comments.

permits or reporting or any provisions for injunctive relief and such sanctions as may be imposed by a court to enforce such relief), **respecting** control and abatement of solid waste or **hazardous waste disposal** and management **in the same manner**, and to the same extent, **as any person is subject to such requirements...**

- This means that the DOE **is subject to**, and **must comply with**, State (and Federal) requirements the same as any ordinary person is subject to those requirements. This specifically includes complying with requirements for permits (such as applying for and complying with the WIPP Permit) and reporting (such as waste quantities, types, and disposal location) with respect to hazardous (in this case, TRU mixed) waste disposal.

The Permittees believe that their PMR, and NMED's draft Permit, complies with this portion of the law, because they insist that the Permit limit its focus on the quantity of waste disposed of solely to the underground Hazardous Waste Disposal Units (**HWDUs**), and not have any regulatory concern with a repository limit. I'll come back to the Permittees' belief momentarily.

WIPP Land Withdrawal Act

Following the Waste Isolation Pilot Plant Authorization Act (Pub. L. 96-164, December 29, 1979) by nearly 13 years, the WIPP LWA provided for, among other things, the withdrawal and reservation of federal lands for the purposes of developing WIPP and the establishment of management responsibilities for the withdrawal area. However, for the purposes of this draft Permit, the more relevant provisions of the WIPP LWA were intended to accomplish the following:

1. Establish EPA disposal regulations
2. Address test phase activities and disposal operations, including TRU waste limitations
3. Establish the legal framework within which DOE **is subject to**, and **must comply with**, environmental laws and regulations with respect to WIPP

Specifically, LWA Section 9, "Compliance with Environmental Laws and Regulations," states in relevant part:

(a) IN GENERAL.—

*(1) APPLICABILITY.— Beginning on the date of the enactment of this Act, **the Secretary shall comply with respect to WIPP, with—***

(A) the regulations issued by the Administrator establishing the generally applicable environmental standards for the management and storage of spent nuclear fuel, high-level radioactive waste, and transuranic radioactive waste and contained in subpart A of part 191 of title 40, Code of Federal Regulations;

(B) the Clean Air Act (40 U.S.C. 7401 et seq.);

*(C) **the Solid Waste Disposal Act (42 U.S.C. 6901 et seq.);***

(D) title XIV of the Public Health Service Act (42 U.S.C. 300f et seq.; commonly referred to as the "Safe Drinking Water Act");

(E) the Toxic Substances Control Act (15 U.S.C. 2601 et seq.);

(F) the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq.);
(G) all other applicable Federal laws pertaining to public health and safety or the environment; and
(H) all regulations promulgated, and all permit requirements, under the laws described in subparagraphs (B) through (G).

...
(d) SAVINGS PROVISION.— The authorities provided to the Administrator and to the State pursuant to this section are in addition to the enforcement authorities available to the State pursuant to State law and to the Administrator, the State, and any other person, pursuant to the Solid Waste Disposal Act (42 U.S.C. 6901 et seq.) and the Clean Air Act (40 U.S.C. 7401 et seq.). (emphasis added)

Note the use of two contrasting responsibilities identified in this section laying out the legal and regulatory framework for WIPP:

1. "... the Secretary **shall comply** with respect to WIPP, ..."
2. "The **authorities provided to the Administrator and to the State** pursuant to this section..."

It is clear within the context of the WIPP LWA that the State was specifically delegated authority over provisions of the SWDA and RCRA. Thus, with respect to environmental laws at WIPP, the Administrator (EPA) and the State (NMED) are the regulators of environmental laws, regulations, and permits under their specific authority, and the Secretary (DOE) is the regulated entity.

FFCA and WIPP LWA considered together

Consider now both laws, signed by the President in October 1992.

Another provision of the FFCA was to direct the DOE to develop specific reports dealing with mixed waste inventories and treatment technologies, as specified in 42 U.S.C. §6939c, "Mixed waste inventory reports and plan":

(a) Mixed waste inventory reports

(1) Requirement - Not later than 180 days after October 6, 1992, the Secretary of Energy shall submit to the Administrator and to the Governor of each State in which the Department of Energy stores or generates mixed wastes the following reports:

(A) A report containing a national inventory of all such mixed wastes, regardless of the time they were generated, on a State-by-State basis.

(B) A report containing a national inventory of mixed waste treatment capacities and technologies.

Beginning as early as 1982, DOE annually issued waste inventory reports, including TRU and mixed TRU waste potentially destined for WIPP. My April 3, 2018 comments (p. 2, pp. 10-11) described how DOE adapted this existing inventory process to satisfy the FFCA requirement to generate reports containing a national inventory of all mixed waste. The

first annual report fulfilling the FFCA requirement¹⁴ established the precedent for reporting mixed waste volumes as the gross internal volume of the disposal container:
...Waste volume is reported in cubic meters (m³) and generally reflects the amount of space occupied by the waste and its container.

Although I am unable to locate the initial report of mixed waste treatment capacities and technologies, I am aware that DOE historically designated all mixed TRU waste for disposal at WIPP (which had been constructed by 1992 but was not yet permitted to accept waste) in their inventory of mixed waste treatment/disposal technologies.

At the same time, the WIPP LWA established TRU waste limitations on disposal operations at WIPP. LWA Section 7(a) states,

(a) TRANSURANIC WASTE LIMITATIONS.—

(1) REM LIMITS FOR REMOTE-HANDLED TRANSURANIC WASTE.—

(A) 1,000 REMS PER HOUR.— No transuranic waste received at WIPP may have a surface dose rate in excess of 1,000 rems per hour.

(B) 100 REMS PER HOUR.— No more than 5 percent by volume of the remote-handled transuranic waste received at WIPP may have a surface dose rate in excess of 100 rems per hour.

(2) CURIE LIMITS FOR REMOTE-HANDED TRANSURANIC WASTE.—

(A) CURIES PER LITER.— Remote-handled transuranic waste received at WIPP shall not exceed 23 curies per liter maximum activity level (averaged over the volume of the canister).

(B) TOTAL CURIES.— The total curies of the remote-handled transuranic waste received at WIPP shall not exceed 5,100,000 curies.

(3) CAPACITY OF WIPP.— The total capacity of WIPP by volume is 6.2 million cubic feet of transuranic waste. (emphasis added)

There is no other regulatory program specified in Section 9 of the LWA that expresses or regulates disposal capacity (i.e., volume) in cubic meters/feet than RCRA.

So, to summarize these facts as presented:

1. DOE has a history of resisting external regulation, particularly hazardous waste
2. RCRA (as amended and reaffirmed by the FFCA) in 42 U.S. C. §6961 says that DOE is subject to, and must comply with, State requirements (including any requirement for permits or reporting), respecting hazardous waste disposal and management in the same manner, and to the same extent, as any person is subject to such requirements;
3. WIPP LWA affirms the State's authority over RCRA at WIPP, as well as DOE's role as the regulated entity;
4. FFCA required DOE to submit a national mixed waste inventory report, which established the precedent for how TRU waste volume is measured and reported; and

¹⁴ Integrated Data Base Report for 1993 (DOE/RW-0006, Rev 9, March 1994) (*view and download individual pages*), <https://hdl.handle.net/2027/ien.35556023491582>

5. WIPP LWA established a total disposal capacity of 6.2 million cubic feet of TRU (and mixed TRU) waste.

Yet the Permittees assert in their PMR narrative, and again in the TID response, a somewhat different perspective:

“The reporting of disposed waste volumes is required by several regulatory drivers, such as RCRA, the LWA, 40 CFR 194, and DOE Orders. Each of these requires volume reporting for different purposes. For example, **RCRA requires volume reporting to determine how much waste is put into the WIPP facility relative to the volumes in Table 4.1.1,** which are limited by the physical volume of each mined HWDU, while **the LWA requires the volume to be reported relative to the total capacity limit of 6.2 million ft³ (175,564 m³) of TRU waste; 40 CFR Part 194 requires the reporting of the volume of waste** and also information regarding material parameter waste estimates and radionuclides for purposes of comparison to the input data used in the Compliance Certification Application; and **DOE Orders require estimates relative to transportation and operational safety.**” (Class 2 PMR, p. 2, pdf p. 6)

“Because several regulatory requirements are implemented at the WIPP facility, it is important to distinguish between these requirements since they are subject to different regulatory authority. For example, the authority for overseeing RCRA at the WIPP facility has been granted to the NMED by the Environmental Protection Agency, and **the authority for management, tracking, and reporting the LWA TRU waste volume has been granted to the DOE by Congress.**” (Class 2 PMR, p. 9, pdf p. 13)

“[The] **Department of Energy/Carlsbad Field Office [is r]esponsible for implementing the laws issued by Congress.** For example, **WIPP Land Withdrawal Act of 1992...**” (TID response, Attachment 1, “Agencies that Oversee the Permittees,” pdf p. 15)

Although DOE clearly has responsibilities for implementing laws and authorities “granted by Congress” in general, it seems DOE may be conveniently ignoring one of their primary responsibilities to **be subject to and comply with** key provisions within the WIPP LWA, and instead is reverting back to self-regulation. Unfortunately, I will have to address the fallacies in these three statements later at the public hearing to be held on this draft Permit.

The timing of the FFCA’s enactment (just three weeks prior to enactment of the WIPP LWA on October 30, 1992) leaves no doubt as to who is the regulator and who is the regulated entity. The FFCA amended the Solid Waste Disposal Act (**SWDA**) (42 U.S.C. 6901 et seq.), which includes RCRA. The LWA in Section 9(a)(1)(C) and (H) requires DOE to comply with the SWDA and RCRA, and with all regulations promulgated, and all permit requirements, under the SWDA and RCRA. The LWA in Section 9(a)(2) explicitly identifies the State of New Mexico as the recipient of DOE’s biennial environmental compliance reports with respect specifically to the SWDA and, by inference, RCRA. Finally, so that there is no further

doubt as to whom Congress intended to delegate authority over RCRA at WIPP, LWA Section 14 states:

SEC. 14. SAVINGS PROVISIONS.

(a) ...

(b) EXISTING AUTHORITY OF EPA AND STATE.— No provision of this Act may be construed to limit, or in any manner affect, the Administrator's or the State's authority to enforce, or the Secretary's obligation to comply with—

(1) the Clean Air Act (42 U.S.C. 7401 et seq.);

(2) the Solid Waste Disposal Act (42 U.S.C. 6901 et seq.), except that the transuranic mixed waste designated by the Secretary for disposal at WIPP is exempt from the land disposal restrictions described in section 9(a)(1); or

(3) any other applicable clean air or hazardous waste law. (emphasis added)

NMED is on solid ground to enforce the LWA total capacity limit of 6.2 million ft³ of TRU waste in the Permit based upon its authority and the long-standing presence of the requirement in the Permit since the DOE was ordered in 1994 to submit a RCRA Permit application reflecting disposal operations at WIPP. It has been included in every Part A Permit Application since then to the present day, with the exception of the PMR that led to this draft Permit.

Likewise, the FFCA inventory requirement is particularly relevant to this draft Permit. The FFCA in Section 3021(1)(A) required DOE to submit, within 180 days of enactment, “A report containing a national inventory of all such mixed wastes, regardless of the time they were generated, on a State-by-State basis.” Section 3021(2)(B) and (C) specify two requirements for this report, namely:

“(B) The amount of each type of mixed waste currently stored at each Department of Energy facility in each State, set forth separately by mixed waste that is subject to the land disposal prohibition requirements of section 3004 and mixed waste that is not subject to such prohibition requirements.

“(C) An estimate of the amount of each type of mixed waste the Department expects to generate in the next 5 years at each Department of Energy facility in each State.” (emphasis added)

DOE generated an “Interim Mixed Waste Inventory Report” within the 180 day deadline. The next inventory report incorporating requirements for the FFCA was the previously cited Integrated Data Base Report for 1993 (published March 1994) that first articulated the assumption for reporting waste amount by volume.

Finally, DOE makes this claim in the PMR with respect to the 1977 DOE Organization Act (PMR, p. 10):

“The changes proposed in this PMR are appropriate because it is DOE’s responsibility to manage the waste in a manner that assures that the mission of the WIPP facility is fulfilled. Congress has authorized the DOE to regulate TRU waste under its control.”

Yes, “Congress authorized the DOE to regulate TRU waste under its control,” but that was 1977, and DOE has not presented any evidence that Congress has granted them “any additional functions than those already conferred by law” since then. DOE has been given no explicit “responsibility” to redefine waste volume for WIPP. They made their choice nearly 25 years ago in response to the FFCA requirement to report waste amounts using specific assumptions, and the LWA sealed their fate by requiring DOE to comply with RCRA at WIPP. NMED is the undisputed RCRA regulator for WIPP, and NMED should have clearly and without reservation rejected the idea of two different definitions for waste disposal volumes at WIPP, especially when one of the definitions eliminates NMED’s enforcement authority. In issuing the draft Permit, NMED has failed to do this, and is proposing to abdicate their legal authority in order to appease DOE’s preference for self-regulation.

7. NMED has not justified issuance of this draft Permit, and in doing so has ignored the full administrative record and history of the WIPP Permit

The published index to the administrative record for this draft Permit¹⁵, prepared and issued by NMED on August 6, is so inadequate and favoring the Permittees position as to be embarrassing. At a minimum, it needs to include all references cited in all public comments submitted by the close of the Class 2 PMR (specifically mine and those of Don Hancock), as well as expanded to include all references cited in public comments submitted on the draft Permit.

In addition to Appendix D1 from the May 1995 RCRA Part B Permit Application, Rev 6, proposed and added to the administrative record at the request of the Permittees, the entire Rev 6 application must be added to the administrative record, along with the following documents:

- The May 15, 1998 Draft Hazardous Waste Facility Permit, Volumes 1-4, including the public notices and all fact sheets
- DOE’s comments on the Draft Permit (5/28/98, 8/14/98)
- The November 13, 1998 Revised Draft Hazardous Waste Facility Permit Volumes 1 – 4, including the public notice and all fact sheets, and NMED response to comments on the Draft Permit
- DOE Comments on the Revised Draft Permit (12/22/98)
- NMED response to comments on the Revised Draft Permit (1/18/99)
- Transcripts from the public hearing on the Revised Draft Permit
- Report of the Hearing Officer (9/9/99)
- DOE and NMED comments on the Hearing Officer’s Report on the Revised Draft Permit
- Secretary’s Final Order (10/27/99)

- The April 27, 2010 Draft Renewal Permit, including the public notice and all fact sheets
- DOE Comments on Draft Renewal Permit (5/25/10)

¹⁵ NMED, Index to the Administrative Record, August 6, 2018, <https://www.env.nm.gov/wp-content/uploads/2016/05/Admin-Record-Index-Draft-Permit-August-2018.pdf>

- The June 4, 2010 public notice on the hearing
- Transcripts from the public hearing on the Revised Draft Renewal Permit
- DOE Comments on Revised Draft Renewal Permit (7/15/10)
- Report of the Hearing Officer 10/26/10)
- DOE and NMED comments on the Hearing Officer's Report
- Secretary's Final Order (10/30/10)

My intent in seeking these documents is to demonstrate that the applicants/Permittees never contested or objected to the inclusion of the WIPP LWA total capacity limit of 6.2 million ft³ of TRU waste in the application or the Permit, and that they never challenged NMED's authority to ensure compliance with that limit under RCRA, the New Mexico Hazardous Waste Act, or the WIPP Hazardous Waste Facility Permit.

By failing to include any of these documents in the administrative record for this draft Permit, NMED has demonstrated either a remarkable lack of interest in the administrative history of the WIPP Permit, or a deliberate intent to ignore it as a means of approving the current draft Permit. At a minimum, NMED must defend its decision to issue the draft Permit with the intent to approve based upon a complete administrative record. Simply issuing the draft Permit with a few changes and no explanation is unacceptable.

8. The Permittees have not adequately explained the role of overpacking in their justification for seeking this PMR

In TID response to Question #6, the Permittees reiterate their argument first introduced in the Class PMR regarding the assumption that containers would be full (citing SEIS-II page 3-8):

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 analyses in SEIS-II, the volume of the drum or cask is used, as if the drum or cask were full without void space.

I've already commented on how I believe this quote is taken out of context in my April 3, 2018 comments (see pp. 2-4, including footnotes). The same SEIS II states:

TRU waste inventory estimates, as used throughout SEIS-II, embody many conservative assumptions to ensure bounding analyses of maximum, reasonably foreseeable impacts.

Thus, conservative assumptions for modeling analyses do not equate to real life expectations. But DOE continues to express surprise in their TID response:

"... That is to say, the containers, as they existed at the generator/storage site, or as they were anticipated to be generated in the future, were full. Therefore, the container volumes defined the estimated waste volume. **However, what the DOE did not anticipate was the need to overpack numerous containers prior to**

shipping. This overpacking did not increase the volume of TRU waste to be disposed, but it did impact how much space needed to be excavated and how much container volume needed to be permitted because overpacking introduces a significant amount of void space. It is this void space, introduced as the result of overpacking, that the DOE is accounting for by implementing the CBFO management policy regarding the VOR.”

DOE has provided no information to quantify the impact of overpacking on disposal volumes at WIPP, either in the PMR (other than to provide undocumented volume differences from the WWIS on p. 9) or in the TID response (except for undocumented volumes of previously unspecified “authorized” overpacked containers – see my comment #2 above). Using this limited information, I was able to construct a spreadsheet based upon the container types in TID response Table 1 and attempt to match these containers with information available in the WDS/WWIS Public Access System¹⁶ as of September 12, 2018. I have attached a printout of this spreadsheet to my comments, and present these conclusions based upon a review of the information contained on it.

1. My numbers generally agree with the volume differences reported in the PMR. The Permit volume is 95,731 m³ versus the LWA VOR volume of 69,075 m³, or a ratio of LWA VOR vs. Permit volume of 72%.
2. Three specific overpack containers are responsible for 98.6% of this volume reduction:
 - a. TDOP with 10 55-gallon drums
6511 emplaced, volume reduction 15,626 m³ (58.6% of reduction)
 - b. SWB with 4 55-gallon drums
6229 emplaced, volume reduction 6,478 m³ (24.3% of reduction)
 - c. 55-gallon drum with a 12-in Standard POC
25,980 emplaced, volume reduction 4,188 m³ (15.7% of reduction)

Obviously, these containers were not overpacked at WIPP for container condition reasons specified in the Permit (e.g., severe rusting, apparent structural defects, leaking). Some of them could have been overpacked at generator sites for these reasons, but it is more likely such containers would have been repackaged instead of overpacked.

Which leads to the question... what led to the high number of these particular overpack configurations to be used, and is it really true that *“the DOE did not anticipate... the need to overpack [these] numerous containers prior to shipping?”* I’m not a shipping and packaging expert by any means, but I find it difficult to believe that DOE was unaware of their waste inventory that **required** shipping in the 12-in standard POC configuration due to transportation restrictions, particularly at Rocky Flats. That inventory was well known for a long time and was some of the earliest waste disposed of from Rocky Flats at WIPP, beginning in July 1999. It was also considered a direct loaded 55-gallon drum containing a POC, and never thought of as an “overpack” in DOE’s waste inventory reports, in contrast to the manner it was presented in the PMR.

¹⁶ WDS/WWIS Public Access System available at <http://wipp.energy.gov/WDSPA>

Although I'm uncertain why SWBs were overpacked in such a large numbers, I'm relatively certain the large volume of waste overpacked in TDOPs was for purposes of "payload management," with the first emplacement in early 2003. Payload management may have been "unanticipated" when the Permittees first submitted their application for a disposal permit back in 1995, but it was a conscious decision by DOE to develop and implement it.¹⁷ This was done in order to dispose of containers that, on their own, failed to meet the TRU alpha activity concentration requirement of the LWA (*"containers shall contain more than 100 nCi/g of alpha-emitting TRU isotopes with half-lives greater than 20 years"*), but may meet the requirement if overpacked with other containers from the same waste stream and the average TRU alpha activity concentration of all overpacked containers meets the requirement.

This has the effect of allowing many individual "low activity" containers, unable to meet the requirement on their own, being overpacked with a few "high activity" containers so that on average, they all meet the concentration requirement. This has a double impact on overall disposal volume:

1. Containers that otherwise were ineligible for disposal were disposed in a TDOP, and
2. TDOPs, containing only 10 drums, occupied the space of 14 55-gallon drums.

I recall viewing data from the WWIS back in 2003 and finding TDOPs emplaced holding nine "low activity" drums and a single "high activity" drum, all occupying the space that could have instead held 14 drums that all met the TRU alpha activity concentration on their own.

The Permittees must explain how their decisions with respect to overpacking have impacted the volume of waste emplaced at WIPP, and explain the circumstances under which these three configurations (TDOP with 10 55-gallon drums; SWB with 4 55-gallon drums; and 55-gallon drum with a 12-in Standard POC) are either required or optional for transportation and/or disposal.

Request for Public Hearing

In light of my comments, I am requesting a public hearing on the draft Permit as specified in the public notice and fact sheet, both issued on August 6, 2018:

Requests for a public hearing shall provide: (1) a clear and concise factual statement of the nature and scope of the interest of the person requesting the hearing; (2) the name and address of all persons whom the requestor represents; (3) a statement of any objections to the draft Permit, including specific references to any conditions being modified; and (4) a statement of the issues which the commenter proposes to raise for consideration at the hearing.

¹⁷ DOE 2016. Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant. DOE/WIPP-02-3122. July 2016. <http://www.wipp.energy.gov/library/wac/WAC.pdf>. In particular, see "3.3.3 TRU Alpha Activity Concentration", pp. 34-35, and "Appendix E, Payload Management of TRU Alpha Activity Concentration", pp. 10-102.

(1) Nature and scope of interest of person requesting the hearing:

I am a private citizen with extensive knowledge of and experience with the WIPP Permit. I am particularly interested in maintaining the clarity of the existing roles of regulator (NMED) and regulated entity (DOE and their contractor, referred to as the Permittees) in the Permit.

(2) Person(s) whom the requestor represents:

I am representing myself with no other persons. My name and address are provided on the cover page to these comments.

(3) Objections to the draft Permit:

I object in total to all conditions proposed for change in the draft Permit, as stated in these comments as well as in my April 3, 2018 comments, and instead recommend the adoption and substitution of modifications as enumerated on pages 13-15 of those earlier comments. I also object to the conclusions drawn from the existing limited administrative record by the Permittees and, by inference through the issuance of the draft Permit, the conclusions of NMED.

(4) Issues proposed for consideration at the hearing:

- a) The administrative record for this draft Permit is relatively incomplete, in that it includes limited documents related to issuance of the original Permit in 1999 nor its renewal in 2010, among other things, that would provide context for the changes proposed in the draft Permit.
- b) DOE has not demonstrated, based upon the record, that Congress delegated to them sole authority to determine compliance with the LWA volume limits.
- c) DOE has not demonstrated, based upon the record, their authority to change long-established precedent on how waste volumes of containers disposed at WIPP are calculated.
- d) The Permittees are effectively abandoning their long-standing commitment that "all TRU waste is managed as though it were mixed."
- e) NMED has provided no reason, based upon the record, for issuing this draft Permit. Specifically, NMED has not demonstrated, based upon the WIPP Permit's administrative history, why it should abdicate responsibility for WIPP's compliance with the LWA volume limits after nearly 20 years.
- f) The Permittees have not acknowledged their direct responsibility for the waste management policies at WIPP that created their current waste volume dilemma.

In requesting a public hearing, I also wish to be included in any negotiations to resolve the issues I have raised in my comments, as provided in 20.4.1.901.A(4) NMAC.

Finally, having participated in the September 17, 2018 meeting with the Permittees, NMED, and representatives of four citizen groups, I object to NMED's plan to issue a public notice of hearing within a day or two of the comment deadline and before an opportunity to hold negotiations to resolve issues raised in public comments.

Please feel free to contact me if you have any questions or seek clarification about my comments. I can be reached at (505) 660-0353 or by email at steve_zappe@mac.com.

Sincerely,

A handwritten signature in black ink that reads "Steve Zappe". The signature is written in a cursive style with a large, sweeping initial "S".

Steve Zappe

Attachments

Federal Facility Compliance Act Summary

DOE Office of Health, Safety and Security



Federal Facility Compliance Act

"Historical" Perspective

Before the passage of the Federal Facility Compliance Act (FFCA), the federal government maintained that it was not subject to administrative and civil fines and penalties under solid and hazardous waste law because of the doctrine of "sovereign immunity." The State of Ohio challenged the federal government's claim of sovereign immunity in *Ohio v. the Department of Energy* (DOE). In this case, the U.S. Circuit Court of Appeals found in favor of the State (June 11, 1990) stating that the federal government's sovereign immunity is waived under both the Clean Water Act's (CWA's) sovereign immunity provision and the Resource Conservation and Recovery Act's (RCRA's) citizen suit provision (although not RCRA's sovereign immunity provision). The Circuit Court's decision was overturned by the Supreme Court on April 21, 1992, in *DOE v. Ohio*. The Supreme Court held that the waiver of sovereign immunity in RCRA and CWA is not clear enough to allow states to impose civil penalties directly, although penalties could be pursued in certain situations (i.e., where some type of court order had been issued and subsequently violated).

After the high court's ruling, many in Congress believed that there was a need to enact legislation that would bring federal facilities into the same legal framework as the private sector. The consensus among lawmakers was that there was a double standard in the United States by which the same government that developed laws to protect human health and the environment, and required compliance in the private sector, was itself not assuming the burden of compliance.

Enactment of the Federal Facility Compliance Act

As a result, Congress enacted the FFCA (October 6, 1992, Pub. L. 102-386), which effectively overturned the Supreme Court's ruling. In the legislation Congress specifically waived sovereign immunity with respect to RCRA for federal facilities.

Under section 102, The FFCA amends section 6001 of RCRA to specify that federal facilities are subject to "all civil and administrative penalties and fines, regardless of whether such penalties or fines are punitive or coercive in nature." These penalties and fines can be levied by EPA or by authorized states. In addition, the FFCA states that "the United States hereby expressly waives any immunity otherwise applicable to the United States." It should be noted that federal agents, employees, and officers are not liable for civil penalties, however, they are subject to criminal sanctions. No departments, agencies, or instrumentalities are subject to criminal sanctions.

Section 104 (1) and (2) require EPA to conduct annual RCRA inspections of all federal facilities. As part of the first inspection conducted under this authority, EPA is required to "conduct a comprehensive ground water monitoring evaluation," unless such an evaluation was conducted in the preceding 12 months. Authorized states are also given authority to conduct inspection of federal facilities for the purpose of enforcing compliance with the state hazardous waste program [section 104(3)].

Under section 104(4), the federal agency is required to reimburse EPA for reasonable service charges associated with conducting the inspections of its facilities. States are allowed to recover the costs of inspections under the authority granted in section 102(3). In the case of corrective action DOE can expect more frequent progress inspections by the regulator and that all eligible expenses incurred will have to be reimbursed. It should be noted that on an annual basis, EPA negotiates Interagency Agreements (IAGs) with other federal agencies, including DOE, for reimbursement for these costs. Once the IAGs are executed and processed, only a few basic steps must be followed to use and track these funds appropriately (EPA brochure, *Reimbursement Agreements for RCRA/FFCA Inspections at Federal Facilities*, April 1996)

Mixed Waste

The FFCA was effective upon enactment on October 6, 1992, with the exception that "departments, agencies, and instrumentalities of the executive branch of the Federal Government" would not be subject to the sovereign immunity waiver until three years after enactment for violations of RCRA section 3004(j) "involving storage of mixed waste that is not subject to an existing agreement, permit, or administrative or judicial order, so long as such waste is managed in compliance with all other applicable requirements." Section 3004(j) forbids the storage of hazardous waste prohibited from land disposal unless the storage is for the purpose of accumulating such quantities as necessary to facilitate proper recovery, treatment, or disposal. After October 6, 1995, the waiver of sovereign immunity shall still not apply to DOE so long as the Department "is in compliance with both (i) a plan that has been submitted and approved pursuant to section 3021(b) of the Solid Waste Disposal Act and which is in effect and (ii) an order requiring compliance with such plan which has been issued pursuant to such section 3021(b) and which is in effect." The plan required under section 3021(b) is for the development of treatment capacities and technologies to treat all of the mixed wastes at each DOE facility.

Many DOE facilities are now subject to federal facility compliance agreements and other binding administrative clean-up orders. The FFCA will allow regulators to impose fines or penalties on federal entities that fail to meet milestones or deadlines contained in such agreements or orders. Penalties specified in the agreements will now be enforceable and may result in substantial financial penalties to noncompliant facilities.

Section 105 of the FFCA further amends RCRA by adding the new section 3021 mentioned above. This section, "Mixed Waste Inventory Reports and Plan[s]," provides the mechanism for fulfilling the requirements cited above by imposing several new reporting requirements on DOE related to mixed waste.

First, not later than 180 days after the date of enactment, the Secretary of Energy had to submit (1) reports containing a national inventory of mixed wastes on a state-by-state basis and (2) a national inventory of mixed waste treatment capacities and technologies to the EPA Administrator and the governors of states in which DOE stored or generated mixed wastes. The mixed waste inventory was to, among other things, describe each mixed waste type, list the amount currently stored, and estimate the amount of each type of mixed waste expected to be generated in the next five years at each DOE facility. Wastes that had not been characterized by sampling and analysis also had to be described. The inventory of treatment capacities and technologies was to contain an estimate of available treatment capacity for each waste described in the waste inventory, and provide information to support determinations that no treatment technology exists. DOE submitted its initial draft Mixed Waste Inventory Report to EPA and affected states for comment in April 1993. DOE published a notice of its availability on April 23, 1993 (58 FR 25822).

Second, the Secretary was directed to prepare and submit plans for developing treatment capacities and technologies for all facilities generating or storing mixed waste that are not subject to any permit, agreement, or order. Such plans were to include schedules for developing treatment capacity where treatment technologies exist and schedules for identifying and developing treatment technologies where none is currently available. These plans were to be reviewed and approved either by EPA or the states, depending on whether the state is authorized to regulate mixed waste. Upon approval of the submitted plans, EPA or the states were to issue orders requiring compliance with the plans. Plans were not required where agreements and orders were already in place.

According to a DOE *Chief Financial Officer's Report - FY 1996*:

Currently, 32 of 35 Site Treatment Plans are approved and final orders are in place. Twenty-eight of these 35 Site Treatment plans were approved by October 6, 1995 [the deadline set in section 102(c) of the FFCAct], or shortly thereafter. For the remaining seven sites, the states and the DOE mutually agreed to continue negotiations during FY 1996. Four of these seven sites obtained approval and their final orders were in place in FY 1996. These final orders include consent orders and unilateral orders issued under state law and EPA compliance orders issued under the RCRA enforcement provisions. At the remaining three sites, the Argonne National Laboratory-East, the Brookhaven National Laboratory, and the Lawrence Livermore National Laboratory, the Site Treatment Plans are currently in various stages in the approval process (i.e., the states and the DOE are still negotiating or the state is completing state requirements for approval of the Site Treatment Plan).

Federally Owned Treatment Works

Section 108 of the FFCAct added a new section 3023, "Federally Owned Treatment Works," to Subtitle C of RCRA. This new section provides that if certain conditions are met, Federally Owned Treatment Works (FOTWs) are essentially exempted from RCRA regulation based on the domestic sewage exclusion to the definition of solid waste. For solid or dissolved materials entering an FOTW to be exempt from the solid waste definition, they must meet at least one of the following criteria:

- Materials must be subject to a pretreatment standard under section 307 of the CWA (provided the source is in compliance with established pretreatment standards).
- Materials not currently covered by a pretreatment standard must be subject to (and in compliance with) an EPA-promulgated pretreatment standard that would be applicable before October 6, 1999 (provided EPA has promulgated a schedule for establishing such a standard).
- Materials not covered under either of the above criteria must be treated in accordance with the applicable RCRA Land Disposal Restriction (LDR) treatment standards.
- The generator source is a household or a conditionally exempt small quantity generator generating less than 100 kilograms of hazardous waste, or less than one kilogram of acutely hazardous waste per month.

The purpose of this new section was to ensure similar treatment for both municipal Publically Owned Treatment Works (POTWs) and FOTWs.

Implementing Regulations

On March 18, 1996 (61 FR 11089), EPA issued a technical revision to 40 CFR 22.37 to amend the administrative rules of practice to provide a federal department, agency, or instrumentality which is the subject of an administrative enforcement order, with the opportunity to confer with the EPA Administrator, as provided under the FFCAct.

This page was last updated on

Volume Calculations Using WWIS Container Inventory

Volume Calculations Using WWIS Container Inventory

AUTHORIZED CONTAINER PER WIPP WAC (from Permittees' TID response dated July 12, 2018)	LWA VOR VOLUME (m ³)	PERMIT CONTAINER VOLUME (m ³)	Percent of Permit Container Volume	Number Containers in WWIS	LWA TRU Volume (m ³)	TRU Mixed Waste Volume (m ³)	% of Disposal Volume Change	Actual Volume Reduction (m ³)
55-gallon drum DL	0.21	0.21	100.0%	98205	20623.1	20623.1	100.0%	0.0
85-gallon drum DL	0.32	0.32	100.0%	2	0.6	0.6	100.0%	0.0
85-gallon drum OP with 55-gallon drum	0.21	0.32	65.6%	5	1.1	1.6	65.6%	0.6
100-gallon drum DL	0.38	0.38	100.0%	34291	13030.6	13030.6	100.0%	0.0
Shielded Container DL	0.11	0.21	52.4%	9	1.0	1.9	52.4%	0.9
Standard Waste Box DL	1.88	1.88	100.0%	6899	12970.1	12970.1	100.0%	0.0
Standard Waste Box OP with 4 55-gallon drums	0.84	1.88	44.7%	6229	5232.4	11710.5	44.7%	6478.2
Standard Waste Box OP with 3 85-gallon drums	0.96	1.88	51.1%		0.0	0.0		0.0
Standard Waste Box OP with 2 100-gallon drums	0.76	1.88	40.4%		0.0	0.0		0.0
Ten-Drum Overpack DL	4.5	4.5	100.0%	26	117.0	117.0	100.0%	0.0
Ten-Drum Overpack OP with 10 55-gallon drums	2.1	4.5	46.7%	6511	13673.1	29299.5	46.7%	15626.4
Ten-Drum Overpack OP with 6 85-gallon drums	1.92	4.5	42.7%		0.0	0.0		0.0
Ten-Drum Overpack OP with Standard Waste Box	1.88	4.5	41.8%		0.0	0.0		0.0
12-in Standard Pipe Overpack Container (POC)	0.0488	0.21	23.2%	25980	1267.8	5455.8	23.2%	4188.0
Type S100 POC	0.00163	0.21	0.8%	814	1.3	170.9	0.8%	169.6
Type S200-A POC	0.00691	0.21	3.3%	0	0.0	0.0		0.0
Type S200-B POC	0.0137	0.21	6.5%	0	0.0	0.0		0.0
Type S300 POC	0.00269	0.21	1.3%	51	0.1	10.7	1.3%	10.6
Criticality Control Overpack	0.0128	0.21	6.1%	0	0.0	0.0		0.0
Standard Large Box 2	7.39	7.39	100.0%	232	1714.5	1714.5	100.0%	0.0
RH Removable Lid Canister (DL)	0.89	0.89	100.0%	1	0.9	0.9	100.0%	0.0
RH Removable Lid Canister OP with 3 55-gallon drums	0.63	0.89	70.8%	700	441.0	623.0	70.8%	182.0
NS15 Neutron Shielded Canister	0.195	0.89	21.9%	0	0.0	0.0		0.0
NS30 Neutron Shielded Canister	0.351	0.89	39.4%	0	0.0	0.0		0.0
Total as of 9/12/2018				179955	69074.5	95730.7	72.2%	26656.2
55 gal Solid/Vitrified				0				
6-inch Pipe OP				0				
55 gal 1-TRIP				0				
55 gal Galvanized				0				
RH Canister OP				0				
SWB OP Galvanized Drums				0				
85 gal Short				0				
100 gal OP				0				
RH 30 gal				0				
72-B Fixed Lid DL				18				
72-B Fixed Lid OP				0				
RH 55 gal				0				
RH 15 gal				0				
Non-Container Matl				100				
WWIS Total as of 9/12/2018				180073				