

Steve Zappe

Ricardo, attached are my comments. I've hyperlinked to AR documents throughout. However, since I'm unable to upload a spreadsheet workbook (.xlsx) file that I want attached to my comments, I'll email it to you separately. Thanks!

Steve

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Ricardo,

I am submitting these brief comments on the December 20, 2022 Permit Renewal draft Permit (**draft Permit**) issued by the New Mexico Environment Department (**NMED**) for the Waste Isolation Pilot Plant (**WIPP**). The draft Permit is based upon a Renewal Application submitted to NMED by the US Department of Energy (**DOE**) Carlsbad Field Office and Nuclear Waste Partnership (**Permittees**) on March 31, 2020, along with an Updated redline strikeout (**RLSO**) for the Renewal Application on March 17, 2022. The draft Permit also includes changes proposed by NMED to address their concerns.

I am also requesting a public hearing as specified in the December 20, 2022 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.

While I generally support renewal of the WIPP Hazardous Waste Facility Permit, I oppose NMED's draft Permit primarily because it retains the language introduced into the Permit by the 2018 hearing regarding the Class 3 "Clarification of TRU Mixed Waste Disposal Volume Reporting" modification for which the NMED Secretary issued a Final Order approving the draft Permit on December 21, 2018. Although several parties to the hearing challenged the Final Order, it was ultimately affirmed by the New Mexico Court of Appeals on November 9, 2021.

Among other things, this "Volume of Record" (**VOR**) modification implemented the following changes:

- Created two new waste volume definitions in the Permit
 - TRU Mixed Waste Volume, and
 - Land Withdrawal Act TRU Waste Volume of Record (**LWA VOR**)
- Limited the Permit's concern with waste volume solely to the volume of waste disposed of in Underground Hazardous Waste Disposal Units (**HWDUs**) or Panels by removing relevant references to the maximum repository capacity of 6.2 million cubic feet
- Allowed the DOE to "track and report" the LWA VOR separately from the Permit

What are my reasons for believing that I can seek removal of these 2018 VOR changes from the draft Permit?

- Issues that were excluded from consideration at the 2018 VOR hearing are not excluded for this draft Permit;
- Issues raised at the 2018 hearing can be revisited and brought into clearer focus with the hindsight of nearly five years of experience;
- The impacts that my original comments predicted would happen have created significant issues for NMED;
- The likely basis for NMED's support in 2018 was a policy decision by the previous administration, and was based entirely on adopting the Permittees' position;
- The now-current administration is free to embrace a policy that is more clearly aligned with the historical record that Don Hancock of Southwest Research and Information Center (SRIC) and I each presented independently at the 2018 hearing;
- I believe that if DOE suffers consequences for creating an alternate universe requiring two different volume calculation schemes in lieu of failing to consider a fallback plan for additional disposal capacity, then they deserve it.

I am not going to reiterate my previous comments and testimony on the 2018 Permit Modification Request (PMR) changes. I hereby incorporate by reference the following documents found in the WIPP facility record that support and provide greater detail to my comments provided here:

- [180402.48 – Zappe Comments on January 2018 Class 2 WIPP PMR](#)
- [180914.37 – Zappe Comments on August 2018 WIPP Draft Permit](#)
- [181015 – Zappe Statement of Intent to Present Technical Testimony](#)
- [181124 – HWB 18-19 Zappe Proposed Findings of Fact and Conclusions of Law](#)
- [181129.5 – HWB 18-19 Zappe Comments on Hearing Officer Report](#)

Volume of Record #1 – Issues Excluded from the 2018 Hearing

The Permittees went to great lengths to avoid any indication that their 2018 VOR modification might result in an expansion of the amount or type of waste that could be disposed at WIPP. They did say the original design of the WIPP repository was wrong because the designers hadn't accounted for the number of containers that needed to be overpacked. At the hearing, their attorney said in his opening statement:

"... it's very important to understand what this PMR will do or will not. And it does not seek to expand authorized capacity. It does not seek to add additional hazardous waste disposal units. It does not seek to add additional waste streams." (AR 181033, PDF page 28, ll 16-21

And in a sense, that's true. The actual PMR didn't ask for any of those things, because in developing the PMR, they were careful not to lay all their cards on the table. The truth of the matter was, this PMR was simply the first step in their attempt to deceive NMED, and by extension the public, of the real intent of the PMR and DOE's ultimate goal – to dispose of a vast quantity of waste that had never been anticipated as coming to WIPP, neither

when Congress authorized it in 1979 nor when Congress established the 6.2 million ft³ of TRU waste disposal limit in the WIPP Land Withdrawal Act in 1992. In order to accomplish that first step, the PMR sought to:

- Convince NMED to relinquish regulatory authority to enforce the Congressionally mandated limit for waste disposal at WIPP;
- Let DOE define (for the second time) how waste volume would be determined; and
- Lay the groundwork to expand the capacity of WIPP to attain their goal of disposing of virtually all waste that might foreseeably meet the WIPP waste acceptance criteria for an indefinite period of time into the future.

Many people attempted to raise the issue of WIPP expansion in public comment and at the hearing. Actually, there are two related issues related to WIPP expansion at play here:

- Expanding the volume of waste accepted for disposal at WIPP, and
- Extending the time for acceptance of waste for disposal at WIPP

If the Permittees are allowed to control the definition of how waste volume is calculated (and thereby how long it will take to reach the Congressionally mandated limit of 6.2 million ft³), it will by necessity extend the time it will take to reach that volume limit.

Although not available at that time, a later April 2020 final report issued by the National Academy of Sciences entitled, “Review of the Department of Energy's Plans for Disposal of Surplus Plutonium in the Waste Isolation Pilot Plant” ([AR 200505](#)) addressed many concerns about disposal of surplus plutonium and other proposed waste streams at WIPP. Because the VoR had already been implemented in the WIPP Permit, the NAS report presented a graph of the volumes of emplaced and future TRU waste stream estimates before and after implementation of the VoR (Figure 3-9, page 67, PDF page 80).

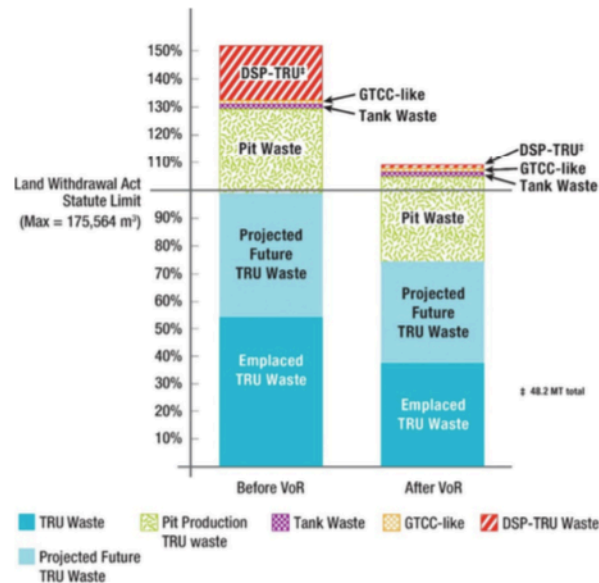


FIGURE 3-9 Using the data from Table 3-2, the emplaced and future TRU wastes estimates, as reported by DOE (DOE-CBFO, 2018a, 2019a); and additional wastes, identified by the committee. Additional wastes are DSP-TRU, Greater-Than-Class-C-like (GTCC-like) TRU wastes, tank wastes, and TRU waste generated from pit production. The graphs illustrate the impact of the volume of record (VoR) recalculation, in particular the large reduction in DSP-TRU waste volumes. Both graphs also show that the Land Withdrawal Act statutory limit is likely to be exceeded.

As is obvious from this graph, VOR is absolutely necessary in order for WIPP to accept any waste beyond the projected future TRU waste that DOE has already anticipated in their Annual TRU Waste Inventory Reports (**ATWIR**). Stated another way, VOR is unnecessary if other historically unanticipated wastes are excluded from disposal at WIPP. These arguments were not allowed to be considered during the 2018 VOR hearing.

Volume of Record #2 – Revisiting Issues Raised at the 2018 Hearing

I was disappointed by NMED concurring with the Permittees' position that DOE not only had the sole authority to redefine how waste volumes were calculated to demonstrate compliance with the LWA statutory limit of 6.2 million ft³, but also that DOE alone (and not NMED) would determine when that limit had been achieved. I was personally confronted at the hearing during cross-examination with a series of questions by the Permittees' attorney as to whether I knew if federal or state hazardous waste laws or regulations ever "mandated maximum capacities" in hazardous waste facility permits ([AR 181033](#), Day 3, p. 88-89, PDF p. 613-614).

Of course, the general answer is no... "normal" hazardous waste facility permits are issued on a "per unit" basis, where storage or disposal units are approved for a specific volume or amount of waste. However, the only exception I'm aware of is WIPP – Congress not only designated WIPP as subject to RCRA regulations, but they also mandated an overall capacity limit for the repository, and DOE's original application depicted a facility design based on these two well-understood and consistently documented assumptions (in DOE's own publications):

- Waste volume is reported as the amount of space occupied by the waste and its container (i.e., gross internal volume of the outermost container) [[AR 180402.48D](#), p. 5, PDF p. 2].
- Overpacks are considered the outermost waste container for disposal, and any overpacked containers inside of an overpack are considered part of the waste [[AR 180402.48A](#), PDF p. 3].

If given the chance to present this case again, I would also emphasize the section of my April 3, 2018 comments under the heading "DOE has no "mandate" to self-regulate ..." ([AR 180402.48](#), pp. 9-11) that the 1977 DOE Organization Act, P.L. 95-91 ([AR 180121.01](#), to which they appeal their authority to self-regulate) is superseded by both the 1992 Federal Facility Compliance Act (**FFCA**) ([AR 180402.48C](#), which requires an inventory of mixed waste to each state) and the near-simultaneous 1992 WIPP Land Withdrawal Act ([AR 180706.03](#), which includes making WIPP subject to RCRA regulations). The final paragraph in my original comments concludes:

Yes, "Congress authorized the DOE to regulate TRU waste under its control," but that was 1977, and a lot of water has passed under the proverbial bridge 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, and the LWA sealed their fate by requiring WIPP to comply with RCRA. There is no looking back, and there is no longer a "mandate," especially for them to make up something drastically different now. NMED is the undisputed RCRA regulator

for WIPP, and NMED should clearly and without reservation reject the idea of two different definitions for waste disposal volumes at WIPP, especially when one of the definitions eliminates NMED's enforcement authority.

Also, one fact I was unable to present more fully at the hearing dealt with the Permittees claiming to have been unable to anticipate the volume of waste being overpacked and thereby consuming more disposal capacity than previously anticipated. In my September 20, 2018 comments on the VOR draft Permit, I addressed my concern that the Permittees had not adequately explained the role of overpacking in their justification for seeking this PMR ([AR 180914.37](#), pp. 16-18). In these comments, I described how I used information available in the WDS/WWIS Public Access System to identify three specific overpack containers that were responsible for nearly 99% of the reduction of reported volumes of emplaced waste at that time using the VOR calculation. These were the TDOP with 10 55-gallon drums, the SWB with 4 55-gallon drums, and the 55-gallon drum with a 12-in Standard POC.

Unfortunately, I didn't include spreadsheet and graphs depicting the disposal of these containers over time. When I attempted to introduce this information during my direct testimony at the hearing, it was denied because I hadn't included it with my pre-filed testimony ([AR 181033](#), Day 3, p. 66-71, PDF p. 591-596). However, I've attached the spreadsheet to my comments and include the graphs here, reflecting emplacements through September 12, 2018.

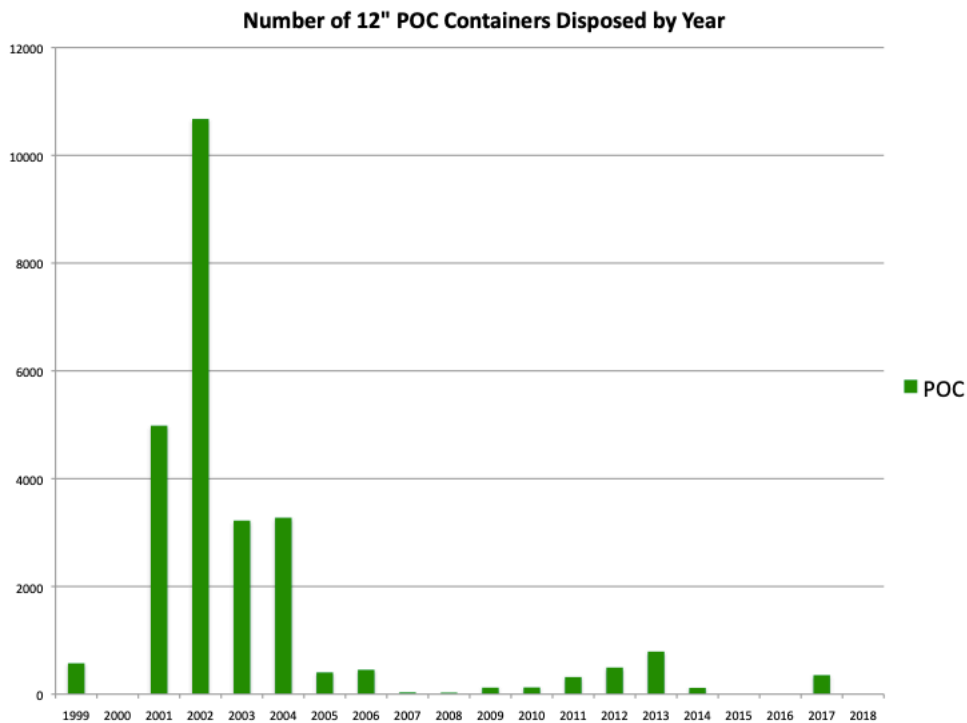


Figure 1 - Number of 12" POC Containers Disposed by Year

Rocky Flats shipped 21,174 POC containers for emplacement between June 1999 and April 2005, representing 92% of POCs emplaced during that time. The Permittees clearly were aware of this significant number of POC containers emplaced in Panels 1 and 2.

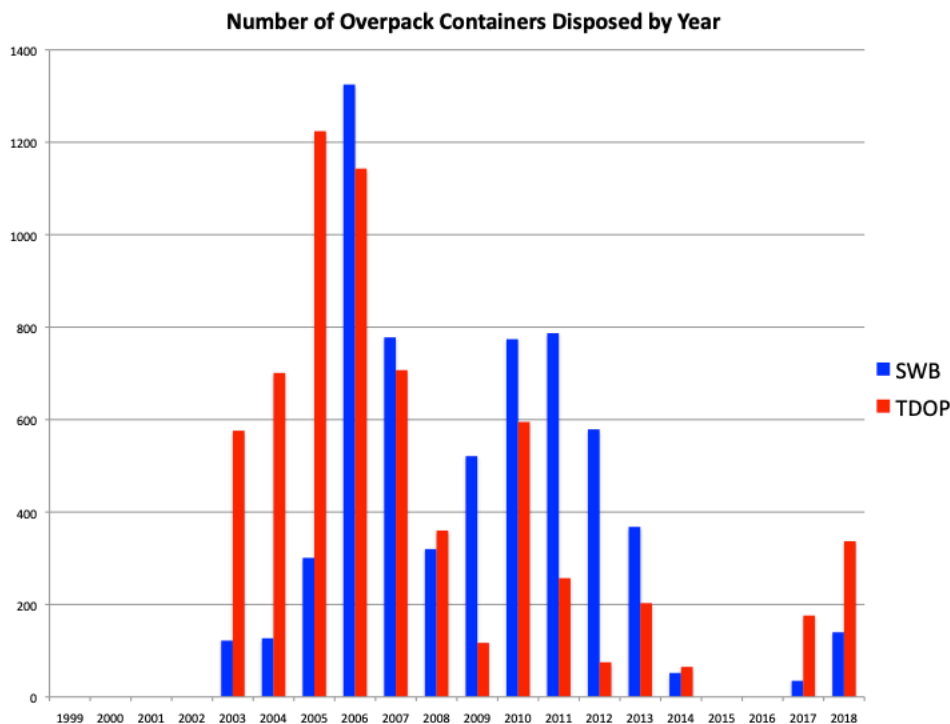


Figure 2 – Number of Other Overpack Containers Disposed by Year

The Permittees received the first shipments of both SWB overpacks and TDOPs in 2003, with the greatest annual emplacement of TDOPs occurring in the 2005-2006 timeframe. Very few TDOPs are direct loaded (not shown here, but only 26 between 2013 and 2017), and nearly all TDOPs are overpacking up to ten 55-gallons drums. The majority of these are for purposes of “payload management,” which 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. As I had pointed out in my written testimony at the VOR hearing, using TDOPs for payload management is generally a “bad” packaging decision from efficiently using WIPP disposal capacity because it allows low activity containers that don’t meet the TRU alpha activity concentration requirement on their own to qualify for disposal by averaging the TRU alpha activity concentration across multiple high activity containers. In any case, these two figures show that the impact of overpacking over time is clearly discernable and that the statement that “... the DOE did not anticipate... the need to overpack numerous containers prior to shipping” is unsupported. ([AR 180706](#), p. 6, PDF p. 9)

Volume of Record #3 – Predicted Outcomes

In my April 3, 2018 public comment on the Class 2 VOR PMR, I predicted:

“Although never clearly stated in the PMR, it appears that the Permittees’ true intent in submitting this PMR and defining the LWA VOR is to exclude NMED from having any regulatory oversight and enforcement authority over determining when the Permittees have reached (or exceeded) the LWA total capacity limit of 6.2 million ft³ of waste, and thus determining when to initiate final repository closure.” (AR 180402.48, p. 7-8)

I predicted that NMED would relinquish enforcement authority with respect to declaring when the LWA capacity limit had been reached, and be relegated primarily to permitting new HWDUs and watching them fill up, with no clear end in sight because they could no longer visualize what constituted a “full WIPP.” Would it be 9 panels, or 19 panels? Would it happen in 2035 or in 2085?

The outcome has been predictable. The concerns of a “Forever WIPP” have emerged into the public comments, previously unthinkable when WIPP had a clear mission as a pilot plant and had a clearly defined capacity limit based upon waste volume being the “gross internal volume of the outermost container.”

Likewise, unable to operate under the premise of the original 1999 permit where the volume is predictably determined for every container, NMED has been forced to rely on a number of unusual and sometimes questionable imposed conditions in the draft Permit that have drawn the ire of WIPP supporters, mainly from the communities surrounding WIPP in southeast New Mexico. Some comments have accused NMED of overstepping their regulatory authority by daring to require the DOE to make plans for a second repository, or to think that NMED has any authority over volume reporting beyond the capacity of individual panels.

Here are the topics that NMED is proposing to impose conditions in the draft Permit that would be unnecessary if the VOR language was removed from the Permit.

Topic	Citation	Summary of why unnecessary
#1 Closure	Section 6.5.2	Pre-VOR language reverts back to original language regarding 6.2 million ft ³ calculated as gross internal volume of outermost container, and NMED enforces it.
#2 Permit Revocation	Section 1.3.1	Questionable whether this is even legally enforceable.
#3 Prioritization and Risk Reduction of New Mexico Waste	Section 4.2.1.4	This language not unenforceable and is improper for a disposal facility’s permit. The preferred approach is a legally binding order on consent between the State of New Mexico, the Department of Energy, and NNSA for shipping TRU waste from LANL, as well as modifying the Permit to exclude all non-ATWIR waste
#7 Siting Another Repository	Section 2.14.3	Issue would be rendered moot if non-ATWIR waste was instead added to an expanded “excluded waste” table and conditions.

Volume of Record #4 – NMED’s 2018 Support Was a Policy Decision

This is perhaps the most difficult allegation to conclusively prove, but I am confident that NMED’s support of the 2018 VOR PMR was entirely a policy decision. A highly reliable former NMED employee who will remain anonymous for now informed me during a casual conversation that the reason NMED supported the PMR was because “[The Secretary] wanted it.” If it becomes relevant for me to substantiate this claim, I will strive to get an affidavit from the individual, who currently is unaware of my sharing this allegation.

This is not simply a speculative allegation on my part, because I have personally been impacted for defending policy decisions by the governor and senior NMED management in the past, a few examples of which are provided as footnotes.¹² While my examples dealt with public revelations that demanded a response (the threat of reclassifying high level waste so it could be disposed at WIPP) or revising health risks levels in the Permit in the

¹ In 2003, DOE began publicly discussing the possibility of considering waste stored in tanks that had historically been managed as high level waste and reclassifying it as TRU waste eligible for disposal at WIPP. Then-governor Bill Richardson had made public statements expressing his opposition to this proposed action, and NMED Secretary Ron Curry internally directed me to find a way to modify the WIPP permit to forbid such tank waste at WIPP. I knew that was an impossible request to directly fulfill, because the state doesn’t have the legal authority to regulate the radioactive component of mixed waste. I remember distinctly telling my staff that it would have been easier if I’d been directed to spin straw into gold, as the old fairy tale goes. On November 26, 2003, NMED issued a fact sheet and public notice of its intent to approve an agency-initiated modification that would instead “limit the waste eligible for disposal to the inventory that was identified when the permit was originally issued.” This announcement apparently triggered negotiations between the governor’s staff and DOE upper management to find an alternate solution, and on June 15, 2004 NMED announced that the hearing on the agency-initiated modification was postponed indefinitely, saying “No further action in this proceeding will take place pending a decision on a PMR that the Permittees intend to file that may supplant the NMED agency-initiated modification.” The issue was finally settled after NMED approved a PMR submitted by the Permittees to exclude waste from specific tanks. This [NMED press release from October 29, 2004](#) reflects how this PMR was the direct result of a policy directive from the governor. My hair turned a little grayer over those 11 months.

² Another issue arose leading up to the 2010 permit renewal hearing. The Permittees had earlier submitted a Class 2 PMR seeking a change to Permit Table 4.6.2.3 in response to EPA’s revised estimate of risk from exposure to carbon tetrachloride, which reduced the inhalation cancer risk from carbon tetrachloride by 2.5 times. The PMR sought to reapportion the VOC risk, but NMED chose simply to increase the Concentration of Concern for only carbon tetrachloride on this table by a factor of 2.5, and defer the Permittees’ reapportionment issue until the hearing. At hearing, the Permittees failed to fulfill their burden proof to reapportion the risk by waiting until rebuttal testimony by Bob Kehrman, witness for Permittees, to present evidence of his calculations. I had stated in my testimony, “The Department does not have a strong preference for any particular reapportionment approach so long as the resultant excess cancer risk from carcinogenic VOCs does not exceed the 10⁻⁵ occupational exposure limit,” but the evidence was not timely and they didn’t get what they wanted. Even though I was expressing the position and policy of NMED management (who apparently didn’t want to give the Permittees assistance in dealing with their increased carbon tetrachloride emissions from the repository), I am certain the Permittees blamed me personally for not helping them their way at the hearing. The final order granting the renewal was issued November 30, 2010, and became effective in the final days of the Richardson administration. On May 4, 2011, I was removed from my position as WIPP Project Leader by the new NMED cabinet secretary and assigned to be the State Food Program manager, a move I viewed as retaliation initiated by representatives and contractors for the M&O contractor at WIPP, who had developed a close and sympathetic relationship with the Martinez administration and who had participated during the transition between administrations.

face of increased hazardous emissions from WIPP, the VOR PMR was totally different. It was a brazen attempt to rewrite history, and a bid to “make hay while the sun shines,” to borrow a colloquialism similar to “get it while you can.”

While DOE has always considered the long range plan for WIPP and its mission to dispose of defense-related transuranic waste and other potential waste streams, they had a lot of time to contemplate their future during the hiatus while disposal activities were halted for nearly three years following the drum rupture event on February 14, 2014. During that time, the Permittees succeeded in cultivating a more “accommodating” management team at NMED over the early years from 2011 through 2016 (Secretary Ryan Flynn, WIPP Project Lead/WPD Division Director Trais Kliphuis, and RPD Director Kathryn Roberts) but by late 2016 all of them had moved on, leaving Cabinet Secretary Butch Tongate (appointed September 12, 2016) without anyone with institutional knowledge of WIPP in upper management at NMED. Meanwhile, at the HWB level, both James Bearzi and I had been reassigned on May 4, 2011, Steven Holmes of my staff passed away unexpectedly the beginning of 2016, and other staff such as Kate Lynnes, Tim Hall, and Sid Brandwein had moved on... only John Kieling, the new HWB Chief, and Ricardo Maestas remained, and Ricardo’s knowledge of the WIPP administrative record was limited to what he had acquired and retained since being hired into the WIPP group in November 2008. The only other significant representative for NMED was Legal Counsel Jennifer Hower, who represented NMED between around 2008 and later as NMED General Counsel (including at the 2018 hearing) before resigning from NMED in March 2021.

So, sometime between 2016 and 2018, the Permittees were prepared to approach NMED with a PMR containing a fabricated revisionist history of WIPP, aided by Bob Kehrman, long-time WIPP M&O employee (and later paid consultant) for the Permittees.

This is presumption on my part, but an agreement was likely reached between the Permittees and Secretary Tongate and General Counsel Hower for NMED to fully support the January 31, 2018 Class 2 (and subsequent Class 3) PMR, which asserted the following as facts:

- The TRU mixed waste volumes reported in the permit are only “for the purposes of reporting and comparing these volumes to the maximum hazardous waste disposal unit (HWDU) capacities prescribed by” the Permit. ([AR 180121](#), PDF p. 6)
- “[T]he maximum capacity of the WIPP repository... is based on the TRU mixed waste capacities of the individual HWDUs... and is not based on the LWA total capacity limit of 6.2 million cubic feet (ft³)... as authorized by Congress in the WIPP LWA of 1992” (ibid.)
- “The LWA TRU waste VOR is related to the quantity of waste that resides at the generator/storage sites *prior* to final packaging within the payload container and is directly related to the total capacity limit specified in the WIPP LWA.” (emphasis added, ibid., PDF p. 7)
- “[I]t is inappropriate to associate the TRU mixed waste volume allowed by the Permit with the LWA TRU waste VOR because the volumes serve separate and distinct purposes.” (ibid., PDF p. 10)
- “The TRU mixed waste volumes recorded in the Permit are not consistent.” (ibid.)

- “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.” (ibid., PDF p. 12)
- The Permittees assumed “[a]s stated in the SEIS-II, containers would be totally full” (ibid.)
- The Permittees also assumed “... NMED would issue a Permit for the entire facility (i.e., all existing and future disposal units, all 10 panels described in the Part B Permit Application) (ibid)
- “The assumption that the Permit volume and the ROD/C&C/LWA volume are linked is not valid... and language to this effect in the Permit constrains the DOE from achieving the goal of removing the inventory of TRU mixed waste from the generator/storage sites.” (ibid., PDF pp. 12-13)
- “Experience with packaging waste at the generator/storage site has resulted in waste containers that are not full as assumed in the ROD [record of decision].” (ibid., PDF p. 13)
- “When the Permit was issued by the NMED, the Permit did not authorize the proposed design capacity of the repository (i.e., all 10 panels). Instead, the NMED chose to authorize the facility on a unit-by-unit basis, as reflected by the capacities listed in Table 4.1.1” (ibid.)
- “Therefore, Section 7 of the Part A Permit Application should reflect the total maximum capacity of the permitted HWDUs shown in Table 4.1.1 since that is the current authorized capacity.” (ibid.)

My [comments on the Class 2 PMR](#) and [the VOR draft Permit](#), as well as [my testimony, findings of fact/conclusion of law](#), and [comments on the Hearing Officer Report](#), refute every one of these statements. **Every one of these statements is demonstrably false or misleading, and yet NMED supported every one of these statements as true and factual at the 2018 hearing. Why?** Because they didn’t know any better, or they blithely accepted everything the Permittees said as true. Neither Secretary Tongate nor General Counsel Hower had any experience or clear understanding of the historical administrative record supporting the WIPP permit.

But they undoubtedly knew **why** the Permittees wanted this change. In explaining why the PMR is a Class 2 modification, the Permittees actually cut to the heart of their problem and stated the real need for the change:

“The Permittees currently track TRU mixed waste volume and associate this volume with the LWA total capacity limit for TRU waste. This association is reflected by several statements in the Permit that reference the 6.2 million ft³ total capacity limit of TRU waste imposed by the LWA... [However], **the association in the Permit constrains the permitting of future TRU mixed waste disposal capacity within the regulated unit.**” (emphasis added, ibid., PDF p. 10)

And repeating a part of one of the bulleted points above:

“... language... in the Permit **constrains the DOE from achieving the goal of removing the inventory of TRU mixed waste from the generator/storage sites.**” (emphasis added, ibid., PDF pp. 12-13)

The only thing constraining the Permittees from achieving their goal were the historically reported volumes that were inconveniently too large. But the Permittees' goal wasn't simply to dispose of the waste historically identified as destined for WIPP. You only have to look at the 2020 NAS report referenced above and Figure 3-9 to see that WIPP was perfectly capable of holding not only the emplaced TRU waste but also the currently projected TRU waste that is identified in the ATWIR. Despite arguing that the PMR was not about expansion, that was the heart and soul of it, because they had plans for other waste, outside of the ATWIR, that would consume a huge amount of space due to the need to overpack all of the diluted surplus plutonium.

All this leads to the final question about the VOR PMR... if the Permittees weren't seeking to expand authorized capacity, add additional hazardous waste disposal units, or add additional waste streams, and they still had at least five years until they would fill Panel 8, why did they request it in 2018? What the urgency behind the request?

The answer was that the season for "making hay while the sun shines" was likely coming to an end. The current administration, with its close and sympathetic relationship with the Permittees, would be gone at the end of 2018, and there was no assurance that the next administration would treat them as favorably. Time was of the essence, and a Final Order needed to be issued before the end of the year. I will not recite the specifics here, but the entire schedule – from elevating the Class 2 to a Class 3, developing and issuing the draft Permit for public comment, recommending and scheduling a hearing, holding negotiations, setting deadlines to file an entry of appearance and a statement of intent to present technical testimony, holding the hearing, and scheduling all the post-hearing filings – was on an incredibly compressed time line. It was clear to everyone involved that the matter had to be completed before the end of the year, and Secretary Tongate signed the Final Order approving the draft Permit on December 21, 2018.

This PMR provided a very clear and stark contrast in interpreting the early history of WIPP, including an understanding of Congressional intent in the Land Withdrawal Act, DOE orders and policies, reports of waste inventories through the years, the assumptions and basis for the design of the WIPP facility, and so forth. The fact that NMED aligned itself with a new and novel "revisionist" interpretation of the administrative record as presented in the PMR, and rejected the "originalist" interpretation of at least two of the opposing expert witnesses with the greatest experience and depth of understanding of the administrative record – Mr. Hancock of SRIC and myself – begs the question: Why, unless it was a policy decision to choose one side over the other?

There really is no other answer to that question. With the Permittees and NMED on the same revisionist side of the issue, the Hearing Officer demonstrated that, in every instance of a difference of interpretation, he would side with the revisionists and dismiss the originalists out of hand (actually referring to my testimony as "non-persuasive" in his report to the Secretary). The Secretary wanted this outcome, and he (and the Permittees) got it, albeit in the last days of his outgoing administration.

Volume of Record #5 – NMED Can Implement a Revised Policy

What recourse does the current administration and NMED Secretary have to reverse the VOR language in the draft Permit, assuming they would consider it?

One complicating factor is that incoming Secretary Kenney supported NMED's position after some of the hearing parties appealed the VOR decision to the NM Court of Appeals. His decision was likely influenced by Ms. Hower, who he retained as his General Counsel, even though she was a political appointee whose position is generally vacated at a change of administrations and filled with a new person of the Secretary's choosing. Ms. Hower subsequently withdrew as counsel for the appeals case on March 1, 2021 and is no longer with NMED.

One obvious approach for the Secretary would be to determine whether there is sufficient reason to question whether the Permittees' certification for the Class 2 PMR is "true, accurate, and complete" under the requirements of 20.4.1.900 NMAC (incorporating 40 CFR §270.11(d)(1)). Mr. Hancock raised this issue in his comments on the Class 2 PMR ([AR 180402.34](#), PDF pp. 7-9). This could then serve as the basis for the Secretary to reevaluate whether the justifications in the PMR were "true, accurate, and complete" with respect to the entirety of the WIPP administrative record. My comments and testimony, as well as those of SRIC, could serve as a guide against which to assess the truth, accuracy, and completeness of the PMR. If the Secretary finds there are sufficiently persuasive reasons for NMED to reconsider the previous Secretary's Final Order approving the VOR changes, this could be accomplished by proposing appropriate revisions to the current renewal draft Permit.

At a minimum, it is critical for NMED to:

- Revoke the specific VOR language that gave DOE improper authority to maintain two inconsistent methods for determining waste disposal volumes,
- Reinstate and codify the historic "gross internal volume of the outermost container" and "overpacked containers are waste" understandings in the Permit, and
- Reassert NMED's authority for enforcing LWA capacity limits and restore the linkage between HWDU disposal volumes and overall LWA capacity limits

Furthermore, consider preemptively identifying additional "excluded waste" categories (e.g., from NAS Table 3-2) and incorporating them into the draft Permit, similar to what was done with waste from specific tanks back in 2004. This could be done by expanding the purpose for Part 2, Section 2.3.3.8 "Excluded Waste," and Attachment C, Table C-4 "Waste Tanks Subject to Exclusion." Such wastes that are not currently in the ATWIR or the administrative record could be readily identified by relevant NEPA documents that propose or recommend WIPP as a disposal alternative for them.

This would help to ensure that all projected future TRU wastes (i.e., those currently reported in ATWIR) have priority for disposal at WIPP. Even if DOE isn't going to keep its commitment to it generator sites and the states that host them and displace them with other wastes, NMED can ensure by incorporating this approach in the WIPP Permit that

states having binding agreements with their DOE generator sites will not be left holding the bag. This approach is also consistent with WIPP serving its original intent as a pilot plant, not as the only and forever disposal site. DOE could even use the excluded waste designations in the Permit as justification to seek Congressional authorization for a future, second repository.

Volume of Record #6 – Consequences for DOE

I believe that if DOE suffers real world consequences for having created an alternate universe requiring two different volume calculation schemes for disposal, instead of planning ahead for additional disposal capacity at a second repository, then they deserve it.

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 December 20, 2022:

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.

(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 to approval of the draft Permit as presented because it retains language implementing the Permittees' 2018 Volume of Record modification

(4) Issues proposed for consideration at the hearing:

- a) VOR and NMED's role in regaining authority over the WIPP LWA capacity limit
- b) Any other issues that remain unresolved following formal negotiations on the draft Permit and on which I have relevant views and opinions either for or against

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.

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, stylized "S" at the beginning.

Steve Zappe
steve_zappe@mac.com

Attachment:

TID Response Container Volumes 2018.xlsx

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%	98380	20659.8	20659.8	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%	6900	12972.0	12972.0	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%	6536	13725.6	29412.0	46.7%	15686.4
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 9/20/2018				180156	69165.7	95881.9	72.1%	26716.2
							98.6%	26352.5
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 9/20/2018				180274				

Volume Calculations

TID Response Container Volumes 2018.xlsx

AUTHORIZED CONTAINER PER WIPP WAC LWA VOR	LWA Container VOLUME (m3)	Inner diameter (in)	Inner Height (in)	Calc Volume (m3)	% Difference
55-gallon drum DL	0.21	22.5	33.25	0.216644524	96.9%
85-gallon drum DL	0.32	26	38.25	0.332789156	96.2%
85-gallon drum OP with 55-gallon drum	0.21				
100-gallon drum DL	0.38	30	33	0.382249988	99.4%
Shielded Container DL	0.11	20.375	29.75	0.15895465	69.2%
Standard Waste Box DL	1.88				
Standard Waste Box OP with 4 55-gallon drums	0.84				
Standard Waste Box OP with 3 85-gallon drums	0.96				
Standard Waste Box OP with 2 100-gallon drums	0.76				
Ten-Drum Overpack DL	4.5	68.75	72.625	4.41796816	101.9%
Ten-Drum Overpack OP with 10 55-gallon drums	2.1				
Ten-Drum Overpack OP with 6 85-gallon drums	1.92				
Ten-Drum Overpack OP with Standard Waste Box	1.88				
6-in Standard Pipe Overpack Container (POC)	0.012	6.07	25.245	0.011971368	100.2%
12-in Standard Pipe Overpack Container (POC)	0.0488	12.25	25.245	0.048757181	100.1%
Type S100 POC	0.00163	3.25	12	0.001631319	99.9%
Type S200-A POC	0.00691	8.125	8.13	0.006907618	100.0%
Type S200-B POC	0.0137	8.125	16.125	0.013700534	100.0%
Type S300 POC	0.00269	3.5	17.07	0.002691291	100.0%
Criticality Control Overpack	0.0128	6.065	26.88	0.012725707	100.6%
Standard Large Box 2	7.39				
RH Removable Lid Canister (DL)	0.89	25.5	107	0.895478514	99.4%
RH Removable Lid Canister OP with 3 55-gallon drums	0.63				
NS15 Neutron Shielded Canister	0.195				
NS30 Neutron Shielded Canister	0.351				

Container number	Container type	Waste stream	Emplacement date
RFD90824	12-inch Pipe OP	RF005.01	7/6/99
RFD90901	12-inch Pipe OP	RF005.01	7/6/99
RFD90902	12-inch Pipe OP	RF005.01	7/6/99
RFD92198	12-inch Pipe OP	RF005.01	7/6/99
RFD92236	12-inch Pipe OP	RF005.01	7/6/99
RFD92365	12-inch Pipe OP	RF005.01	7/6/99
RFD92366	12-inch Pipe OP	RF005.01	7/6/99
RFD92372	12-inch Pipe OP	RF005.01	7/6/99
RFD92373	12-inch Pipe OP	RF005.01	7/6/99
RFD92374	12-inch Pipe OP	RF005.01	7/6/99
RFD92375	12-inch Pipe OP	RF005.01	7/6/99
RFD92376	12-inch Pipe OP	RF005.01	7/6/99
RFD92378	12-inch Pipe OP	RF005.01	7/6/99
RFD92622	12-inch Pipe OP	RF005.01	7/6/99
RFD92626	12-inch Pipe OP	RF005.01	7/6/99
RFD92641	12-inch Pipe OP	RF005.01	7/6/99
RFD93048	12-inch Pipe OP	RF005.01	7/6/99
RFD93051	12-inch Pipe OP	RF005.01	7/6/99
RFD93094	12-inch Pipe OP	RF005.01	7/6/99
RFD93105	12-inch Pipe OP	RF005.01	7/6/99
RFD93109	12-inch Pipe OP	RF005.01	7/6/99
RFD93890	12-inch Pipe OP	RF005.01	7/6/99
RFD93954	12-inch Pipe OP	RF005.01	7/6/99
RFD93976	12-inch Pipe OP	RF005.01	7/6/99
RFD94559	12-inch Pipe OP	RF005.01	7/6/99
RFD94711	12-inch Pipe OP	RF005.01	7/6/99
RFD94993	12-inch Pipe OP	RF005.01	7/6/99
RFD94996	12-inch Pipe OP	RF005.01	7/6/99
RFD90899	12-inch Pipe OP	RF005.01	7/20/99
RFD91043	12-inch Pipe OP	RF005.01	7/20/99
RFD92244	12-inch Pipe OP	RF005.01	7/20/99
RFD92251	12-inch Pipe OP	RF005.01	7/20/99
RFD92342	12-inch Pipe OP	RF005.01	7/20/99
RFD92379	12-inch Pipe OP	RF005.01	7/20/99
RFD92529	12-inch Pipe OP	RF005.01	7/20/99
RFD92621	12-inch Pipe OP	RF005.01	7/20/99
RFD92630	12-inch Pipe OP	RF005.01	7/20/99
RFD92632	12-inch Pipe OP	RF005.01	7/20/99

HBL120525	12-inch Pipe OP	SR-221H-PUOX	8/1/17
HBL120527	12-inch Pipe OP	SR-221H-PUOX	8/1/17
HBL120529	12-inch Pipe OP	SR-221H-PUOX	8/1/17
HBL120533	12-inch Pipe OP	SR-221H-PUOX	8/1/17
HBL120534	12-inch Pipe OP	SR-221H-PUOX	8/1/17
HBL120535	12-inch Pipe OP	SR-221H-PUOX	8/1/17
HBL120536	12-inch Pipe OP	SR-221H-PUOX	8/1/17
HBL120537	12-inch Pipe OP	SR-221H-PUOX	8/1/17
HBL120459	12-inch Pipe OP	SR-221H-PUOX	8/10/17
HBL120460	12-inch Pipe OP	SR-221H-PUOX	8/10/17
HBL120470	12-inch Pipe OP	SR-221H-PUOX	8/10/17
HBL120481	12-inch Pipe OP	SR-221H-PUOX	8/10/17
HBL120526	12-inch Pipe OP	SR-221H-PUOX	8/10/17
HBL120530	12-inch Pipe OP	SR-221H-PUOX	8/10/17
HBL120532	12-inch Pipe OP	SR-221H-PUOX	8/10/17
HBL120541	12-inch Pipe OP	SR-221H-PUOX	8/10/17
HBL120542	12-inch Pipe OP	SR-221H-PUOX	8/10/17
HBL120543	12-inch Pipe OP	SR-221H-PUOX	8/10/17
HBL120544	12-inch Pipe OP	SR-221H-PUOX	8/10/17
HBL120546	12-inch Pipe OP	SR-221H-PUOX	8/10/17
HBL120550	12-inch Pipe OP	SR-221H-PUOX	8/10/17
HBL120553	12-inch Pipe OP	SR-221H-PUOX	8/10/17

Container type	Waste stream	Emplacement start date	Emplacement end date	Count	Description	SCG	WTC	Date Approved
12-inch Pipe OP	RF005.01	7/6/99	11/10/99	574	STABILIZED PYROCHEMICAL SALTS	S3000	TRU	
12-inch Pipe OP	RF006.01	2/23/01	4/17/05	1120	MAGNESIUM OXIDE & LECO CRUCIBLES	S5000	TRU	2/13/01
12-inch Pipe OP	RF008.01	3/15/01	4/9/05	436	INORGANIC NONMETAL DEBRIS /CERAMICS	S5000	TRU	3/9/01
12-inch Pipe OP	RF003.01	4/23/01	4/15/05	1326	GRAPHITE DEBRIS WASTE	S5000	TRU	4/16/01
12-inch Pipe OP	RF005.02	6/11/01	4/5/05	377	STABILIZED PYROCHEMICAL SALTS	S3000	TRU	6/6/01
12-inch Pipe OP	RF009.01	7/13/01	4/9/05	6304	REPACKAGED PYROCHEMICAL SALTS	S3000	TRU	6/25/01
12-inch Pipe OP	RF118.01	12/20/01	4/20/05	6881	INCINERATOR ASH & PROCESS RESIDUES	S3000	MTRU	10/19/01
12-inch Pipe OP	RF128.01	12/11/02	12/8/04	953	TRM PU FLOURIDE (SOLIDIFIED INORGANICS)	S3000	MTRU	11/19/02
12-inch Pipe OP	LA-OS-00-01	5/7/03	5/7/03	2	OSR SEALED SOURCES	S5000	TRU	4/23/03
12-inch Pipe OP	RLMSSC.001	5/29/03	8/6/06	311	SAND, SLAG & CRUCIBLE	S5000	TRU	5/20/03
12-inch Pipe OP	RF032.01	6/18/03	4/15/05	991	SAND, SLAG & CRUCIBLE	S5000	TRU	5/27/03
12-inch Pipe OP	RF115.01	7/10/03	4/15/05	417	TRM FIREBRICK	S5000	MTRU	6/9/03
12-inch Pipe OP	RLHMOX.001	12/4/03	3/4/07	932	PPF MIXED OXIDES	S5000	MTRU	11/20/03
12-inch Pipe OP	RF002.01	1/14/04	4/20/05	66	METAL AND HEAVY METAL DEBRIS (NON-SS)	S5000	TRU	3/9/00
12-inch Pipe OP	RF004.01	1/14/04	4/8/05	11	GLASS DEBRIS WASTE	S5000	TRU	8/13/02
12-inch Pipe OP	RF141.02	4/28/04	4/8/05	846	TRM LOW-GRADE OXIDES	S3000	MTRU	4/14/04
12-inch Pipe OP	RF141.01	6/15/04	4/17/05	219	SOLIDIFIED INORGANICS	S3000	MTRU	4/28/04
12-inch Pipe OP	RF121.01	6/25/04	4/8/05	221	TRM INORGANIC NONMETAL DEBRIS	S5000	MTRU	4/28/04
12-inch Pipe OP	RLMHASH.001	7/24/04	3/4/07	299	INCINERATOR ASH & PROCESS RESIDUES	S3000	MTRU	7/15/04
12-inch Pipe OP	RLRFETS.001	7/24/04	3/4/07	307	INCINERATOR ASH & PROCESS RESIDUES	S3000	MTRU	7/15/04
12-inch Pipe OP	RF104.01	7/28/04	4/5/05	37	TRM GLASS DEBRIS	S5000	MTRU	5/3/04
12-inch Pipe OP	RF129.01	8/26/04	3/15/05	16	TRM HETEROGENEOUS DEBRIS	S5000	MTRU	1/23/04
12-inch Pipe OP	RF033.01	9/19/04	4/6/05	57	TRU SS&C HEEL	S3000	TRU	8/27/04
12-inch Pipe OP	RF031.01	10/14/04	10/16/04	2	ORGANIC RESINS/TRU	S5000	TRU	6/24/04
12-inch Pipe OP	RF102.31	10/14/04	4/17/05	3	TRM METAL DEBRIS W/LEAD SHIELDING	S5000	MTRU	3/10/03
12-inch Pipe OP	RF122.01	12/8/04	4/9/05	163	TRM INORGANIC SLUDGE	S3000	MTRU	11/18/04
12-inch Pipe OP	RF116.01	1/8/05	1/18/05	19	TRM FIREBRICK HEEL	S3000	MTRU	12/20/04
12-inch Pipe OP	RF126.01	1/21/05	1/22/05	5	SOLIDIFIED ORGANICS	S3000	MTRU	1/6/05
12-inch Pipe OP	RF126.04	1/29/05	2/19/05	10	TRM SOLIDIFIED ORGANICS	S3000	MTRU	1/19/05

12-inch Pipe OP	RF029.01	2/25/05	4/20/05	15	HETEROGENEOUS DEBRIS	S5000	TRU	8/20/02
12-inch Pipe OP	RF125.01	2/25/05	4/17/05	30	TRM MISC. HOMOGENEOUS SOLIDS	S3000	MTRU	2/16/05
12-inch Pipe OP	RF122.06	3/5/05	4/17/05	33	TRM INORGANIC SLUDGE	S3000	MTRU	2/24/05
12-inch Pipe OP	RF119.01	3/11/05	3/15/05	5	TRM INCINERATOR SLUDGE	S3000	MTRU	2/2/05
12-inch Pipe OP	RF123.01	4/5/05	4/9/05	36	TRM INORGANIC SOLIDS	S3000	MTRU	3/28/05
12-inch Pipe OP	RF110.01	4/17/05	4/17/05	1	FILTERS & FILTER MEDIA/TRM	S5000	MTRU	6/2/04
12-inch Pipe OP	LA-OS-00-01.001	7/30/05	11/3/13	377	WIPP ELIGIBLE OSR SEALED SOURCES	S5000	TRU	7/26/05
12-inch Pipe OP	RLM308D.001	9/8/05	7/13/06	119	HETEROGENEOUS DEBRIS - BLDG. 308	S5000	MTRU	8/18/05
12-inch Pipe OP	RLMPDT.001	4/21/06	5/2/08	195	HETEROGENEOUS DEBRIS (MPFPD)	S5000	MTRU	8/12/02
12-inch Pipe OP	LA-MHD01.001	4/30/08	1/28/14	1177	HETEROGENEOUS DEBRIS	S5000	MTRU	4/7/05
12-inch Pipe OP	LA-MHD03.001	8/26/10	9/17/13	17	HETEROGENEOUS DEBRIS	S5000	MTRU	10/3/06
12-inch Pipe OP	LA-MHD05-ITRI.001	7/21/12	8/30/12	2	HETEROGENEOUS DEBRIS WASTE	S5000	MTRU	6/9/11
12-inch Pipe OP	LA-MHD08.001	7/21/12	7/21/12	2	HETEROGENEOUS DEBRIS FROM TA-48 ALPHA FACILITY	S5000	MTRU	4/7/10
12-inch Pipe OP	SR-221H-PUOX	8/28/12	8/10/17	666	HETEROGENEOUS INORGANIC DEBRIS	S5000	MTRU	8/3/12
12-inch Pipe OP	LA-MIN02-V.001	10/6/12	1/28/14	78	INORGANIC PARTICULATE WASTE FROM TA-55	S3000	MTRU	8/14/13
12-inch Pipe OP	LA-MIN04-S.001	10/6/12	12/10/13	43	SALT WASTE FROM TA-55	S3000	MTRU	8/24/12
12-inch Pipe OP	LA-MHD09.001	10/7/12	11/3/13	6	HETEROGENEOUS DEBRIS WASTE	S5000	MTRU	8/16/11
12-inch Pipe OP	LA-CIN01.001	4/28/13	12/10/13	273	CEMENTED TRU WASTE	S3000	MTRU	6/17/10
				25980				

Container number	Container type	Waste stream	Emplacement date
SRSB00001	SWB OP	SR-W027-221F-HETA	1/24/03
SRSB00002	SWB OP	SR-W027-221F-HETA	1/24/03
SRSB00003	SWB OP	SR-W027-221F-HETA	1/24/03
SRSB00005	SWB OP	SR-W027-221F-HETA	1/24/03
SRSB00006	SWB OP	SR-W027-221F-HETA	1/24/03
SRSB00009	SWB OP	SR-W027-221F-HETA	1/24/03
SRSB00011	SWB OP	SR-W027-221F-HETA	1/26/03
SRSB00013	SWB OP	SR-W027-221F-HETA	1/26/03
SRSB00015	SWB OP	SR-W027-221F-HETA	1/27/03
SRSB00016	SWB OP	SR-W027-221F-HETA	1/27/03
SRSB00017	SWB OP	SR-W027-221F-HETA	1/27/03
SRSB00026	SWB OP	SR-W027-221F-HETA	1/27/03
SRSB00027	SWB OP	SR-W027-221F-HETA	1/27/03
SRSB00028	SWB OP	SR-W027-221F-HETA	1/27/03
SRSB00029	SWB OP	SR-W027-221F-HETA	1/27/03
SRSB00030	SWB OP	SR-W027-221F-HETA	1/27/03
SRSB00031	SWB OP	SR-W027-221F-HETA	1/27/03
SRSB00032	SWB OP	SR-W027-221F-HETA	1/27/03
SRSB00033	SWB OP	SR-W027-221F-HETA	1/29/03
SRSB00038	SWB OP	SR-W027-221F-HETA	1/29/03
SRSB00043	SWB OP	SR-W027-221F-HETA	1/29/03
SRSB00044	SWB OP	SR-W027-221F-HETA	1/29/03
SRSB00046	SWB OP	SR-W027-221F-HETA	1/29/03
SRSB00047	SWB OP	SR-W027-221F-HETA	1/29/03
SRSB00036	SWB OP	SR-W027-221F-HETA	1/31/03
SRSB00039	SWB OP	SR-W027-221F-HETA	1/31/03
SRSB00041	SWB OP	SR-W027-221F-HETA	1/31/03
SRSB00042	SWB OP	SR-W027-221F-HETA	1/31/03
SRSB00034	SWB OP	SR-W027-221F-HETA	2/3/03
SRSB00037	SWB OP	SR-W027-221F-HETA	2/3/03
SRSB00040	SWB OP	SR-W027-221F-HETA	2/3/03
SRSB00048	SWB OP	SR-W027-221F-HETA	2/3/03
SRSB00049	SWB OP	SR-W027-221F-HETA	2/3/03
SRSB00050	SWB OP	SR-W027-221F-HETA	2/3/03
SRSB00051	SWB OP	SR-W027-221F-HETA	2/3/03
SRSB00053	SWB OP	SR-W027-221F-HETA	2/3/03
SRSB00008	SWB OP	SR-W027-221F-HETA	2/5/03
SRSB00019	SWB OP	SR-W027-221F-HETA	2/5/03

BN10647084	SWB OP	ID-RF-S3114	6/4/18
BN10647080	SWB OP	ID-RF-S3114	6/5/18
BN10647082	SWB OP	ID-RF-S3114	6/5/18
BN10649280	SWB OP	BNINW216	6/12/18
BN10649281	SWB OP	BNINW216	6/12/18
BN10649283	SWB OP	BNINW216	6/13/18
BN10649284	SWB OP	BNINW216	6/13/18
BN10649285	SWB OP	BNINW216	6/14/18
BN10649274	SWB OP	BNINW216	6/21/18
BN10647104	SWB OP	ID-RF-S3114	6/21/18
BN10647099	SWB OP	ID-RF-S3114	6/25/18
BN10649300	SWB OP	ID-RF-S3114	6/25/18
BN10649306	SWB OP	ID-RF-S3114	6/25/18
BN10647102	SWB OP	ID-RF-S3114	6/26/18
BN10647103	SWB OP	ID-RF-S3114	6/26/18
BN10649294	SWB OP	ID-RF-S3114	6/26/18
BN10649298	SWB OP	ID-RF-S3114	6/26/18
BN10649288	SWB OP	ID-RF-S3114	6/28/18
BN10649304	SWB OP	ID-RF-S3114	6/28/18
BN10649276	SWB OP	BNINW216	7/2/18
BN10649277	SWB OP	BNINW216	7/2/18
BN10649301	SWB OP	ID-RF-S3114	7/2/18
BN10649307	SWB OP	ID-RF-S3114	7/2/18
BN10649282	SWB OP	BNINW216	7/3/18
BN10649275	SWB OP	BNINW216	7/11/18
BN10649303	SWB OP	ID-RF-S3114	7/11/18

Container number	Container type	Waste stream	Emplacement date
SRTP00002	TDOP	SR-W027-221F-HETA	2/19/03
SRTP00003	TDOP	SR-W027-221F-HETA	2/19/03
SRTP00001	TDOP	SR-W027-221F-HETA	2/20/03
SRTP00008	TDOP	SR-W027-221F-HETA	2/24/03
SRTP00009	TDOP	SR-W027-221F-HETA	2/24/03
SRTP00013	TDOP	SR-W027-221F-HETA	2/24/03
SRTP00018	TDOP	SR-W027-221F-HETA	2/24/03
SRTP00007	TDOP	SR-W027-221F-HETA	2/26/03
SRTP00010	TDOP	SR-W027-221F-HETA	3/3/03
SRTP00014	TDOP	SR-W027-221F-HETA	3/3/03
SRTP00015	TDOP	SR-W027-221F-HETA	3/3/03
SRTP00016	TDOP	SR-W027-221F-HETA	3/3/03
SRTP00020	TDOP	SR-W027-221F-HETA	3/5/03
SRTP00021	TDOP	SR-W027-221F-HETA	3/5/03
SRTP00022	TDOP	SR-W027-221F-HETA	3/5/03
SRTP00024	TDOP	SR-W027-221F-HETA	3/5/03
SRTP00017	TDOP	SR-W027-221F-HETA	3/6/03
SRTP00019	TDOP	SR-W027-221F-HETA	3/6/03
SRTP00025	TDOP	SR-W027-221F-HETA	3/7/03
SRTP00026	TDOP	SR-W027-221F-HETA	3/7/03
SRTP00027	TDOP	SR-W027-221F-HETA	3/7/03
SRTP00029	TDOP	SR-W027-221F-HETA	3/7/03
SRTP00031	TDOP	SR-W027-221F-HETA	3/7/03
SRTP00023	TDOP	SR-W027-221F-HETA	3/10/03
SRTP00034	TDOP	SR-W027-221F-HETA	3/10/03
SRTP00028	TDOP	SR-W027-221F-HETA	3/11/03
SRTP00030	TDOP	SR-W027-221F-HETA	3/11/03
SRTP00032	TDOP	SR-W027-221F-HETA	3/11/03
SRTP00036	TDOP	SR-W027-221F-HETA	3/11/03
SRTP00037	TDOP	SR-W027-221F-HETA	3/11/03
SRTP00038	TDOP	SR-W027-221F-HETA	3/13/03
SRTP00039	TDOP	SR-W027-221F-HETA	3/13/03
SRTP00040	TDOP	SR-W027-221F-HETA	3/13/03
SRTP00042	TDOP	SR-W027-221F-HETA	3/17/03
SRTP00044	TDOP	SR-W027-221F-HETA	3/17/03
SRTP00033	TDOP	SR-W027-221F-HETA	3/19/03
SRTP00035	TDOP	SR-W027-221F-HETA	3/19/03
SRTP00041	TDOP	SR-W027-221F-HETA	3/19/03

SRTP01769	TDOP	SR-W027-221F-HETA	3/1/07
SRTP01786	TDOP	SR-W027-221F-HETA	3/10/07
SRTP01825	TDOP	SR-W027-221F-HETA	4/7/07
SRTP01826	TDOP	SR-W027-221F-HETA	4/7/07
SRTP01856	TDOP	SR-W027-221F-HETA	5/12/07
SRTP01867	TDOP	SR-W027-221F-HETA	5/17/07
SRTP01868	TDOP	SR-W027-221F-HETA	5/17/07
SRTP01869	TDOP	SR-W027-221F-HETA	5/17/07
SRTP01870	TDOP	SR-W027-221F-HETA	5/25/07
SRTP01895	TDOP	SR-W027-221F-HETA	6/28/07
SRTP01916	TDOP	SR-W027-221F-HETA	7/13/07
SRTP01906	TDOP	SR-W027-221F-HETA	7/27/07
SRTP01914	TDOP	SR-W027-221F-HETA	7/27/07
SRTP01915	TDOP	SR-W027-221F-HETA	7/27/07
SRTP01933	TDOP	SR-W027-221F-HETA	9/7/07
SRTP01934	TDOP	SR-W027-221F-HETA	9/7/07
SRTP01967	TDOP	SR-W027-221F-HETA	10/21/07
SRTP01970	TDOP	SR-W027-221F-HETA	11/4/07
SRTP01979	TDOP	SR-W027-221F-HETA	11/28/07
SRTP02010	TDOP	SR-W027-221F-HETA	12/13/07
SRTP02024	TDOP	SR-W027-221F-HETA	12/20/07
SRTP02025	TDOP	SR-W027-221F-HETA	12/20/07
SRTP01989	TDOP	SR-W027-221F-HETA	1/16/08
SRTP02078	TDOP	SR-W027-221F-HETA	3/14/08
SRTP02101	TDOP	SR-W027-221F-HETA	4/7/08
SRTP02102	TDOP	SR-W027-221F-HETA	4/18/08
SRTP02100	TDOP	SR-W027-221F-HETA	4/22/08
SRTP02138	TDOP	SR-W027-221F-HETA	7/15/08
SRTP02152	TDOP	SR-W027-221F-HETA	10/23/08

Container type	Waste stream	Emplacement start date	Emplacement end date	Count	Description	SCG	WTC	Date Approved
TDOP	SR-W027-FB-PRE86-C	2/19/03	11/1/08	461	PRE-1986 ORGANIC DEBRIS - FB LINE	S5000	MTRU	9/23/02
TDOP	SR-W027-221F-HETA	2/19/03	10/23/08	387	HETEROGENEOUS DEBRIS - FB LINE	S5000	MTRU	3/28/02
TDOP	AECHDM	7/1/03	7/28/03	10	HETEROGENEOUS MIXED DEBRIS	S5000	MTRU	5/13/03
TDOP	MU-W002	7/28/03	7/28/03	1	HETEROGENEOUS DEBRIS	S5000	MTRU	7/23/03
TDOP	SR-W027-221F-HETA, SR-W027-FB-PRE86-C	8/6/03	8/11/03	2				
TDOP	SR-W027-221H-HET	8/20/03	3/23/10	614	HETEROGENEOUS DEBRIS - 221H	S5000	MTRU	8/14/03
TDOP	SR-W026-772F-HET	12/17/03	8/31/10	345	CLAB COMBUSTIBLE DEBRIS	S5000	MTRU	12/9/03
TDOP	BNINW216	3/17/04	9/20/18	966	FIRST/SECOND STAGE SOLIDIFIED SLUDGE	S3000	MTRU	9/17/04
TDOP	SR-W026-221F-HET	3/18/04	9/11/08	124	HETEROGENEOUS DEBRIS - FB LINE	S5000	MTRU	3/4/04
TDOP	BNINW218	6/3/04	5/17/06	91	SOLIDIFIED SLUDGE (B374)	S3000	MTRU	3/18/04
TDOP	SR-W027-235F-HET	6/11/04	1/14/10	109	HETEROGENEOUS DEBRIS - 235F	S5000	MTRU	5/21/04
TDOP	AECHHM	7/17/04	7/17/04	1	ANL-E CH HOMOGENEOUS MIXED SOLID WASTE	S3000	MTRU	6/9/04
TDOP	RF002.01	2/26/05	4/7/05	3	METAL AND HEAVY METAL DEBRIS (NON-SS)	S5000	TRU	3/9/00
TDOP	RLMPDT.001	3/12/05	9/27/08	172	HETEROGENEOUS DEBRIS (MPFPD)	S5000	MTRU	8/12/02
TDOP	RLNPDT.002	3/12/05	4/2/06	24	DEBRIS WASTES - PLASTICS (NFPFD)	S5000	TRU	7/11/00
TDOP	RF029.01	4/15/05	4/15/05	1	HETEROGENEOUS DEBRIS	S5000	TRU	8/20/02
TDOP	SR-W027-773A-HET	5/1/05	10/7/10	132	HETEROGENEOUS DEBRIS - 773A	S5000	MTRU	3/10/05
TDOP	RLNPURX.001	5/5/05	5/5/05	1	HETEROGENEOUS DEBRIS (NPUREXD)	S5000	TRU	2/6/04
TDOP	RLMPURX.001	6/4/05	3/30/08	18	HETEROGENEOUS DEBRIS (MPUREXD)	S5000	MTRU	2/6/04
TDOP	BN835	6/15/05	8/24/09	227	SOLIDIFIED INORGANICS	S3000	MTRU	4/7/05
TDOP	RLCFFD.001	7/24/05	10/7/07	14	HETEROGENEOUS DEBRIS	S5000	MTRU	6/10/05
TDOP	BN211	9/18/05	2/1/07	102	FILTER DEBRIS	S5000	MTRU	6/19/06
TDOP	BN296	9/28/05	11/17/06	92	NON-SS METAL DEBRIS	S5000	MTRU	9/21/05
TDOP	BN243	10/16/05	1/12/07	31	GLASS DEBRIS	S5000	MTRU	9/28/05
TDOP	BN252	10/26/05	1/17/07	23	LEADED RUBBER DEBRIS	S5000	MTRU	10/17/05
TDOP	ID-RF-S5100-A	11/30/05	5/23/10	104	RASCHIG RINGS - DEBRIS	S5000	MTRU	11/18/05
TDOP	ID-RF-S5300-A	12/1/05	5/8/13	606	COMBUSTIBLES & PLASTIC DEBRIS	S5000	MTRU	11/18/05
TDOP	ID-RF-S5126	12/1/05	5/19/10	36	GRAPHITE DEBRIS	S5000	MTRU	11/18/05
TDOP	BN161	1/9/06	9/12/06	12	CERAMIC DEBRIS	S5000	MTRU	12/27/05
TDOP	BN304	1/11/06	8/7/06	62	HETEROGENEOUS DEBRIS (MOUND)	S5000	MTRU	6/19/06
TDOP	BN004	1/12/06	7/5/13	24	SOLIDIFIED INORGANICS - SPECIAL SETUPS	S3000	MTRU	12/28/05
TDOP	RLM308D.001	4/10/06	11/17/06	7	HETEROGENEOUS DEBRIS - BLDG. 308	S5000	MTRU	8/18/05
TDOP	ID-RF-S3150-A	5/21/06	7/28/12	7	SOLIDIFIED ORGANIC SLUDGES	S3000	MTRU	1/6/06
TDOP	ID-RF-S3114	6/3/06	8/22/18	1000	SOLIDIFIED ORGANICS	S3000	MTRU	1/24/06
TDOP	RLCBWD.001	11/9/06	5/3/10	17	B&W HETEROGENEOUS DEBRIS	S5000	MTRU	6/27/06
TDOP	SR-AGNS-HET	1/16/08	7/8/08	9	ALLIED GENERAL NUCLEAR SERVICES DEBRIS	S5000	MTRU	12/6/07
TDOP	RLM325D.001(OLD)	1/31/08	7/9/08	3	HETEROGENEOUS DEBRIS WASTE - BLDG 325	S5000	MTRU	5/17/07
TDOP	LA-CIN02.001	6/4/08	6/4/08	1	SOLIDIFIED HOMOGENEOUS SOLIDS	S3000	MTRU	4/3/08

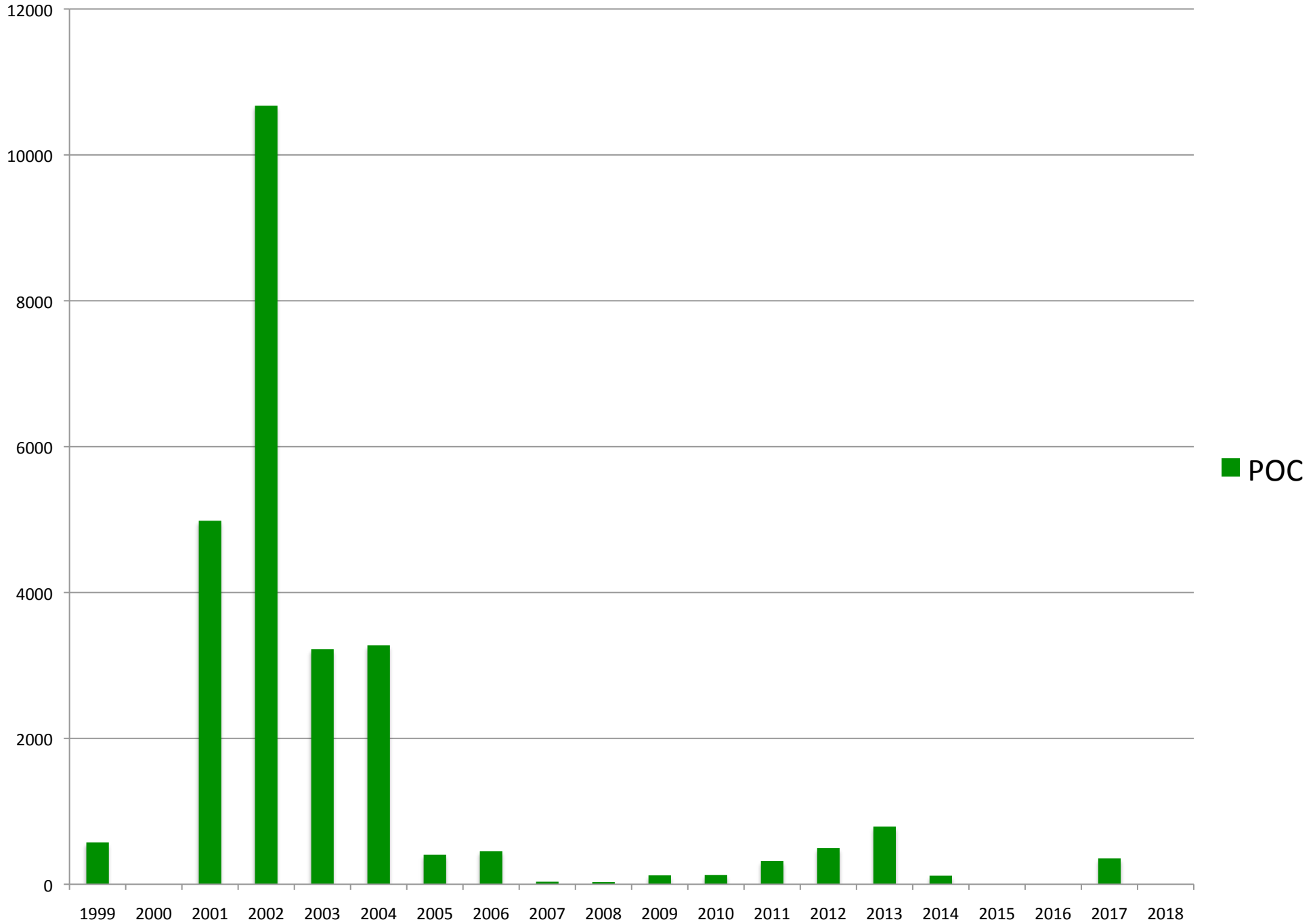
TDOP	SR-SWMF-HET-A	6/17/08	2/1/10	10	DEBRIS FROM SWMF	S5000	MTRU	4/13/08
TDOP	RLSWOCD.001	7/19/08	7/19/08	1	HETEROGENEOUS DEBRIS	S5000	MTRU	6/7/07
TDOP	RLM231ZD.001(OLD)	9/9/08	9/9/08	1	RICHLAND 231-Z MIXED DEBRIS	S5000	MTRU	9/10/07
TDOP	SR-MD-HET	8/22/09	8/22/09	1	DEBRIS FROM MOUND SITE	S5000	MTRU	4/15/08
TDOP	BN222	3/30/10	3/30/10	1	MISCELLANEOUS CEMENTED WASTE	S3000	MTRU	1/29/10
TDOP	ID-SDA-SOIL	4/20/10	9/15/11	136	SOILS	S4000	MTRU	6/19/08
TDOP	ID-SDA-SLUDGE	4/26/10	9/29/11	505	SOLIDIFIED ORGANICS	S3000	MTRU	9/26/07
TDOP	RLM233SD.001	5/3/10	5/3/10	1	HETEROGENEOUS DEBRIS (RLM223SD)	S5000	MTRU	11/10/06
TDOP	ID-SDA-DEBRIS	8/31/10	7/26/11	37	HETEROGENEOUS DEBRIS	S5000	MTRU	2/21/07
TDOP	ID-LL-W019-S3900	2/15/11	2/15/11	1	SOLIDIFIED LIQUIDS AND SLUDGES	S3000	MTRU	1/28/11
TDOP	SR-LA-PAD1	5/10/11	7/17/11	2	HETEROGENEOUS DEBRIS FROM LANL	S5000	MTRU	4/21/11
TDOP	SR-MD-PAD1	8/17/11	8/17/11	1	HETEROGENEOUS DEBRIS FROM MOUND SITE	S5000	MTRU	7/19/10
				6536				

Yearly Totals

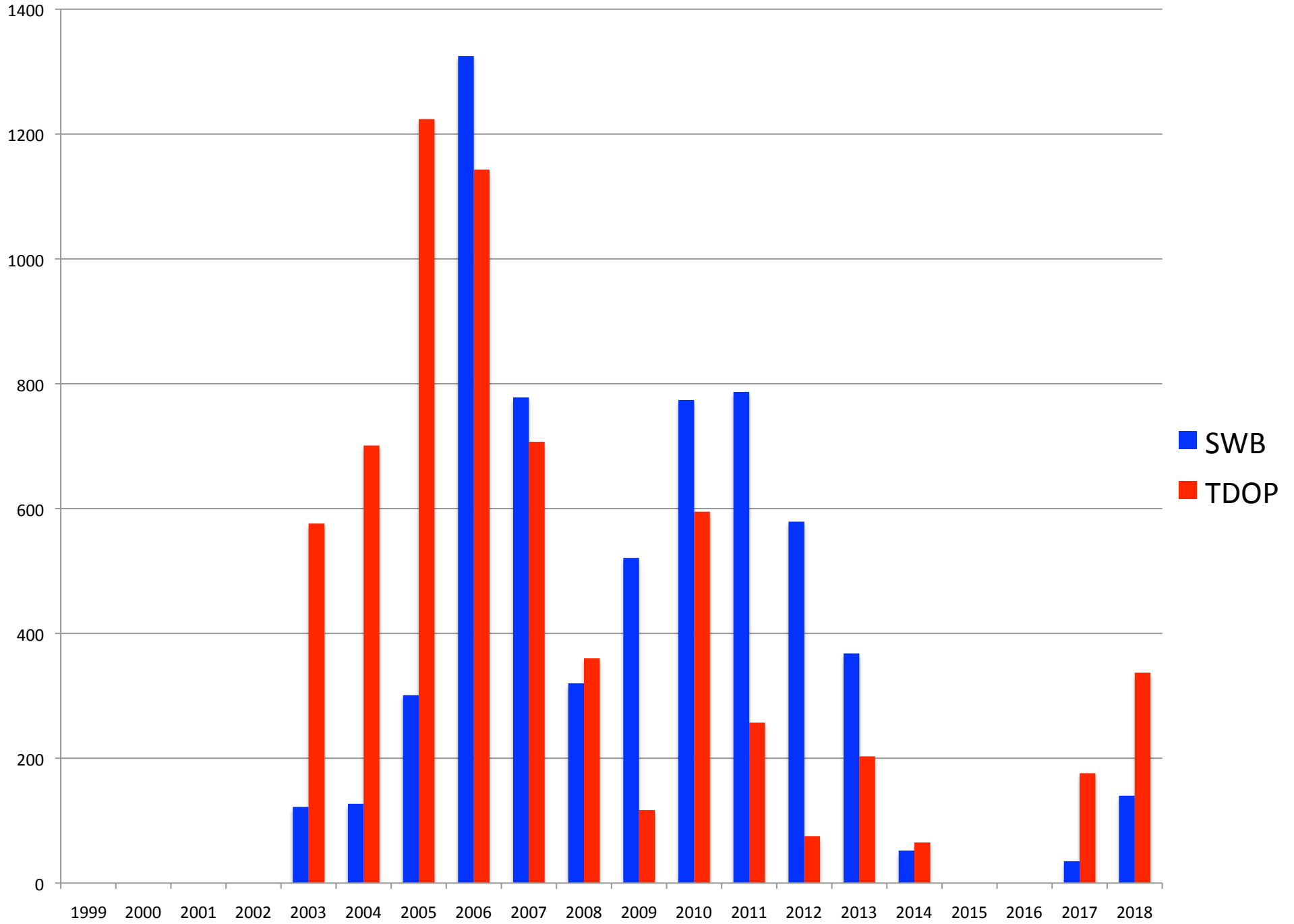
TID Response Container Volumes 2018.xlsx

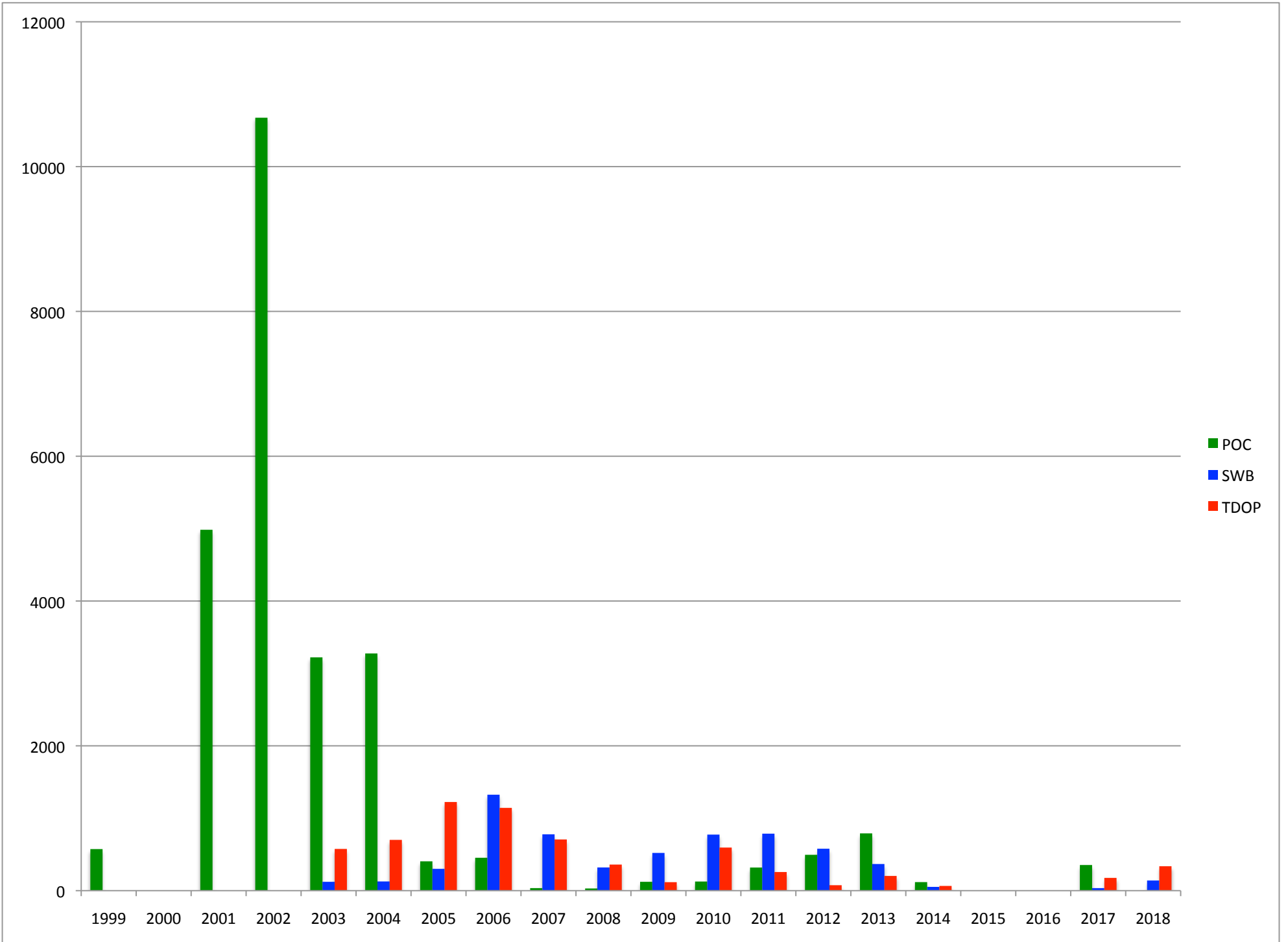
Year	POC	SWB	TDOP
1999	574	0	0
2000	0	0	0
2001	4984	0	0
2002	10675	0	0
2003	3222	122	576
2004	3276	127	701
2005	405	301	1224
2006	454	1325	1143
2007	35	778	707
2008	30	320	360
2009	122	521	117
2010	126	774	595
2011	319	787	257
2012	495	579	75
2013	791	368	203
2014	118	52	65
2015	0	0	0
2016	0	0	0
2017	354	35	176
2018	0	140	337
Total	25980	6229	6536

Number of 12" POC Containers Disposed by Year



Number of Overpack Containers Disposed by Year





Container number	Container type	Waste stream	Emplacement date
DUNN001	55 gal		3/28/11
DUNN002	55 gal		1/13/02
DUNN003	55 gal		8/7/08
DUNN020	55 gal		3/22/11
DUNN021	55 gal		3/23/11
DUNN03701	55 gal		10/4/03
DUNN03702	55 gal		10/4/03
DUNN03703	55 gal		10/4/03
DUNN03704	55 gal		10/4/03
DUNN03705	55 gal		10/4/03
DUNN03706	55 gal		10/4/03
DUNN03707	55 gal		10/4/03
DUNN03801	55 gal		10/6/03
DUNN03802	55 gal		10/6/03
DUNN03803	55 gal		10/6/03
DUNN039	55 gal		4/10/11
DUNN041	55 gal		4/16/11
DUNN042	55 gal		5/28/11
DUNN043	55 gal		6/21/11
DUNN050	55 gal		6/21/11
DUNN059	55 gal		6/21/11
DUNNAGE	55 gal		11/16/06
DUNNAGE-	55 gal		11/16/06
DUNNAGE-10	55 gal		11/16/06
DUNNAGE-11	55 gal		11/16/06
DUNNAGE-12	55 gal		11/16/06
DUNNAGE-13	55 gal		11/16/06
DUNNAGE-14	55 gal		11/16/06
DUNNAGE-2	55 gal		11/16/06
DUNNAGE-22	55 gal		2/15/07
DUNNAGE-23	55 gal		2/15/07
DUNNAGE-24	55 gal		2/15/07
DUNNAGE-25	55 gal		2/15/07
DUNNAGE-26	55 gal		2/15/07
DUNNAGE-27	55 gal		2/15/07
DUNNAGE-28	55 gal		2/15/07
DUNNAGE-29	55 gal		10/23/08
DUNNAGE-3	55 gal		11/16/06
DUNNAGE-30	55 gal		10/23/08
DUNNAGE-33	85 gal Tall		10/23/08
DUNNAGE-34	85 gal Tall		10/23/08

TWPCDUN199	55 gal		3/20/18
TWPCDUN200	55 gal		3/28/18
TWPCDUN201	55 gal		3/28/18
TWPCDUN202	55 gal		5/24/18
TWPCDUN203	55 gal		5/24/18
TWPCDUN204	55 gal		5/24/18
TWPCDUN205	55 gal		5/24/18
TWPCDUN206	55 gal		5/18/18
TWPCDUN207	55 gal		5/18/18
TWPCDUN208	55 gal		5/18/18
TWPCDUN209	55 gal		5/3/18
TWPCDUN210	55 gal		5/3/18
TWPCDUN211	55 gal		5/18/18
TWPCDUN212	55 gal		5/18/18
TWPCDUN213	55 gal		5/18/18
TWPCDUN214	55 gal		5/18/18
TWPCDUN215	55 gal		5/18/18
TWPCDUN216	55 gal		5/15/18
TWPCDUN217	55 gal		5/15/18
TWPCDUN218	55 gal		5/15/18
TWPCDUN219	55 gal		5/15/18
TWPCDUN220	55 gal		5/15/18
TWPCDUN221	55 gal		5/14/18
TWPCDUN222	55 gal		5/14/18
TWPCDUN223	55 gal		5/14/18
TWPCDUN224	55 gal		5/14/18
TWPCDUN225	55 gal		5/14/18
TWPCDUN226	55 gal		5/10/18
TWPCDUN227	55 gal		5/10/18
TWPCDUN228	55 gal		5/10/18
TWPCDUN229	55 gal		5/10/18
TWPCDUN230	55 gal		5/10/18
TWPCDUN231	55 gal		9/19/18