

SOUTHWEST RESEARCH AND INFORMATION CENTER

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June 10, 2013

Trais Kliphuis
New Mexico Environment Department (NMED)
2095 Rodeo Park Drive, Building 1
Santa Fe, NM 87505

RE: WIPP Class 2 Permit Modification Request – Modify Excluded Waste Prohibition

Dear Trais,

Southwest Research and Information Center (SRIC) provides the following comments on the Class 2 permit modification request that was submitted by the permittees on April 8, 2013, according to their public notice. SRIC has actively participated in and been party to numerous previous Permit proceedings, representing its staff, board members, and contributors that reside along WIPP transportation routes and near the site that would potentially be affected by shipments or disposal operations or by releases. The request would allow more radioactive or hazardous waste than would otherwise be the case, which directly and adversely affects SRIC.

SRIC appreciates that the permittees provided a draft of the proposed request and that representatives of the permittees as well as NMED met with SRIC, other citizen group representatives, and others on March 20, 2013. SRIC believes that such pre-submittal meetings are useful and supports continuing that “standard” practice in the future. SRIC notes the permittees’ concerns about having media and others present at such meetings, but also notes that the permittees invited people from Carlsbad to attend pre-submittal meetings in 2012. SRIC is certainly willing to further discuss how to improve pre-submittal meetings. SRIC also notes that there were some changes made in the modification request after the pre-submittal meeting, although the fundamental concern that the request not be submitted was ignored.

SRIC considers the request to be based solely on politics, not on Hazardous Waste Act (HWA) or Resource Conservation and Recovery Act (RCRA) requirements, nor on the record of Permit Section 2.3.3.8. The request is an affront to more than 20 years of history and promises made by the Department of Energy (DOE) to NMED and New Mexicans regarding WIPP’s mission and limitations. The request also is contrary to the WIPP Land Withdrawal Act (LWA, Public Law 102-579), which NMED can enforce through the Permit, and in particular Section 12 that states:

BAN ON HIGH-LEVEL RADIOACTIVE WASTE AND SPENT NUCLEAR FUEL.

The Secretary [of Energy] shall not transport high-level radioactive waste or spent nuclear fuel to WIPP or emplace or dispose of such waste or fuel at WIPP.

1. NMED must deny the modification request.

Pursuant to 20.NMAC 4.1.900 (incorporating 40 CFR §270.42(b)(7)), NMED may deny the Class 2 modification request for any of three reasons. SRIC believes that denial is required because the request is deficient under each of the three criteria — the request is not complete, the request does not meet the requirements of RCRA and the HWA, and the request does not demonstrate that the changes requested will protect human health and the environment. SRIC notes that on several occasions, including as recently as January 31, 2012 and as far in the past as March 26, 2001, NMED has denied Class 2 modification requests. Thus, NMED has ample precedent, as well as the legal authority, to deny the request. While NMED also has legal authority, and precedent, to approve a Class 2 request with changes, it cannot do so for the present request because of the many deficiencies.

A. The request is not complete. 40 CFR §270.42(b)(7)(i).

(1) The request does not completely and accurately discuss the need.

HWA regulations require that the request state why the modification is needed. 40 CFR §270.42(b)(1)(iii).

On page 7 of the modification request Overview, the permittees state:

In summary, this PMR is needed for the following reasons:

A. Consistency: Modify the excluded waste prohibition to be consistent with the WIPP LWA without the requirement to obtain special NMED regulatory approval that is not based on a RCRA-related (chemical) property of the waste.

B. Efficiency: Modification of the exclusion and associated approval requirements will streamline the process for shipping eligible TRU waste from generator/storage sites to the WIPP facility without incurring unnecessary delays associated with the approval of a Class 3 PMR. The potential benefit to the public from this PMR is that it facilitates a more timely cleanup of sites contaminated with TRU waste and results in risk reduction. In addition, the public is afforded a 60-day comment period by virtue of the Class 2 process to provide written comments regarding the proposal to modify the exclusion.

The request and that summary are clearly incomplete and inaccurate. No where does the request state why the modification is needed at this time since both reasons have been true and unchanged since Permit Section 2.3.3.8 was approved in 2004. The request cites no changes in laws or regulations or technological changes that require the modification, nor instances in which public health and the environment have been negatively affected by the Permit provision. The effective elimination of the Permit provision is needed at this time only because of an action taken by the Department of Energy (DOE), not pursuant to the HWA or RCRA, that was published in the *Federal Register* on March 11, 2013. 78 FR 15358-15359 (Attachment 1). That action was to reverse DOE's previous determination that "no Hanford tank wastes would be shipped to WIPP." 74 FR 67189 (Attachment 2). That 2009 determination was consistent with Permit Section 2.3.3.8. Now that DOE has made a political decision to reverse its determination regarding Hanford tank wastes, it seeks to change the WIPP Permit to conform with that political determination. However, the request includes no discussion of that political action and is incomplete and inaccurate.

In addition, DOE's March 2013 announcement provides no timeframe for any of the Hanford tank waste to be ready to ship to WIPP. In fact, the facilities necessary for retrieval, treatment,

and storage of those tank wastes do not exist, have not been designed, have not been permitted by the state of Washington, nor has Congress funded them. At a minimum, it would be years before there would be any Hanford tank waste that could be “delayed” from coming to WIPP. Thus, the modification is not needed now or in the foreseeable future. But the request is incomplete in that it does not discuss the schedule and status of tank waste removal and characterization for WIPP. Although the DOE announcement was discussed at the presubmittal meeting, it was not included in the request, which is incomplete.

The request also is inaccurate in the stated need for “consistency.” Existing Permit Section 2.3.3.8 is consistent with the WIPP LWA, so there is no reason for a change to establish “consistency” with the LWA. The request does not show that the provision is inconsistent with the LWA, and it is not. Clearly, high-level waste is prohibited at WIPP. The existing provision provides a method by which the permittees must establish that waste that has ever been managed as high-level waste can be brought to WIPP, subject to extensive public comment and public hearing and NMED approval.

The request also is inaccurate in the stated need for “efficiency.” Even though the existing provision has been in effect for more than eight years, suddenly it must be eliminated to avoid “incurring unnecessary delays associated with the approval of a Class 3 PMR.” However, the request cites not a single instance in which there have been any delays caused by Permit Section 2.3.3.8. Indeed, the permittees have never submitted any waste stream for approval under that Section. If the permittees actually have a waste stream from any of the tanks specified in Permit Attachment C they should submit that information in the modification request. They did not. In fact, DOE has stated in its 2013 action that no waste stream from the Hanford tanks has been characterized under the WIPP Permit requirements, and indeed “DOE has not classified any of the waste as mixed TRU waste.” 78 FR 15359. Thus, there is no basis for the permittees to state that there have been or will be any delays in shipping waste to WIPP because of Permit Section 2.3.3.8, so that purported need must be rejected.

Further, there has been no showing that “more timely cleanup” will occur at any site. As will be discussed in section 1.C.(2) below, it is much more likely that tank wastes would delay cleanup of waste at DOE sites, including at Los Alamos National Laboratory (LANL).

Absurdly, the request describes as a desirable “efficiency” the taking away of the public 60-day written comment period and the more extensive comment and public hearing requirements of the existing Class 3 process and replacing it with only the 60-day written comment period on this request. It is an “efficiency” only for the permittees! It is not an “efficiency” for the public, because it takes away the public’s right to the more extensive public participation requirements, including a public hearing with technical testimony and cross-examination of witnesses, in the existing provision. It is outrageous that the permittees attempt to cast their denial of the public’s right to a public hearing as an “efficiency.”

In addition, the permittees ignore the public participation requirements of RCRA. In enacting RCRA, Congress stated:

Public participation in the development, implementation, and enforcement of any regulation, guideline, information, or program under this chapter shall be provided for, encouraged, and assisted by the Administrator and the States. 42 USC §6974(b)(1).

The extensive public participation requirements of RCRA and the HWA are in compliance with the law's preference for and emphasis on public participation. There is no public "benefit" in taking away the Class 3 requirements. To the contrary, taking away those requirements is both contrary to RCRA and the HWA and a disgraceful affront to New Mexicans.

Not discussing those public participation requirements is another incompleteness of the request, which must be denied.

(2) The request ignores the record and basis for the approval of Permit Section 2.3.3.8. Permit Section 2.3.3.8 was approved by NMED on October 29, 2004 ("Final Determination"). The approval was based on the permittees' request dated July 2, 2004, a 60-day comment period "during which NMED received written specific comments from a total of thirteen individuals and organizations. NMED also received approximately 1200 general comments in the form of green postcards expressing opposition to high-level waste at WIPP." Final Determination at 1.

The request does not discuss the record of the 2004 modification process. SRIC requests that record be included in full in the present request. Ignoring the substantial record, including the rationale for the permittees' 2004 request and the NMED basis for the approval of Permit Section 2.3.3.8 makes the request grossly incomplete, so the request must be denied by NMED.

(a) The request does not include the permittees own stated need for the provision in 2004. The 2004 request Overview on page 1 stated:

This PMR would establish a procedure for approval of the disposal of transuranic (TRU) mixed waste from tanks that have ever been managed as high-level waste by adding language to Section II.C.3, Section B-1c, and Table B6-1 of the WIPP HWFP. The proposed conditions would prohibit WIPP from accepting TRU mixed waste from tanks that has ever been managed as high-level waste unless it is approved for WIPP disposal through a Class 3 permit modification.

The permittees' fact sheet stated:

The proposed procedure will prohibit WIPP from accepting and disposing of this tank waste unless it has been approved by NMED though [sic] a Class 3 permit modification.

The permittees' publication, *TRU Team Works* – July 22, 2004 (p. 2) stated:

Wille Most, WRES principal scientist, clarifies the intent of the request: "This modification would prohibit TRU mixed waste from tanks that has ever been managed as high-level waste unless it is approved for disposal through a Class 3 permit modification. Any subsequent permit modification seeking approval for disposal of such waste at WIPP would provide specific information on the waste and its origin and would involve stakeholder participation through the Class 3 process."

The permittees' comment of September 7, 2004 (pages 2-3) stated:

Instead, the purpose of the PMR is to establish a procedure whereby TRU mixed waste from tanks that has ever been managed as high-level waste may be considered for disposal at WIPP. The PMR accomplishes this purpose by (1) prohibiting TRU mixed waste which has ever been managed as HLW from disposal at WIPP under the present provisions of the WIPP HWFP and (2) providing that TRU mixed waste which has ever been managed as HLW can only be disposed of at WIPP in the future if a Class 3 permit modification, which specifically authorizes the disposal of such waste, is requested and approved by NMED.

The PMR proposes to add an additional item to the list of prohibited wastes in Module II.C.3. If any of the waste discussed in these comments falls within the category of TRU mixed waste from tanks that has ever been managed as HLW, it would now be specifically excluded from disposal at WIPP unless NMED approved a Class 3 PMR proposed by the Permittees. The waste will be subject to applicable permit conditions, including the specific prohibitions identified in Module II.C.3.

Generator sites would be required to comply with this prohibition when they assemble their waste characterization information. If waste at a generator site is identified as TRU mixed waste from tanks that has ever been managed as HLW, the Permittees would be required to obtain a Class 3 permit modification from NMED before the waste can be accepted for disposal at WIPP. The Class 3 permit modification request required by the proposed procedure would be subject to the regulatory and administrative requirements applicable to Class 3 modifications, including public comment and a potential hearing.

The proposed procedure would apply to TRU mixed waste from tanks that has ever been managed as HLW. The PMR does not change the prohibition on the disposal of HLW and spent nuclear fuel at WIPP found in the Land Withdrawal Act (LWA).[footnote omitted] Nor does it change the definition of HLW found in the Nuclear Waste Policy Act, which was incorporated in the LWA. Instead, it expands that prohibition to any waste from tanks that has ever been managed as HLW even if it is in fact TRU mixed waste.

The Permittees are now proposing exactly the opposite of what was stated in the 2004 request.

- The current request would eliminate the “procedure for approval of the disposal of transuranic (TRU) mixed waste from tanks that have ever been managed as high-level waste.”
- The current request would allow “waste from tanks that has ever been managed as high-level waste without any permit modification and without any public hearing.”
- The current request would disregard NMED’s authority to prohibit any waste that has ever been managed as high-level waste.

The request does not acknowledge, let alone explain, the total reversal of the permittees’ position. The request does not explain why the 2004 request, which was certified to be true, accurate, and complete, was apparently not. The current request is incomplete, at best. The request must be denied by NMED.

Further, if the information in the 2004 request was incomplete or inaccurate, the permittees are required by Permit Section 1.7.15 to report such a situation to NMED and notify the email list. SRIC has received no such notification. SRIC requests that NMED investigate this apparent violation of the Permit.

(b) The request does not discuss NMED's basis for approving Section 2.3.3.8 and, instead, misrepresents the basis of the provision.

NMED explained why it approved the modification in the General Response to Comments. NMED stated:

NMED believes it is important for the public to recognize that this permit modification does not allow any of this waste (TRU waste managed as high-level, waste from specific tanks) to come to WIPP. It only clarifies the intent of the WIPP Land Withdrawal Act in the permit by prohibiting such waste, and defers any decision regarding DOE's desire to "rename" or "reclassify" such waste as something other than HLW to a separate permit modification action. That is why Table II.C.3.i has been left blank at this time – it can only be changed to include exceptions to the excluded wastes by a separate permit modification. By including language stating that specific approval for such waste would be "through a Class 3 permit modification", NMED assures the public that any consideration of such a request by DOE would include multiple opportunities for public comment and involvement, including a public hearing. The burden of proof would be upon the WIPP Permittees (i.e., DOE and its contractor Washington TRU Solutions) to supply compelling evidence that such waste was never HLW, subject to public scrutiny and examination at a hearing, before NMED could modify the permit to allow its acceptance and disposal at WIPP. at 2.

NMED also stated in its Response to Comments on Permit Section 2.3.3.8:

NMED agrees that the term "managed" would be troublesome if it were the only criteria upon which these wastes would be evaluated. As submitted, the PMR language appears to allow waste that has previously been classified, recognized, and/or documented as HLW to be eligible for disposal at WIPP if only an adequate demonstration of waste management is made; that is, HLW itself may not be prohibited, just waste that was "managed" as if it were HLW. NMED agrees with public comment that the Permittees must comply with the WIPP Land Withdrawal Act (**LWA**) which prohibits HLW from WIPP. Section I.D.5 of Module I presents the definition of TRU waste, which states that "TRU Waste means waste containing more than 100 nanocuries of alpha-emitting transuranic isotopes per gram of waste, with half-lives greater than 20 years, except for (A) high-level radioactive waste...". It is NMED's position that this definition means that TRU waste, as it has been defined, unchallenged in the WIPP permit for over five years, cannot contain high-level radioactive waste as defined in the Nuclear Waste Policy Act of 1982 as amended (Public Law 947-425). As such, NMED will require that any Class 3 PMR seeking to allow tank wastes specified in Table B-9 at WIPP shall include all necessary information pertinent to the PMR, including but not limited to both adequate definition of waste management, as well as information demonstrating that HLW is not present in the subject wastes. To reiterate, it is NMED's intent that the Permittees would have to prove

that any waste subject to consideration for inclusion on Table II.C.3.i is not now and never has been HLW.
General Response to Comments 4.2.

The cited TRU waste definition remains as Permit Section 1.5.6, though the request never mentions that provision. Nor does the request address NMED's determination that TRU waste coming to WIPP "cannot contain high-level radioactive waste" as defined in the same federal laws that the request also cites. Nor does the request address or refute that the Permittees must prove that waste "is not now and never has been HLW." The request is incomplete and must be denied.

Instead of discussing the actual basis for NMED's approval of Section 2.3.3.8, the request invents two non-existent issues – "nuclear safety concerns" and "chemical incompatibility." First, the Overview of the request on page 3 states:

Therefore, to the extent that the 2004 Class 2 permit modification requires the NMED to make a determination of nuclear safety concerns, the matter has been reserved to federal determination.

The entire discussion is a strawman that does not reflect NMED's actual determination basis, which is not discussed and did not mention "nuclear safety concerns." In its response to comments, NMED stated:

NMED is fully aware of its authority with respect to regulation of the hazardous portion of the TRU mixed waste stored and disposed of at the WIPP facility, and will continue to exercise that authority as an EPA-authorized state implementing a hazardous waste program. However, NMED is acting on a PMR submitted by the Permittees, who are responsible for proposing the exclusion of waste from tanks ever managed as high-level waste (**HLW**). Also, NMED made a clear case at the original public hearing in 1999 that it has the authority to impose requirements and restrictions on all wastes (both TRU and TRU mixed waste) that will be managed or disposed of in RCRA regulated units such as the Underground Hazardous Waste Disposal Units. This is done in order to ensure compliance with the New Mexico Hazardous Waste Act and RCRA and to protect human health and the environment.

General Response to Comments 2.1.

The request does not mention or address that NMED response, nor the record of the "original public hearing in 1999," which clearly refutes the false accusation that NMED is making a determination of "nuclear safety concerns." The request is grossly inaccurate and incomplete and must be denied by NMED.

Second, the request includes an extensive, but inadequate, discussion of chemical compatibility and Appendix D on Chemical Compatibility of waste streams. NMED's Final Determination and Response to Comments did not include chemical compatibility as providing any basis for the approval of Section 2.3.3.8. Thus, chemical compatibility was not relevant to approving the existing condition, nor to providing a basis to change the provision. Nonetheless, that Appendix D is incomplete and inaccurate and cannot be relied upon by the permittees or NMED.

Appendix D states that the waste stream data source was the 2011 Annual Transuranic Waste Inventory Report (ATWIR), Appendixes A and B. at D-5 and D-6. However, that Inventory is not the current 2012 Inventory, so the request does not include the most current data. The 2011 Inventory does not include all of the Hanford tanks, nor even all of the 20 tanks that DOE has stated it intends to ship to WIPP. Thus, the analysis in Appendix D is incomplete. The 2011 Inventory includes three waste streams from the Hanford tanks – RP-TFC001, RP-W754, and RP-W755. at 408-410 of 456. The 2011 Inventory deleted and did not include four other Hanford tank waste streams – RP-TFC002, RP-TFC003, RP-W013, and RP-W-016. at 450 of 456. Those four waste streams were in the 2010 Inventory and included 3040 cubic meters of stored RH tank waste (RP-TFC002), 370 cubic meters of stored RH tank waste (RP-TFC003), 270 cubic meters of stored RH tank waste (RP-W013), and 2030 cubic meters of stored RH tank waste (RP-W016). Those four waste streams total 5,710 cubic meters of stored RH tank waste that was not included in the 2011 Inventory as the three waste streams included in both the 2010 and 2011 Inventory are the same. This deletion of the four waste streams is not described in Appendix D, which is incomplete.

Further, even if the permittees were to argue (Appendix D does not do so), that the deletion of the waste streams does not change the chemicals included in the analysis, there is no basis provided, or publicly available, to conclude that those chemicals analyzed include all the chemicals in the Hanford tank wastes. On the contrary, DOE itself admits that it has not sampled all of the Hanford tanks. *Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington*. DOE/EIS-0391, November 2012 at D-2. The DOE EIS further states: “Due to these limitations on collected samples, a complete tank inventory cannot be determined based on samples only.” *Ibid.* Moreover, the Hanford Best-Basis Inventory (BBI) “does not provide inventory estimates for analytes such as chromium, pertechnetate, polychlorinated biphenyls (PCBs), and volatile and semivolatile organic compounds that may be of concern for retrieval, disposal, and closure purposes.” *Id.* at D-3. Thus, the permittees cannot accurately maintain that Appendix D includes all chemicals, when DOE’s own current Hanford tank EIS admits that it does not.

In addition, DOE does not even know what chemicals will be used to remove the waste from the Hanford tanks, and such chemicals would create uncertainties regarding chemical compatibility. *Id.* at E-27. Those removal processes could introduce additional chemicals into the waste that are not included in the Appendix D analysis. Neither the request, nor Appendix D, discuss the chemicals in the tank waste removal process, so the request is incomplete.

Moreover, the independent Defense Nuclear Facilities Safety Board, which has made numerous recommendations about the status and safety of the Hanford tank for many years, continues to find not only that current waste characterization is not adequate and accurate, but that even “the development of accurate waste characterization methods faces formidable technical challenges.” The DNFSB also has great concerns about leaking Hanford tanks, the potential for a catastrophic explosion, and the continuing safety culture problems at Hanford. See Attachment 3.

Consequently, the request is grossly incomplete regarding chemical sampling of the Hanford tanks, the inadequate waste characterization at Hanford, and the chemical incompatibility. The incompleteness and inadequacy requires denial of the request.

The request is grossly incomplete in not discussing NMED's basis for approving Section 2.3.3.8. The request is incomplete and inaccurate it making up issues that were not the basis for NMED approving the provision. Clearly, the request is incomplete and inaccurate and must be denied.

(c) The request questions NMED's authority to approve Section 2.3.3.8, which authority the agency clearly has and to which the permittees have repeatedly agreed and acknowledged.

The Overview of the request on page 5 states:

The Class 3 process associated with the waste exclusion in the Permit puts the NMED in the position of having to make a decision whether or not to modify the Permit regarding the adequacy of a DOE defense nuclear classification and not the hazardous waste characteristics.

Insofar as the request questions NMED's authority to include the excluded waste provision, the request is incomplete because it does not discuss the permittees long-standing agreement that NMED does have the authority to include the provision in the Permit and enforce that, and other, conditions related to all wastes at WIPP.

For example, as NMED stated in the 2004 General Response to Comments 2.1:

NMED made a clear case at the original public hearing in 1999 that it has the authority to impose requirements and restrictions on all wastes (both TRU and TRU mixed waste) that will be managed or disposed of in RCRA regulated units such as the Underground Hazardous Waste Disposal Units. This is done in order to ensure compliance with the New Mexico Hazardous Waste Act and RCRA and to protect human health and the environment.

Not only did NMED made "a clear case" to establish its authority over all wastes during the original 1999 public hearing on the Permit, but the authority also was determined to be necessary by the independent Hearing Officer who presided over the hearing. In extensive findings of fact and conclusions of law, the Hearing Officer determined that NMED's authority was necessary to protect public health and the environment and that the Permit provisions:

[did] not impermissibly regulate TRU non-mixed waste in contravention of 42 U.S.C. §6903(27), NMSA 1978 74-4-3.M (Repl. Pamph. 1993), or New Mexico v. Watkins, 969 F.2d 1122, 1128 (D.C. Cir. 1992).
Hearing Officer Report at Conclusions of Law 54.

The permittees also accepted and agreed to that NMED authority in 1999. In 2004, the permittees again agreed to the authority when they proposed and accepted NMED's authority to impose Permit Section 2.3.3.8. In 2009, the permittees again agreed to NMED's authority when they included the excluded waste provision in their permit renewal application. In 2010, the permittees again agreed to NMED's authority when they agreed to that renewed Permit, including Section 2.3.3.8. The request is incomplete because it does not discuss that history, nor that the permittees have repeatedly agreed and accepted NMED's authority to exclude tank waste or waste that has ever been managed as high-level waste.

The permittees position regarding NMED's authority also appears to be contradictory. On the one hand, the permittees question the NMED authority to exclude waste that has ever been managed as HLW. On the other hand, the permittees implicitly agree that NMED has authority to enforce the exclusion of HLW. The permittees' proposed modification would create a new Permit condition:

High-level radioactive waste, as defined in the WIPP Land Withdrawal Act, is not acceptable at the WIPP facility.

The request does not discuss, nor explain, that apparent contradiction and is incomplete. The request also does not describe what measures, including requiring a Class 3 modification for each waste stream of tank waste or waste that has ever been managed as high-level waste, that NMED could impose to exercise its authority to exclude HLW under the proposed Section 2.3.3.8. Thus, the request is incomplete.

(d) The request misrepresents the effect of the proposed changes.

The Overview of the request on page 6 states:

Therefore, the requirement to submit and approve a Class 3 PMR for waste that has ever been managed as high-level waste and waste from waste tanks subject to exclusion is not needed to ensure that compliant and acceptable waste is received and disposed of at the WIPP facility.

If the Permit were modified as stated in the request, the Permittees believe it would eliminate the requirement to prove that waste "is not now and never has been HLW." The request, if approved, would fundamentally change the Permit TSDf-WAC and the Waste Analysis Plan, but which the request does not discuss or justify. The Permit provisions have been in place, unchallenged by the permittees, for years, and are totally consistent with NMED's authority under the HWA and RCRA. Those laws are unchanged.

Once again, the request does not address the record of Permit Section 2.3.3.8, nor NMED's basis for approving the provision. NMED did determine that the provision and the Class 3 requirement are necessary. The permittees have agreed since 2004 that the provision and the Class 3 requirements are needed and included the provision in their Permit Renewal Application. Thus, the record and nine years of actual WIPP activity indicate that the Class 3 requirement is needed to ensure that waste that has ever been managed as high-level waste and waste from waste tanks specified in Permit Attachment C Table C-4 is excluded from WIPP.

The request is not complete and accurate in discussing the effect of the proposed changes, and it must be denied.

(e) The request is incomplete and ignores other evidence that the Hanford tank waste is high-level waste and is thereby excluded by the LWA and the Permit.

On March 16, 2004, the Environmental Evaluation Group (EEG) convened a Workshop on the DOE Plans to dispose of Hanford tank waste at WIPP. Presentations were made by the WIPP Site Manager, and representatives of the Hanford Office of River Protection, U.S. Environmental Protection Agency Region 10, Washington State Departments of Ecology and Health, and the Natural Resources Defense Council. Other officials, EEG, and members of the public

participated. The Workshop discussed the same 20 tanks from which DOE now proposes to send to WIPP. None of the presentations attempted to demonstrate that any of the tanks had never received HLW. See Attachment 4. EEG and the attendees at the Workshop were convinced that the waste in the tanks was high-level waste and thus not allowed for disposal at WIPP. See Attachment 5. The request is incomplete in not discussing the Workshop and other available information about the 20 Hanford tanks.

In summary, the request is repeatedly and grossly incomplete and inaccurate, and NMED must deny the request.

B. The request does not meet the requirements of the HWA and RCRA. 40 CFR §270.42(b)(7)(ii).

Because the request is incomplete and inaccurate, as detailed in Section 1.A, the request does not meet the requirements of the HWA and RCRA and must be denied.

Although the Permittees include in Appendix C their position paper as to why the request is a Class 2, not a Class 3, modification, they again do not address the record regarding Permit Section 2.3.3.8. They do not discuss on what basis they do not submit a class 3 modification ***when the agency has already determined that the request is a class 3 request.***

NMED agrees with this commenter and does not believe that the phrase "unless specifically approved through a Class 3 permit modification" is likely duplicative with what would actually take place if the prohibition were presented without this clause. However, NMED elected to retain this provision because it ensures that any attempt to modify this permit condition would be subject to the extensive public involvement requirements of the Class 3 process, which includes an initial public comment period on the PMR as submitted, a second public comment period on any draft permit in support of the modification issued by NMED, and a public hearing with opportunity for technical testimony and cross examination of witnesses by the public. Inclusion of this provision does not suggest that NMED will actually approve a PMR, if submitted. See response to comment 7.4. General Response to Comments 7.9.

NMED clearly states:

...any attempt to modify this permit condition would be subject to the extensive public involvement requirements of the Class 3 process, which includes an initial public comment period on the PMR as submitted, a second public comment period on any draft permit in support of the modification issued by NMED, and a public hearing with opportunity for technical testimony and cross examination of witnesses by the public. Emphasis added.

The request, including Appendix C, does not address that NMED determination. SRIC also considers that determination to be binding on NMED, so that the agency must deny the request and require any other future request to modify the provision be a Class 3 modification.

NMED may not change that determination without offering a reasoned explanation for the change. *Motor Vehicle Manufacturers Association v. State Farm Mutual Automobile Insurance Co.*, 463 U.S. 29, 57 (1983); *Citizens Awareness Network v. U.S. Nuclear Regulatory Commission*, 59 F.3d 284, 291 (1st Cir. 1995); *Menkes v. Department of Homeland Security*, 662

F.Supp.2d 62, 68 (D.D.C. 2009), *aff'd*, 637 F.3d 319 (D.C. Cir. 2011). *See also: Smiley v. Citibank (S.D.), N.A.*, 517 U.S. 735, 742 (1996).

C. The request does not demonstrate that modifying the exclusion will protect public health and the environment. 40 CFR §270.42(b)(7)(iii); §74-4-4 NMSA.

The request seeks to eliminate the Permit Section 2.3.3.8 requirement that the permittees must demonstrate that waste has never been managed as high-level waste. Eliminating that requirement and allowing waste that has been managed as high-level waste to come to WIPP would significantly increase risks to public health and the environment.

(1) All of the 243 tanks listed in Attachment C, Table C-4, have been managed as high-level waste (HLW), and it is undisputed that the waste in those tanks is extremely dangerous.

Thus, allowing any waste from those tanks would significantly increase risks to public health and the environment.

Regarding whether all of those tanks have been managed as HLW, numerous DOE documents so state. For example, *Linking Legacies: Connecting the Cold War Nuclear Weapons Production Processes To Their Environmental Consequences*, DOE/EM-0319, January 1997, referring to Hanford HLW, states:

At Hanford, high-level waste alkaline liquid, salt cake, and sludge are stored in 149 single-shell underground tanks and 28 double-shell underground tanks. Some transuranic waste and low-level waste is also stored in the tanks but all tank waste is classified at Hanford and managed as high-level waste. at 35, emphasis added, see also at 33.

That same document describes the HLW tanks at SRS and INEEL. at 37-38.

DOE's *Integrated Data Base* Reports consistently state that the waste in the Hanford tanks is managed as HLW. For example,

Hanford single-shell tank wastes (i.e., liquid, sludge, and salt cake) and double-shell tank wastes (i.e., slurry) consist of HLW, TRU wastes, and several LLWs. However, in storage practice, all tanks are managed as if they contain HLW. Thus, their contents are included in the HLW inventory.

Integrated Data Base Report – 1992: U.S. Spent Nuclear Fuel and Radioactive Waste Inventories, Projections, and Characteristics, DOE/RW-0006, Rev. 8, October 1992, at 55.

That same document includes two pages of diagrams showing how HLW at Hanford, INEL, and SRS will be stored treated and disposed. Each of the diagrams show the wastes being disposed “in HLW geologic repository.” at 45-46. This document was issued about the same time that the LWA was passed.

Four years later, the *Integrated Data Base* stated:

At Hanford, waste in single- and double-shell tanks consist of HLW, TRUW, and several LLWs. However, in the interim storage mode, the tanks are managed as if they contain only HLW. Thus, their contents are included in the HLW inventory. *Integrated Data Base Report – 1995: U.S. Spent Nuclear Fuel and Radioactive*

Waste Inventories, Projections, and Characteristics, DOE/RW-0006, Rev. 12, December 1996, at 33.

In *A Report to Congress on Long-Term Stewardship*, DOE/EM-0563, January 2001, DOE stated: The chemical processing of irradiated fuels generated the largest volume of Hanford's waste. The process wastewaters were divided into high-level radioactive alkaline slurries containing heavy metals, organic and inorganic salts; uranium, plutonium, and mixed fission products stored in underground waste tanks; and low-level waste streams, such as cooling water, condensates, and other similar waste discharged to the ground. Most of the high-level waste remains in underground storage tanks and will be removed from the tanks and treated in the proposed Waste Processing and Immobilization Facility. Volume II, at Washington 11. [Note that there is no mention of TRU waste.]

Regarding SRS, the *Report to Congress* states:

About 132 million liters (35 million gallons) of high-level waste are stored in waste tanks at SRS. DOE is working to remove the high-level waste from 49 remaining tanks and stabilize and close the tanks. Two have already been closed at South Carolina 9. [Note that there is no mention of TRU waste.]

In its *Transuranic Waste Baseline Inventory Report (Revision 2)*, (TWBIR) DOE/CAO-95-1121, December 1995, DOE stated:

Another category of possible future TRU waste is from Hanford site. The tank wastes at Hanford can be classified as high-level wastes (HLW), transuranic (TRU) wastes, or low-level (LLW). For purposes of receipt, storage and management, all tank wastes are managed as HLW. at 5-8.

In including Section 12 in the LWA, Congress was aware that tank wastes were HLW and that such wastes were being excluded from WIPP. Both House and Senate land withdrawal bills (HR 2637 and S. 1671) contained a provision banning high-level radioactive waste at WIPP. The bans are discussed in the four committee reports issued regarding those bills. There were three House committee reports (H. Rept. 102-241 Part 1 (Interior and Insular Affairs), Part 2 (Armed Services), and Part 3 (Energy and Commerce) and Sen. Rept. 102-196 (Energy and Natural Resources).

The Senate Report provides the most detail about the HLW ban. It states:

[subsection] prohibits receipt of any high-level radioactive waste at WIPP. This section would revoke the authority of the Secretary to conduct experiments with high-level radioactive waste under Section 213 of Public Law 96-164. Section 213 of Public Law 96-164, and the accompanying Conference Report (Report 96-702), set forth the mission of WIPP to include temporary storage and experiments on defense high-level radioactive waste. DOE's program plans for WIPP initially included experiments on a limited quantity of defense high-level radioactive waste. DOE has since determined, however, that it will not conduct high-level radioactive waste experiments at WIPP.

S. Rept. 102-196 at 28. See also *Id.* at 47.

Further, the Senate Report background discussion of the legislation provides some history and description of transuranic waste. The discussion states: “Prior to 1970, transuranic waste was placed in shallow land burial as low-level radioactive waste.” at 16. Thus, since the waste was placed in the tanks, not shallow land burial, and much of the tank waste was created before 1970, the committee did not consider those wastes to be transuranic waste. Indeed, since the passage of the Nuclear Waste Policy Act (Public Law 97-425) in 1982, Congress and the public have understood that the HLW in the tanks would be disposed of in a geologic repository or repositories, and not at WIPP.

The House Energy and Commerce Committee report states: “Prior to 1970, transuranic waste was routinely buried in shallow trenches near defense production facilities.” H. Rept. 102-241, Part 3 at 13. Again, waste that was placed in tanks was not considered to be transuranic. The House Armed Services Committee used similar language to the Senate report:

In the early years of the nuclear weapons program, transuranic wastes were placed in shallow land burial as low-level waste, and approximately 192,000 cubic meters was disposed of in this fashion.

H. Rept. 102-241, Part 2, at 13-14.

Once again, the committees understood that wastes in tanks were not considered to be transuranic. None of the committees understood that HLW tank wastes or spent fuel sludges could come to WIPP, nor did DOE propose that such wastes would be disposed at WIPP during the five years of debate on the LWA.

In debating the LWA, Congress also was aware of DOE’s own historic statements about the WIPP inventory of what wastes could come to WIPP. The original *Final Environmental Impact Statement (FEIS) Waste Isolation Pilot Plant* DOE/EIS-0026, October 1980, did not include any of the Hanford, SRS, or INEEL tank waste or spent nuclear fuel sludges. The inventory was the readily retrievable waste expected to be stored in Idaho through 1990....In addition, the WIPP would be designed to accommodate all defense TRU waste generated between 1990 and 2003. at 2-18.

The 1981 DOE Record of Decision on the FEIS stated:

The WIPP facility will dispose of defense transuranic (TRU) waste stored retrievably at the Idaho National Engineering Laboratory (INEL). By approximately 1990 all existing waste stored at INEL will have been removed to WIPP, and the WIPP facility would be in a position to receive and dispose of TRU waste from other defense waste generating facilities.

46 FR 9162 (January 28, 1981).

That Record of Decision also called for:

Conducting experiments on defense wastes, including small volumes of defense high-level waste. The high-level waste used for experiments will be retrieved and removed from the site prior to decommissioning of the WIPP facility. Id.

The FEIS analysis of HLW for experiments was based on “a reference experimental waste” from SRS. at 5-8.

The 1990 *Final Supplement Environmental Impact Statement Waste Isolation Pilot Plant*, DOE/EIS-0026-FS, January 1990, eliminated the high-level waste experiments. at 3-4. The inventory includes no waste from any HLW tanks or spent nuclear fuel sludges. at 3-2 to 3-6.

As already noted, in the LWA, Congress clearly withdrew any authority for HLW experiments at WIPP and prohibited HLW and spent nuclear fuel storage and disposal.

The dangers of those tank wastes have been documented and acknowledged many times. For example, the Nuclear Waste Policy Act of 1982 (NWPA) definition states that HLW is “highly radioactive.” In recognition of those significant dangers to public health and the environment, that law established many mechanisms regarding its safety, storage, and disposal. Thirty years after enactment of the NWPA, DOE continues to acknowledge both the great dangers and costs of high-level waste. The DOE *Fiscal Year 2014 Budget Request to Congress* states that the lifecycle costs of the Hanford Office of River Protection that deals with the tank wastes is from \$67,586,000,000 to \$75,259,000,000 (Vol. 5 at EM-23) and that tank waste remediation will take until from 2042 to 2050. *Id.* at EM-47.

That high-level waste is highly radioactive and includes large and unmeasured amounts of chemical contaminants and poses major risks to public health and the environment in Washington and Oregon. Sending any of the waste to WIPP would increase risks to public health and the environment along transportation routes and at the WIPP site. The request does not discuss those issues. Permit Section 2.3.3.8 protects the public from those wastes and provide numerous opportunities to public comment and public hearing that would be eliminated if the request were approved.

The request must be denied because it does not demonstrate that public health and the environment would be protected.

(2) Approval of the request would likely displace other waste, including from Los Alamos National Laboratory (LANL), thereby negatively affecting public health and the environment.

NMED and Governor Susana Martinez have determined, and DOE has agreed, in the Los Alamos National Laboratory Framework Agreement: Realignment of Environmental Priorities that the New Mexico public health and environment priority is for above ground LANL waste to be removed and the TRU waste disposed at WIPP. The Framework Agreement also requires a schedule for the disposition of below-ground wastes at LANL Area G. Putting DOE and WIPP resources into characterizing, storing, and transporting Hanford tank waste to WIPP could prevent or delay meeting the schedule for LANL waste being disposed at WIPP. NMED has been continually concerned that LANL does not have the budget to accomplish the Framework Agreement and required ground water monitoring. Putting additional DOE and financial resources into Hanford waste would very likely reduce resources for LANL waste. The resulting delays would not protect public health and the environment at LANL, along transportation routes, or at WIPP.

The Hanford tank waste, as well as tank wastes from the Savannah River Site and Idaho National Laboratory that also have been managed as HLW, would displace transuranic waste that is

planned for disposal at WIPP. SRIC has pointed out for several years that WIPP does not have actual capacity for the remote-handled (RH) waste in the WIPP Inventory. The Attachment 6 chart shows that the actual underground capacity at WIPP is approximately half of the RH legal limit of 7,079 cubic meters. That RH capacity shortfall also was found by the DOE Inspector General (IG) in its May 28, 2013 Report. The IG Report also found that DOE's proposed plans to address the RH capacity shortfall are inadequate. Attachment 7.

As discussed on page 8 above, the Hanford tank waste includes 5,710 cubic meters of stored RH waste. There is not actual capacity at WIPP for existing RH waste in the Inventory, let alone the additional RH tank waste. Thus, allowing that RH waste would result in expanding WIPP's RH capacity, which would further endanger public health and the environment, as well as violating the LWA and the Consultation and Cooperation Agreement that limits RH to 7,079 cubic meters and no more than 5.1 million curies.

The request does not discuss the health and safety issues related to high-level waste, nor the priority for LANL wastes being removed to WIPP to protect public health and the environment. The request does not discuss how tank wastes could displace CH and RH waste because of the actual capacity limits of the existing permitted capacity of WIPP.

2. The request is not properly a class 2 modification.

As noted in Section 1.B. (page 11), NMED has previously determined that this request would be a Class 3 modification. Even without NMED's previous determination, there are other reasons that Class 3 procedures and a public hearing are required.

Pursuant to 20.NMAC 4.1.900 (incorporating 40 CFR §270.42(b)(6)(i)(C)), NMED may determine that any modification request must follow the procedures for a Class 3 modification because there is substantial public concern about the proposed modification or the complex nature requires the more extensive procedures of Class 3. Both requirements are met regarding excluded wastes. There was very substantial public concern when Section 2.3.3.8 was approved in 2004. There continues to be substantial public concern about excluded waste (high-level waste) as demonstrated by public and organizational comments, the e-mail comments, and the many hundreds of orange "No High-Level Waste at WIPP" postcards that have been submitted about the request that ask NMED to deny the modification. Thus, substantial public concern is demonstrated that requires using Class 3 procedures for the request, if it not denied.

The complex nature of the issues involved with excluded waste is demonstrated by several things, including the fact that the request discussed chemical compatibility, which is technically complicated. That complexity is demonstrated by the permittees lengthy discussion in Appendix D, even though that discussion is incomplete, as discussed on pages 7-8. The complexity of wastes managed as high-level waste, which is the subject of the exclusion, has been demonstrated repeatedly. That after managing HLW at Hanford for almost 70 years, DOE still cannot prevent tanks from leaking, still cannot demonstrate that an explosive deflagration could not occur, and still has not created an adequate safety culture demonstrates the complexity – and dangers – of the tank wastes. Thus, the complex nature of the excluded HLW requires using Class 3 procedures, if the request is not denied.

The request also does not demonstrate that Class 3 requirements would not be necessary pursuant to 20.NMAC 4.1.900 (incorporating 40 CFR §270.42, Appendix I, Item F.3.a. That item provides for Class 3 procedures for “Storage of different wastes in containers...that require additional or different management practices from those authorized in the permit.” Because the waste characterization, packaging, and storage requirements for the Hanford tank wastes have not been established, it is possible that new containers and/or different management practices will be required.

The *Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington*. DOE/EIS-0391, November 2012 at E-121 states that tank waste are presumed to be packed in 55-gallon drums. While RH waste in 55-gallon drums can be placed into an RH canister, the very high radioactivity of the Hanford tank waste could preclude such a configuration. That high radioactivity could certainly require different management practices. The permittees have not demonstrated that Class 3 requirements are not required under Appendix I, Item F.3.a.

3. SRIC requests a public hearing, if the request is not denied.

If NMED does not deny the request, SRIC requests a public hearing so that it can present technical testimony regarding the request on behalf of its staff, board members, and contributors and make argument and cross-examine technical witnesses of the permittees and NMED. In such a public hearing other members of the public can participate.

Thank you very much for your careful consideration of, and your response to, these and all other comments.

Sincerely,



Don Hancock

cc: John Kieling

ATTACHMENTS

1. Department of Energy. DOE’s Preferred Alternative for Certain Tanks Evaluated in the Final Tank Waste Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington. *78 Federal Register* 15358-15359, March 11, 2013.
2. Department of Energy. Notice of Modifications to the Preferred Alternatives for Tank Waste Treatment and Disposal of Off Site Waste in the Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford, Site, Richland, WA. *74 Federal Register* 67189-67190, December 28, 2009.

3. Defense Nuclear Facilities Safety Board Letter to the Honorable Ronald L. Wyden, April 1, 2013.
4. Anastas, George and James K. Channell. Report on the March 16, 2004 Environmental Evaluation Group (EEG) Sponsored Workshop on the U.S. Department of Energy (DOE) Plans to dispose of Hanford High-Level Radioactive Waste at the Waste Isolation Pilot Plant. June 2013.
5. Anastas, George. Briefing Paper: 2004 Proposal by the U.S. Department of Energy (DOE) to Dispose of Hanford High Level Tank Waste at the Waste Isolation Pilot Plant (WIPP) Located Near Carlsbad, New Mexico. April 29, 2013.
6. Southwest Research and Information Center. WIPP Permitted vs. Actual Capacity Chart.
7. U.S. Department of Energy Office of Inspector General. *Audit Report: The Office of Environmental Management's Disposition of Transuranic Waste*. OAS-L-13-09. May 2013.

Department's information collection requirements and provide the requested data in the desired format. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: State of Preschool Survey 2013–2015.

OMB Control Number: 1850–NEW.

Type of Review: New information collection.

Respondents/Affected Public: State, Local or Tribal Governments.

Total Estimated Number of Annual Responses: 53.

Total Estimated Number of Annual Burden Hours: 636.

Abstract: The National Center for Education Statistics (NCES), within the Institute of Education Sciences (IES) of the U.S. Department of Education (ED), is seeking approval to conduct in 2013, 2014, and 2015 the annual, web-based State of Preschool survey, which centralizes data about publicly provided early childhood education opportunities. Data are collected from state agencies responsible for providing early childhood education and made available for secondary analyses. Data collected as part of the survey focus on enrollment counts in state-funded early childhood education programs, funding provided by the states for these programs, and program monitoring and licensing policies. The collected data are then reported, both separately and in combination with extant data available from federal agencies supporting early childhood education programs such as Head Start and the U.S. Census Bureau. Data from the U.S. Census Bureau form the basis for some of the rates developed for the State of Preschool reports. The data and annual report resulting from the State of Preschool data collection provide a key information resource for research and for federal and state policy on publicly funded early childhood education.

Dated: March 5, 2013.

Stephanie Valentine,

Acting Director, Information Collection Clearance Division, Privacy, Information and Records Management Services, Office of Management.

[FR Doc. 2013–05541 Filed 3–8–13; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF ENERGY

DOE's Preferred Alternative for Certain Tanks Evaluated in the Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington

AGENCY: U.S. Department of Energy (DOE).

ACTION: Notice of DOE's preferred alternative.

SUMMARY: The U.S. Department of Energy (DOE) is announcing its preferred alternative for wastes contained in underground radioactive waste storage tanks evaluated in the *Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington* (Final TC & WM EIS, DOE/EIS–0391, December 2012). With regard to those wastes that, in the future, may be properly and legally classified as mixed transuranic waste (mixed TRU waste) ¹ DOE's preferred alternative is to retrieve, treat, package, and characterize and certify the wastes for disposal at the Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico, a geologic repository for the disposal of mixed TRU waste generated by atomic energy defense activities. This Notice supplements DOE's expression of its preferred alternatives identified in the Final TC & WM EIS in Section S.7 of the Summary, and in Chapter 2, Section 2.12, of Volume 1. (Also see **SUPPLEMENTARY INFORMATION.**)

ADDRESSES: Copies of the Final TC & WM EIS (paper or electronic) may be obtained by contacting: Ms. Mary Beth Burandt, NEPA Document Manager, Office of River Protection, U.S. Department of Energy, P.O. Box 1178, Richland, Washington 99352, Email: TC&WMEIS@saic.com.

The Final TC & WM EIS and its DOE Notice of Availability are available on

¹ Transuranic (TRU) waste is waste that contains alpha particle-emitting radionuclides with atomic numbers greater than that of uranium (92) and half-lives greater than 20 years in concentrations greater than 100 nanocuries per gram of waste. "Mixed waste" is radioactive waste containing hazardous constituents regulated under the Resource Conservation and Recovery Act.

the DOE NEPA Web site at <http://energy.gov/nepa>. Additional information on the Final TC & WM EIS is also available through the Hanford Web site at <http://www.hanford.gov/>.

FOR FURTHER INFORMATION CONTACT: For further information on the Final TC & WM EIS, contact Ms. Burandt as listed in **ADDRESSES** or by telephone at 1–888–829–6347. For general information regarding the DOE NEPA process, contact: Ms. Carol M. Borgstrom, Director, Office of NEPA Policy and Compliance, GC–54, U.S. Department of Energy, 1000 Independence Avenue SW, Washington, DC 20585, Telephone: 202–586–4600, or leave a message at 1–800–472–2756, Email: askNEPA@hq.doe.gov.

For further information about DOE's preferred alternative for the tanks discussed herein, contact: Mr. Todd Shrader, U.S. Department of Energy, 1000 Independence Avenue SW., Washington, DC 20585, Telephone: 202–586–3784.

SUPPLEMENTARY INFORMATION:

Background

The Hanford Site, located in southeastern Washington State along the Columbia River, is approximately 586 square miles in size. Hanford's mission from the early 1940s to approximately 1989 included defense-related nuclear research, development, and weapons production activities. These activities created a wide variety of chemical and radioactive wastes. Hanford's mission now is focused on the cleanup of those wastes and ultimate closure of the Site.

To support its decision making process, DOE prepared the TC & WM EIS pursuant to the National Environmental Policy Act (NEPA) and in accordance with Council on Environmental Quality and DOE NEPA implementing regulations (40 CFR Parts 1500–1508; 10 CFR Part 1021); the U.S. Environmental Protection Agency and the Washington State Department of Ecology are cooperating agencies on this EIS. The TC & WM EIS addresses proposed actions in three major areas: The retrieval and treatment of waste from 177 underground radioactive waste storage tanks, including 149 single-shell tanks (SSTs), and closure of the SSTs; decommissioning the Fast Flux Test Facility and its auxiliary facilities; and continued and expanded management of low-level radioactive waste and mixed low-level radioactive waste.

TC & WM EIS Evaluation of Candidate Tank Waste for Classification as Mixed TRU Waste

This notice pertains only to the retrieval, treatment, packaging, and characterization and certification, for disposal at WIPP, of wastes contained in the 20 tanks evaluated in the TC & WM EIS as being candidates for classification as mixed TRU waste. The total volume of waste in these tanks is approximately 3.1 million gallons, all of which the EIS evaluations assumed to be mixed TRU waste for the purposes of analysis. Currently, DOE has not classified any of the waste as mixed TRU waste. The 20 tanks were included in five of the tank closure alternatives evaluated in the TC & WM EIS.² Information about these tanks and further details of the evaluation can be found in the Summary (Page S-57) and in Appendix E of the TC & WM EIS.

Preferred Alternatives

DOE's preferred alternatives for all three major areas listed above are described in the Summary, Section S.7, and in Chapter 2, Section 2.12, of Volume 1 of the Final TC & WM EIS. Regarding wastes contained in the 20 tanks evaluated as candidates for classification as mixed TRU waste, the EIS stated that: "Retrieval of tank waste identified as mixed TRU waste would commence only after DOE had issued a **Federal Register** notice of its preferred alternative and a ROD".³

To make progress in the overall tank waste retrieval process, and in view of recent information about potential tank leaks, DOE now prefers to retrieve, treat, package, and characterize and certify the wastes that are properly and legally classified as mixed TRU waste for disposal at WIPP. Initiating retrieval of tank waste classified as mixed TRU waste would be contingent on DOE's obtaining the applicable and necessary permits, ensuring that the WIPP Waste Acceptance Criteria and all other applicable regulatory requirements have been met, and making a documented determination that the waste is properly classified as mixed TRU waste. Further, retrieval of waste would not commence until a ROD had been issued. DOE may issue such a ROD regarding the candidate TRU wastes no sooner than 30 days from the date of publication of this notice in the **Federal Register**.

Issued in Washington, DC, on March 4, 2013.

David Huizenga,

Senior Advisor for Environmental Management.

[FR Doc. 2013-05509 Filed 3-8-13; 8:45 am]

BILLING CODE 6450-01-P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings

Take notice that the Commission has received the following Natural Gas Pipeline Rate and Refund Report filings:

Filings Instituting Proceedings

- Docket Numbers:* RP13-620-000.
Applicants: Southern Star Central Gas Pipeline, Inc.
Description: Fuel Filing—Eff. April 1, 2013 to be effective 4/1/2013.
Filed Date: 3/1/13.
Accession Number: 20130301-5056.
Comments Due: 5 p.m. ET 3/13/13.
Docket Numbers: RP13-621-000.
Applicants: WBI Energy Transmission, Inc.
Description: 2013 Annual Fuel and Electric Power Reimbursement to be effective 4/1/2013.
Filed Date: 3/1/13.
Accession Number: 20130301-5057.
Comments Due: 5 p.m. ET 3/13/13.
Docket Numbers: RP13-622-000.
Applicants: Discovery Gas Transmission LLC.
Description: 2013 Tariff Revisions to be effective 4/1/2013.
Filed Date: 3/1/13.
Accession Number: 20130301-5058.
Comments Due: 5 p.m. ET 3/13/13.
Docket Numbers: RP13-623-000.
Applicants: Texas Eastern Transmission, LP.
Description: Northeast Energy Contract Conversion FTS-5 to FT-1 to be effective 4/1/2013.
Filed Date: 3/1/13.
Accession Number: 20130301-5064.
Comments Due: 5 p.m. ET 3/13/13.
Docket Numbers: RP13-624-000.
Applicants: Elba Express Company, L.L.C.
Description: BG Negotiated Rate Filing to be effective 4/1/2013.
Filed Date: 3/1/13.
Accession Number: 20130301-5067.
Comments Due: 5 p.m. ET 3/13/13.
Docket Numbers: RP13-625-000.
Applicants: Crossroads Pipeline Company.
Description: Operational Transactions year ended Dec 2012.
Filed Date: 3/1/13.

Accession Number: 20130301-5069.
Comments Due: 5 p.m. ET 3/13/13.

Docket Numbers: RP13-626-000.

Applicants: Energy West

Development, Inc.

Description: Energy West Development, Inc. submit Lost and Unaccounted Gas [LAUF] reimbursement.

Filed Date: 2/28/13.

Accession Number: 20130228-5419.

Comments Due: 5 p.m. ET 3/12/13.

Docket Numbers: RP13-627-000.

Applicants: Virginia Power Energy

Marketing Inc., Dominion Energy

Brayton Point, LLC.

Description: Joint Petition of Virginia Power Energy Marketing, Inc. and Dominion Energy Brayton Point, LLC for Temporary Waiver of Capacity Release Regulations and Policies, and Request for Expedited Treatment.

Filed Date: 2/28/13.

Accession Number: 20130228-5420.

Comments Due: 5 p.m. ET 3/8/13.

Docket Numbers: RP13-628-000.

Applicants: TWP Pipeline LLC.

Description: Annual FRP Filing to be effective 4/1/2013.

Filed Date: 3/1/13.

Accession Number: 20130301-5073.

Comments Due: 5 p.m. ET 3/13/13.

Docket Numbers: RP13-629-000.

Applicants: Empire Pipeline, Inc.

Description: Annual Report Pursuant to GT&C Sec 23.5.

Filed Date: 3/1/13.

Accession Number: 20130301-5078.

Comments Due: 5 p.m. ET 3/13/13.

Docket Numbers: RP13-630-000.

Applicants: Stingray Pipeline

Company, L.L.C.

Description: Stingray Pipeline

Company, L.L.C. submits Events

Surcharge Adjustment.

Filed Date: 2/28/13.

Accession Number: 20130228-5421.

Comments Due: 5 p.m. ET 3/12/13.

Docket Numbers: RP13-631-000.

Applicants: Gulf South Pipeline

Company, LP.

Description: Remove Tariff Sections

Affected by Abandonment in CP13-31-000 to be effective 3/31/2013.

Filed Date: 3/1/13.

Accession Number: 20130301-5092.

Comments Due: 5 p.m. ET 3/13/13.

Docket Numbers: RP13-632-000.

Applicants: Transcontinental Gas

Pipe Line Company.

Description: Annual Fuel Tracker

Filing 2013 to be effective 4/1/2013.

Filed Date: 3/1/13.

Accession Number: 20130301-5093.

Comments Due: 5 p.m. ET 3/13/13.

Docket Numbers: RP13-633-000.

Applicants: Columbia Gas

Transmission, LLC.

² Tank Closure Alternatives 3A, 3B, 3C, 4, and 5.

³ "ROD" refers to a Record of Decision.

The potential costs associated with this proposed regulatory action are those resulting from statutory requirements and those we have determined as necessary for administering this program effectively and efficiently.

In assessing the potential costs and benefits—both quantitative and qualitative—of this proposed regulatory action, we have determined that the benefits of the proposed priority justify the costs.

Discussion of Costs and Benefits: The benefits of the Disability and Rehabilitation Research Projects and Centers Programs have been well established over the years in that similar projects have been completed successfully. This proposed priority will generate new knowledge through research and development.

Another benefit of this proposed priority is that the establishment of a new RRTC will improve the lives of individuals with disabilities. The new RRTC will disseminate and promote the use of new information that will improve the options for individuals with disabilities to obtain, retain, and advance in employment.

Intergovernmental Review: This program is not subject to Executive Order 12372 and the regulations in 34 CFR part 79.

Accessible Format: Individuals with disabilities can obtain this document in an accessible format (e.g., braille, large print, audiotape, or computer diskette) on request to the program contact person listed under **FOR FURTHER INFORMATION CONTACT**.

Electronic Access to This Document: You can view this document, as well as all other documents of this Department published in the **Federal Register**, in text or Adobe Portable Document Format (PDF) on the Internet at the following site: <http://www.ed.gov/news/fedregister>.

To use PDF you must have Adobe Acrobat Reader, which is available free at this site.

Note: The official version of this document is the document published in the **Federal Register**. Free Internet access to the official edition of the **Federal Register** and the Code of Federal Regulations is available on GPO Access at: <http://www.gpoaccess.gov/nara/index.html>.

Dated: December 15, 2009.

Alexa Posny,

Assistant Secretary for Special Education and Rehabilitative Services.

[FR Doc. E9-30188 Filed 12-17-09; 8:45 am]

BILLING CODE 4000-01-P

DEPARTMENT OF ENERGY

Notice of Modifications to the Preferred Alternatives for Tank Waste Treatment and Disposal of Off Site Waste in the Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, WA

AGENCY: Department of Energy.

ACTION: Modification of Preferred Alternatives.

SUMMARY: The U.S. Department of Energy (DOE) is modifying its preferred alternatives for tank waste treatment and also for disposal of off-site waste in the *Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington* (Draft EIS, DOE/EIS-00391), made available for public comment on October 30, 2009 (74 FR 56194). This Draft EIS has been prepared in accordance with the National Environmental Policy Act (NEPA) and its implementing regulations. The public comment period for the Draft EIS extends to March 19, 2010.

In this Draft EIS, DOE analyzed, as a reasonable alternative, treating and sending waste from specific tanks to the Waste Isolation Pilot Plant (WIPP), in Carlsbad, New Mexico, as mixed transuranic (TRU) waste. DOE is now expressing its preference that no Hanford tank wastes would be shipped to WIPP. These wastes would be retrieved and treated in the Waste Treatment Plant (WTP) being constructed at Hanford. The State of Washington Department of Ecology (Ecology), a cooperating agency on the EIS, has revised its Foreword to the Draft EIS in response to this modification to the preferred alternative for tank waste. That revision can be found under **SUPPLEMENTARY INFORMATION**.

In addition, consistent with DOE's preference regarding receipt at Hanford of off-site low-level radioactive waste (LLW) and low-level mixed waste (MLLW), DOE would not ship Greater-Than-Class-C (GTCC) LLW to Hanford at least until the WTP is operational (DOE is analyzing disposal of GTCC LLW in a separate EIS).

ADDRESSES: The Draft EIS is available electronically through, and written comments can be submitted at, TC&WMEIS@saic.com, or by faxing to (1-888) 785-2865. Paper copies may be obtained by request to the EIS website or by contacting: Mary Beth Burandt, Document Manager, TC & WM EIS comments, Office of River Protection,

P.O. Box 1178, Richland, Washington 99352.

The Draft EIS is also available at DOE's NEPA Web site at <http://www.gc.energy.gov/nepa>.

Written comments may be mailed to the document manager at the address above. Further, DOE will accept oral as well as written comments on the Draft EIS during public hearings to be announced soon in the **Federal Register** and local media.

FOR FURTHER INFORMATION CONTACT: For further information on the Draft EIS, contact Ms. Burandt at the address above or by telephone, at (1-888) 829-6347. For further information on DOE's NEPA process, contact: Carol M. Borgstrom, Director, Office of NEPA Policy and Compliance, Office of General Counsel, U.S. Department of Energy, Washington, DC 20585-0103, Telephone: (202) 586-4600, or leave a message at (800) 472-2756.

Further information on the Draft EIS is also available through the Hanford Web site at: <http://www.hanford.gov/orp>.

SUPPLEMENTARY INFORMATION: The *Draft Tank Closure and Waste Management Environmental Impact Statement* has been prepared in accordance with NEPA and its implementing regulations. The Draft EIS analyzes alternatives for proposed actions in three major areas related to the cleanup of the Hanford Site. These are: (1) Retrieving and treating radioactive waste from 177 underground storage tanks at Hanford and closure of the 149 single-shell tanks; (2) decommissioning of the Fast Flux Test Facility, a nuclear test reactor, and its auxiliary facilities; and (3) continued and expanded solid waste management operations on site, including the disposal of Hanford's LLW and MLLW, and limited volumes of LLW and MLLW from other DOE sites. The Draft EIS also analyzes no action alternatives for each of the three types of proposed actions as required under NEPA for use as a basis for comparison of the alternatives.

In the Draft EIS, DOE narrowed its range of preferred alternatives to five (Section S.7.1 of the Summary and Section 2.12 of the main volume). Three of these alternatives contain options for treating the waste from specific tanks as mixed TRU waste (approximately 3 million gallons) that would be prepared as necessary and shipped to WIPP for disposal. Based on further consideration, DOE has concluded that its preference is to manage the waste from these tanks by treating it through the WTP currently under construction as either high-level waste or low-activity

waste as would be the case with the other waste to be treated in each alternative; it would thus not be shipped to WIPP for disposal. Ecology, a cooperating agency on this EIS, has requested the following modification to its Foreword in response to that change:

Ecology acknowledges that subsequent to publishing the draft EIS, DOE has revised its preferred alternative to propose that waste from specific Hanford tanks containing what DOE believes might be mixed TRU waste be treated at Hanford through the WTP. This change does not alter Ecology's expectations concerning this waste. Because Ecology has had, and continues to have, legal and technical concerns with any Hanford tank waste being classified as mixed TRU waste, Ecology has always assumed that the waste would be treated at Hanford through the WTP. Ecology expects that the end date for completing treatment of Hanford's tank waste will not be altered by treating the waste from these specific tanks through the WTP.

Regarding DOE's preferred alternative for waste management, (Section S.7.3 of the Summary and Section 2.12 of the main volume) DOE would not send LLW and MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions) at least until the WTP is operational, consistent with DOE's proposed settlement agreement with the State of Washington. Off-site waste would be addressed after the WTP is operational subject to appropriate NEPA review. Although the Draft EIS considers the cumulative impacts of the potential receipt of GTCC LLW at Hanford, DOE is preparing a separate EIS on GTCC LLW disposition. However, similar to its preference regarding the importation of LLW and MLLW, DOE announces that it does not prefer to import GTCC LLW to Hanford at least until the WTP is operational.

Issued in Washington, DC, on December 10, 2009.

Inés R. Triay,

Assistant Secretary for Environmental Management.

[FR Doc. E9-30173 Filed 12-17-09; 8:45 am]

BILLING CODE 6450-01-P

DEPARTMENT OF ENERGY

Environmental Management Site-Specific Advisory Board, Oak Ridge Reservation

AGENCY: Department of Energy.

ACTION: Notice of Open Meeting.

SUMMARY: This notice announces a meeting of the Environmental

Management Site-Specific Advisory Board (EM SSAB), Oak Ridge Reservation. The Federal Advisory Committee Act (Pub. L. 92-463, 86 Stat. 770) requires that public notice of this meeting be announced in the **Federal Register**.

DATES: Wednesday, January 13, 2010, 6 p.m.

ADDRESSES: DOE Information Center, 475 Oak Ridge Turnpike, Oak Ridge, Tennessee.

FOR FURTHER INFORMATION CONTACT: Patricia J. Halsey, Federal Coordinator, Department of Energy Oak Ridge Operations Office, P.O. Box 2001, EM-90, Oak Ridge, TN 37831. Phone (865) 576-4025; Fax (865) 576-2347 or e-mail: halseypj@oro.doe.gov or check the Web site at <http://www.oakridge.doe.gov/em/ssab>.

SUPPLEMENTARY INFORMATION:

Purpose of the Board: The purpose of the Board is to make recommendations to DOE in the areas of environmental restoration, waste management, and related activities.

Tentative Agenda: Technetium-99 Contamination in the K-25 Building at the East Tennessee Technology Park.

Public Participation: The EM SSAB, Oak Ridge, welcomes the attendance of the public at its advisory committee meetings and will make every effort to accommodate persons with physical disabilities or special needs. If you require special accommodations due to a disability, please contact Patricia J. Halsey at least seven days in advance of the meeting at the phone number listed above. Written statements may be filed with the Board either before or after the meeting. Individuals who wish to make oral statements pertaining to the agenda item should contact Patricia J. Halsey at the address or telephone number listed above. Requests must be received five days prior to the meeting and reasonable provision will be made to include the presentation in the agenda. The Deputy Designated Federal Officer is empowered to conduct the meeting in a fashion that will facilitate the orderly conduct of business. Individuals wishing to make public comments will be provided a maximum of five minutes to present their comments.

Minutes: Minutes will be available by writing or calling Patricia J. Halsey at the address and phone number listed above. Minutes will also be available at the following Web site: <http://www.oakridge.doe.gov/em/ssab/minutes.htm>.

Issued at Washington, DC on December 14, 2009.

Rachel Samuel,

Deputy Committee Management Officer.

[FR Doc. E9-30165 Filed 12-17-09; 8:45 am]

BILLING CODE 6450-01-P

DEPARTMENT OF ENERGY

Office of Science; Notice of Renewal of the Biological and Environmental Research Advisory Committee

Pursuant to Section 14(a)(2)(A) of the Federal Advisory Committee Act, App., and section 102-3.65, Title 41, Code of Federal Regulations, and following consultation with the Committee Management Secretariat, General Services Administration, notice is hereby given that the Biological and Environmental Research Advisory Committee has been renewed for a two-year period.

The Committee will provide advice to the Department of Energy's Office of Science on the biological and environmental research programs. The Secretary of Energy has determined that renewal of the Biological and Environmental Research Advisory Committee is essential to the conduct of the Department's business and in the public interest in connection with the performance of duties imposed by law upon the Department of Energy. The Committee will continue to operate in accordance with the provisions of the Federal Advisory Committee Act (Pub. L. 92-463), the General Services Administration Final Rule on Federal Advisory Committee Management, and other directives and instructions issued in implementation of those acts.

FOR FURTHER INFORMATION CONTACT: Ms. Rachel Samuel at (202) 586-3279.

Issued in Washington, DC on December 14, 2009.

Carol A. Matthews,

Acting Committee Management Officer.

[FR Doc. E9-30161 Filed 12-17-09; 8:45 am]

BILLING CODE 6450-01-P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Docket No. ID-4074-007

Good, Lynn J.; Notice of Filing

December 11, 2009.

Take notice that on December 10, 2009, Lynn J. Good filed an application for authorization to hold interlocking positions, pursuant to section 305(b) of the Federal Power Act, 16 USCA

Peter S. Winokur, Chairman
Jessie H. Roberson, Vice Chairman
John E. Mansfield
Joseph F. Bader
Sean Sullivan

**DEFENSE NUCLEAR FACILITIES
SAFETY BOARD**

Washington, DC 20004-2901



April 1, 2013

The Honorable Ronald L. Wyden
United States Senate
221 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Wyden:

In response to your request dated March 22, 2013, the Defense Nuclear Facilities Safety Board (Board) would like to present our perspective on the state of nuclear safety at the Hanford Site. The Board has observed firsthand the challenges facing the Department of Energy (DOE) at Hanford as it strives to eliminate the hazards posed by its high-level radioactive waste. Resolution of these significant challenges will require continued focus by both DOE and the Board over the next several years.

During the past 3 years, the Board has issued three Recommendations to the Secretary of Energy, held three public hearings (October 2010, March 2012, and May 2012), and written numerous letters describing the Board's concerns related to nuclear safety at the Hanford Site. In response to your request dated March 22, 2013, the information provided below summarizes the Board's perspective on (1) safety concerns associated with the Hanford Tank Farms, (2) unresolved technical issues related to the design of the Waste Treatment and Immobilization Plant (WTP), and (3) the current state of Hanford's safety culture.

Safety Concerns Associated with the Hanford Tank Farms

DOE stores more than 50 million gallons of high-level radioactive waste in 177 underground tanks at the Hanford Site. Many of the old single-shell tanks have been known to leak. As a result, DOE transferred most of the liquid waste in those tanks to newer double-shell tanks. The Board has been following DOE's plans for dealing with leaking tanks, and the impact these tanks have on the DOE's overall waste retrieval, treatment, and disposition strategy. In August 2012, DOE discovered that double-shell tank AY-102 was leaking and more recently DOE announced that single-shell tanks are continuing to leak. This situation reinforces the need to retrieve and treat the tank waste and be vigilant in maintenance and safe operations in the Hanford Tank Farms for the foreseeable future. The Board believes that prolonged storage of waste in the Hanford Tank Farms represents a potential threat to public health and safety.

Eliminating the risk of high-level waste (HLW) release to the environment requires waste retrieval and treatment. The very nature of the waste makes establishment of viable retrieval and treatment systems extremely challenging because some of the waste has "sludge-like" consistency and some also contains relatively large plutonium particles. Accurate characterization of tank waste is necessary to meet the waste acceptance criteria of WTP and to operate the facility safely. However, the development of accurate waste characterization

methods faces formidable technical challenges. Formidable technical challenges also remain in the development of safe waste mobilization and transfer systems.

In addition to tank leakage, another issue with the current Tank Farms concerns a possible deflagration event caused by hydrogen gas generation within a tank. Such an event could spread radioactive waste in the Tanks Farms. On September 28, 2012, the Board transmitted Recommendation 2012-2, *Hanford Tank Farms Flammable Gas Safety Strategy*, to the Secretary of Energy. This Recommendation identified concerns with DOE's administrative controls for monitoring flammable gas conditions in its double-shell waste tanks and recommended that DOE restore the functional classification of the ventilation systems in these tanks from general service to safety-significant. DOE's safety analyses show many of the double-shell tanks currently have enough flammable gas retained in the waste that, if released in the tank headspace, could create a flammable atmosphere. Furthermore, all the double-shell tanks contain waste that continuously generates some flammable gas. This gas will eventually reach flammable conditions if adequate ventilation is not provided. Consequently, ventilating the double-shell tanks is critical to the safety posture of the Hanford Tank Farms. DOE has accepted this Recommendation and is currently developing an implementation plan.

In an April 26, 2011, letter sent to DOE's Assistant Secretary for Environmental Management, the Board identified weaknesses in the underground waste transfer system used at the Hanford Tank Farms. For example, the Board's letter noted deficiencies in the methodology for extending the service life of temporary "hose-in-hose" waste transfer lines located in trenches and the process for certifying the waste transfer system can perform its safety function. DOE has taken actions to address these issues, including (1) implementation of a Fitness for Service Program that addresses some of the performance and maintenance issues of the waste transfer system and (2) developing a test plan for studying the aging of the hose-in-hose lines and other common polymer components. As the frequency of waste transfers increases, these issues could require additional management attention.

Technical Issues Concerning the Design of WTP

DOE is in the process of transitioning the WTP project from a design-construction phase to a construct-operate phase. However, DOE has not resolved key technical issues with the WTP design, many of which were identified several years ago. These technical issues must be resolved to support completing the design and construction of the Pretreatment Facility (PTF) and, to a lesser extent, the HLW facility. Key technical challenges associated with the PTF include operations associated with pulse-jet mixing, strategies for hydrogen in pipes and ancillary vessels, and erosion/corrosion of pipes and vessels. The resolution of these safety issues is complicated by the partial construction of the PTF and the use of a "black-cell" design concept that may not allow for maintenance over the 40-year life of the plant.

DOE is considering alternate strategies to bypass the PTF, which includes directly feeding the WTP vitrification facilities from Tank Farms. These strategies are in the conceptual phase. The Board will evaluate these alternate strategies to identify any safety issues when engineering and safety strategy information is available. The Board believes that directly feeding waste into the WTP vitrification facilities will be a challenging undertaking that will

involve resolving some of the same technical and safety issues associated with the design of the PTF and the HLW facility. For example, DOE will be required to partially re-design the existing facilities to receive wastes directly from Tank Farms, develop new processes to “precondition” the waste, duplicate process operations that are currently housed in the PTF, and resolve technical issues associated with feed delivery and development of waste acceptance criteria.

The Board has identified a number of safety-related risks with the WTP, including many that were identified in the design of WTP. A summary of these safety-related issues are listed below. The first listed issue, *Mixing in Process Vessels*, was considered by the Board to be of such significance as to warrant a recommendation to the Secretary. The remaining concerns presented advice, analysis and concerns to the Secretary, but did not warrant a recommendation and are listed here in reverse chronological order. The summary is based on information from the Board’s Report to Congress on the Status of Significant Unresolved Issues with DOE’s Design and Construction Projects, the most recent of which is dated December 24, 2012.

Mixing in Process Vessels—On December 17, 2010, the Board transmitted Recommendation 2010-2, *Pulse Jet Mixing at the Waste Treatment and Immobilization Plant*, to the Secretary of Energy. This Recommendation identified concerns that inadequate performance of mixing systems at WTP could lead to nuclear criticality accidents, explosions of flammable gases, and mechanical failures of process vessel components. DOE has informed the Board that resolution of these issues is delayed because a key technical assumption underlying DOE’s implementation plan was not supported by test data. The Secretary is developing a revised implementation plan.

Formation of Sliding Beds in Process Pipes—In an August 8, 2012, letter sent to DOE’s Senior Advisor for Environmental Management, the Board expressed concerns that the current design of the WTP slurry pipeline system is susceptible to frequent formation of sliding beds of solids on the bottom of the pipe. The sliding bed of solids could increase wear from erosion/corrosion and could increase the likelihood of pipeline plugging. Prolonged operation of a centrifugal pump with a plugged process line can cause the pump to fail catastrophically potentially resulting in the loss of primary confinement, and damage to adjacent structures, systems, and components. The Board also observed that DOE has not yet incorporated new information on waste properties into the design of the slurry transport system.

Design and Construction of Electrical Distribution System—In an April 13, 2012, letter sent to DOE’s Senior Advisor for Environmental Management, the Board identified several issues with the operability and safety of the electrical distribution system for WTP. DOE has developed a plan to address these issues.

Erosion and Corrosion of Piping, Vessels, and Pulse Jet Mixer Nozzles—In a January 20, 2012, letter sent to DOE’s Senior Advisor for Environmental Management, the Board communicated its concern that design information for WTP does not provide confidence that wear allowances are adequate to ensure that piping, vessels, and components located in black cells are capable of performing their safety functions over the 40-year design life of the facility. DOE is developing a plan to address the erosion and corrosion issues.

Ammonia Control—In a September 13, 2011, letter to DOE’s Acting Assistant Secretary for Environmental Management, the Board expressed concern that the existing design and safety-related controls associated with the storage and potential release of large quantities of ammonia at the WTP site did not adequately protect workers or facilities at WTP. DOE stated that the project team would perform three new hazard analyses to address the Board’s concerns. The Board will evaluate the hazard analyses and supporting calculations as they are developed.

Heat Transfer Analysis for Process Vessels—In an August 3, 2011, letter sent to DOE’s Acting Assistant Secretary for Environmental Management, the Board identified technical issues with the heat transfer calculations used to establish post-accident hydrogen mixing requirements necessary to prevent explosions in PTF process vessels at WTP. DOE plans to revise these calculations.

Spray Leak Analysis—In an April 5, 2011, letter sent to DOE’s Assistant Secretary for Environmental Management, the Board identified technical issues with DOE’s model for estimating radiological consequences to the public from spray leak accidents in the PTF and HLW facilities of WTP. DOE subsequently completed a spray leak-testing program at Pacific Northwest National Laboratory, which similarly concluded the spray leak model is non-conservative. DOE is planning additional testing to resolve this issue.

Hydrogen in Piping and Ancillary Vessels—Beginning with the April 15, 2010, *Quarterly Report to Congress on the Status of Significant Unresolved Issues with the Department of Energy’s Design and Construction Projects*, the Board expressed concern with DOE’s 2010 change in its safety strategy for hydrogen hazards in pipes and ancillary vessels¹. Flammable gases, such as hydrogen, generated by the wastes treated in WTP will accumulate whenever flow is interrupted in process piping, and in regions of the piping system that do not experience flow, such as piping dead legs. DOE has approved a strategy that allows hydrogen explosions in piping under certain conditions, and relies on a Quantitative Risk Analysis (QRA) and other complex models to predict the magnitude of the explosions and the response of the piping system. The Board remains concerned that DOE has not yet developed a QRA that demonstrates that explosions would not lead to a breach of the primary confinement in process piping and vessels.

Hanford’s Safety Culture

The Board’s evaluation of the technical issues at WTP discussed above was broadened in the summer of 2010 to include an investigation into the project’s safety culture after the Board received a letter from Dr. Walter Tamosaitis, a former engineering manager for the project’s contractor. In his letter, Dr. Tamosaitis alleged that he was removed from the project because he identified technical issues that could affect safety. He further alleged that there was a flawed safety culture at the project. The Board’s investigation concluded that a flawed safety culture at WTP was inhibiting the identification and resolution of technical and safety issues.

¹ *Conditional Approval of Safety Requirements Document (SRD) Change Adding Hydrogen in Piping and Ancillary Vessels (HPAV) Design Criteria for Pretreatment (PT) Facility*, 10-NSD-013, February 15, 2010

As a result, on June 9, 2011, the Board transmitted Recommendation 2011-1, *Safety Culture at the Waste Treatment and Immobilization Plant*, to the Secretary of Energy. This Recommendation highlighted the need for DOE to expeditiously make major improvements in the safety culture at WTP. Subsequently, DOE's Office of Health, Safety and Security independently reviewed the safety culture at WTP and issued a report in January 2012 that confirmed the Board's conclusions. In its public hearing on March 22, 2012, the Board concluded that the flawed safety culture within DOE's field and contractor organizations was inhibiting the ability to (1) identify and address long-standing technical issues and (2) resolve conflicts between the engineering and nuclear safety to ensure safety controls were integrated into the facility design as required by DOE's *Nuclear Safety Management Rule*, Title 10, Code of Federal Regulations, Part 830.

DOE has taken several significant actions to address the safety culture issues identified in the Board's Recommendation. These include clarifying roles and responsibilities in the federal field and Headquarter organizations; strengthening the Differing Professional Opinion and Employees Concerns processes; validating the basis for the project's nuclear safety strategy; and increasing DOE's Senior leadership involvement in technical challenges.

On December 5, 2011, Secretary Chu and Deputy Secretary Poneman issued a memorandum to the heads of all DOE elements describing expectations for nuclear safety in the Department. The memorandum addressed roles and responsibilities, safety culture, standards and directives, and Integrated Safety Management. The Secretary and Deputy Secretary clearly stated their commitment "to a strong and sustained safety culture, where all employees—from workers with shovels in the ground to their managers all the way up to the Secretary and everyone in between—are energetically pursuing the safe performance of work, encouraging a questioning work environment, and making sure that executing the mission safely is not just a policy statement but a value shared by all." The Board believes that Secretary Chu has vigorously tackled this issue, but progress in changing any organizational culture is historically slow. Fundamental differences between WTP engineering and nuclear safety must still be resolved. DOE has committed to conducting a review of the WTP safety culture within the next few months to evaluate the effectiveness of its corrective actions. The Board looks forward to the results of this review.

If you would like additional information regarding any of these issues, I would welcome the opportunity to discuss them further at your earliest convenience.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter S. Winokur". The signature is stylized and cursive.

Peter S. Winokur, Ph.D.
Chairman

Report on the

March 16, 2004

Environmental Evaluation Group (EEG) Sponsored

Workshop

On the U.S. Department of Energy (DOE)

Plans to dispose of

Hanford High-Level Radioactive Waste

At the

Waste Isolation Pilot Plant (WIPP)

Prepared by:

George Anastas, PE, CHP, DEE, FHPS, FARPS

James K. Channell, Ph.D., CHP (Emeritus)

June 2013

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 - c. John Kristofzski, Waste Disposal Strategic Planning Director, CH2MHill and Rob Yasek, TRU Project Manager, Office of River Protection, DOE
 - d. Allen W. Conklin, Air Emissions and Defense Waste Section, Office of Radiation Protection, Washington State Department of Health
 - e. Thomas Cochran, Senior Scientist, Natural Resources Defense Council, Washington, D.C.
 - f. David Bartus, U.S. Environmental Protection Agency
5. References

1. Forward

The 2004 EEG sponsored Workshop was held to gather information regarding the plans, at that time, by DOE to bring to WIPP for disposal radioactive waste contained in high-level radioactive waste tanks at Hanford.

A not unreasonable question is, “Why prepare a report on a Workshop that was held 9 years ago?” There are five main reasons for the preparation of this report:

First, EEG funding was eliminated by the DOE shortly after the workshop was held and thus we were not able to complete the report on the Workshop.

Second, the DOE recently announced plans to bring essentially the same tank waste to the WIPP for disposal.

Third, we recently read an account of the statement by Richard Huizinga, Senior Advisor in the DOE’s Office of Environmental Management at the 2013 Waste Management Conference: “Huizinga noted that much of the challenge (ed note: the ongoing effort to complete the waste treatment plant) stems from the fact that the wastes from different reprocessing methods were combined in underground tanks and were allowed to sit for some 30 years.” May 2013 Nuclear News, page 69.

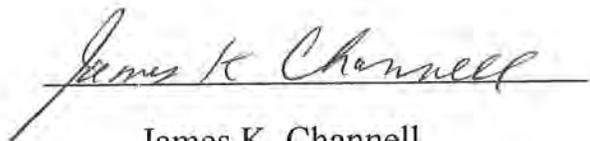
Fourth, the DOE announced in December 2009 (FR 67189) that “DOE is now expressing its preference that no Hanford tank wastes would be shipped to WIPP.”

Fifth, we are concerned that high-level waste (HLW) might be mixed (or perhaps already mixed) with transuranic waste which would then be shipped to WIPP.

Accordingly, in view of the fact that DOE again wishes to bring Hanford tank waste to New Mexico, we believe it is in the public interest to provide a record of the 2004 Workshop.



George Anastas



James K. Channell

June 2013, Albuquerque, New Mexico

2. Summary

All presentators had responsibilities or interests concerning the tank waste at Hanford. However, none were specifically concerned with transuranic waste (TRU) classification for disposal at WIPP. While some speakers believed it may be possible to separate a TRU waste fraction out of the waste in the tanks, none attempted to judge whether this waste would meet the WIPP Waste Acceptance Criteria for disposal at WIPP.

The WIPP Land Withdrawal Act (LWA) definition of TRU waste precludes high-level waste. Judge Winmill's Decision states: "It is undisputed that the waste at Hanford, INEEL, and SRS is highly radioactive and the result of reprocessing. No solids have yet been extracted from the liquid waste at those sites and treated to reduce fission products. Thus the waste at issue in this case falls within NWPA's definition of HLW. (Memorandum Decision, July 2, 2003, p.11)"

None of the presentations attempted to demonstrate that any of the tanks had never received HLW.

3. Introduction

During the Fall of 2003 there were several newspaper articles regarding radioactive and hazardous waste stored at various DOE sites. These articles did not provide a great deal of technical detail, but did state that the proposed site for the waste was the WIPP. The WIPP is a repository for the disposal of transuranic waste generated by atomic energy defense activities of the United States Government.

a) Atomic Energy Defense Activities

These activities took place at numerous sites across the country, including Hanford, Idaho National Engineering and Environmental Laboratory (INEEL), the Savannah River Site (SRS), Oak Ridge National Laboratory (ORNL), Argonne National Laboratory (ANL), and others.

EEG understood from the newspaper articles and conversations with representatives of the DOE that some of the tank waste, the waste that meets the definition of transuranic waste, at Hanford may be the first tank waste proposed to

be disposed at the WIPP. Accordingly, EEG focused its efforts on the waste in those specific tanks in order to obtain detailed scientific information from specific agencies and individuals most knowledgeable about the Hanford tank waste situation. The EEG organized a public Workshop that was held March 16, 2004 at the Glaesner Training Center in Albuquerque, New Mexico. The Workshop focused on technical issues relating to the tank waste at Hanford believed to meet WIPP disposal requirements.

The EEG was fortunate to have representatives of the DOE Office of River Protection (ORP), CH2MHill Hanford Group (a contractor to the DOE Office of River Protection), the DOE Carlsbad Field Office, the Washington State Department of Ecology, the Washington State Department of Health, the Region 10 Office of the U.S. Environmental Protection Agency (EPA), and the Natural Resources Defense Council (NRDC) present information on the topic. In addition, staff from various organizations, members of the public and press participated in the discussions at the Workshop.

b) Hanford Operations

Beginning in 1944 the Hanford Site in Southeastern Washington State served a major role in atomic energy defense activities relating to the production of plutonium for nuclear weapons and associated research activities. The DOE and its predecessor agencies were responsible for the planning, design, construction and operation of the facilities at the Site. The Site contained a myriad of facilities including nuclear reactor fuel fabrication facilities, nine nuclear reactors for the production of plutonium, four chemical separation plants for the separation of plutonium from irradiation nuclear fuel (T and B Plants, REDOX and PUREX), one chemical separations plant to recover uranium from tank waste (U Plant), plutonium concentration and purification facilities, large underground tanks in which radioactive waste and hazardous waste from chemical separations and facilities operations were stored, and various nuclear and radiation research facilities related to atomic energy defense activities. In 1987 the last production reactor, N-Reactor, ceased operation and in 1990 the last chemical separations facility, PUREX, ceased operation.

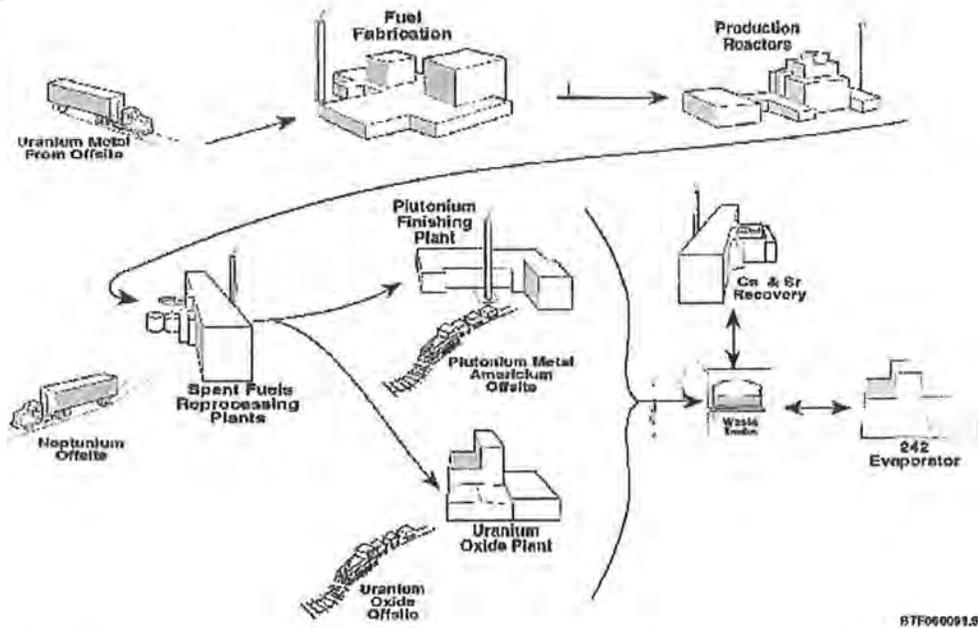


Figure 1: Hanford Defense Production Facilities (1944-1990)

Source: Presentation by Ms. Suzanne Dahl

c) The Hanford Tanks

There are 149 large single shell tanks that were constructed between 1943 and 1964, ranging in capacity from 55,000 to 1,000,000 gallons. There are also 28 large double shell tanks that were constructed between 1968 and 1986, ranging in capacity from 1,000,000 to 1,100,000 gallons.

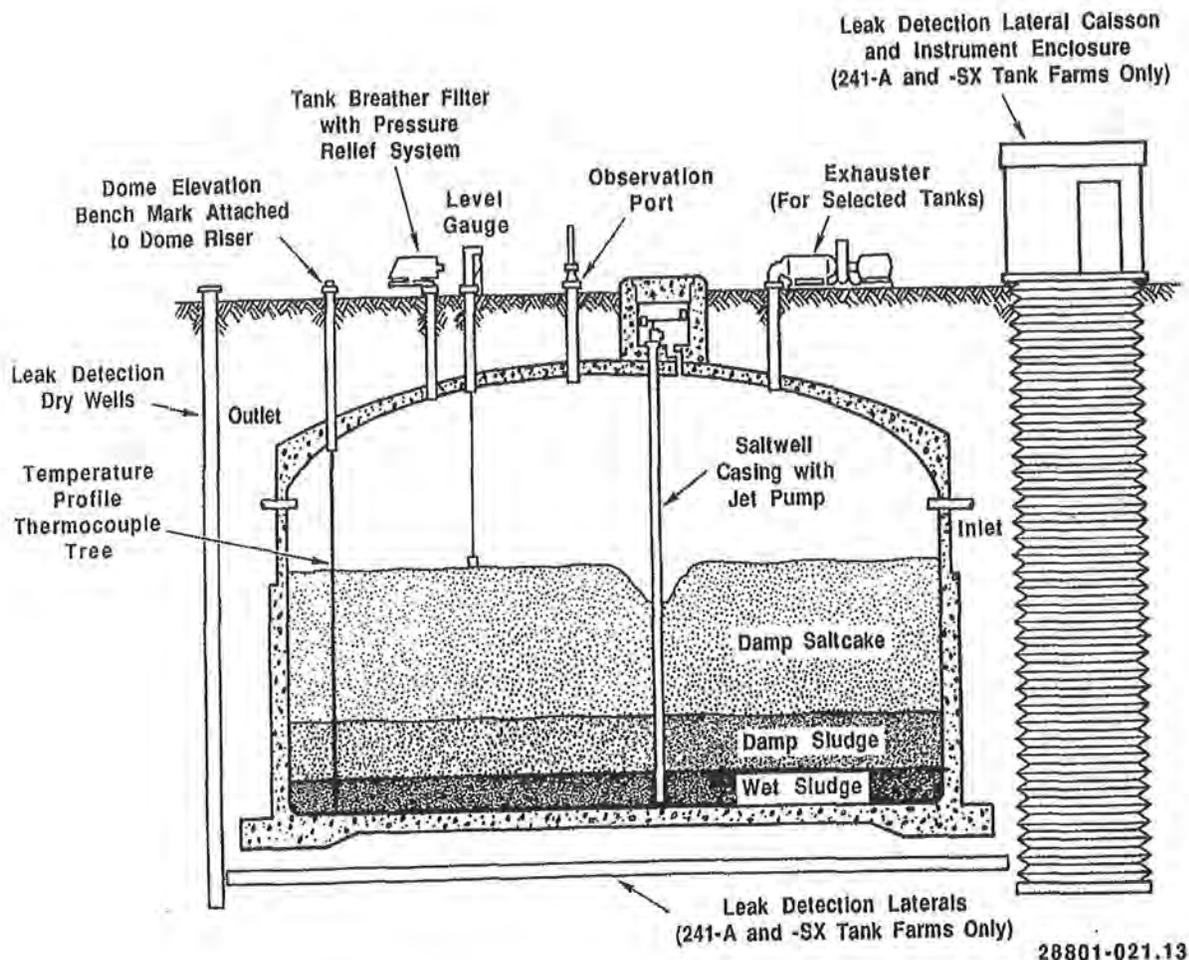


Figure 2, Typical Single Shell Tank (Source: http://www5.hanford.gov/pdw/fsd/ar/fsd0001/fsd0003/D195065510/D195065510_1415.pdf)

The 177 tanks contain radioactive and hazardous waste produced during more than 40 years of atomic energy defense activities. Based upon a January 1, 2001 estimate, these tanks contain about 194 million curies of radioactivity and hazardous wastes including over 166,000 metric tons of chemicals in approximately 55 million gallons. The volume of waste in the tanks consists of liquid, saltcake, sludge and interstitial liquid.

Hanford Tank Waste Inventory

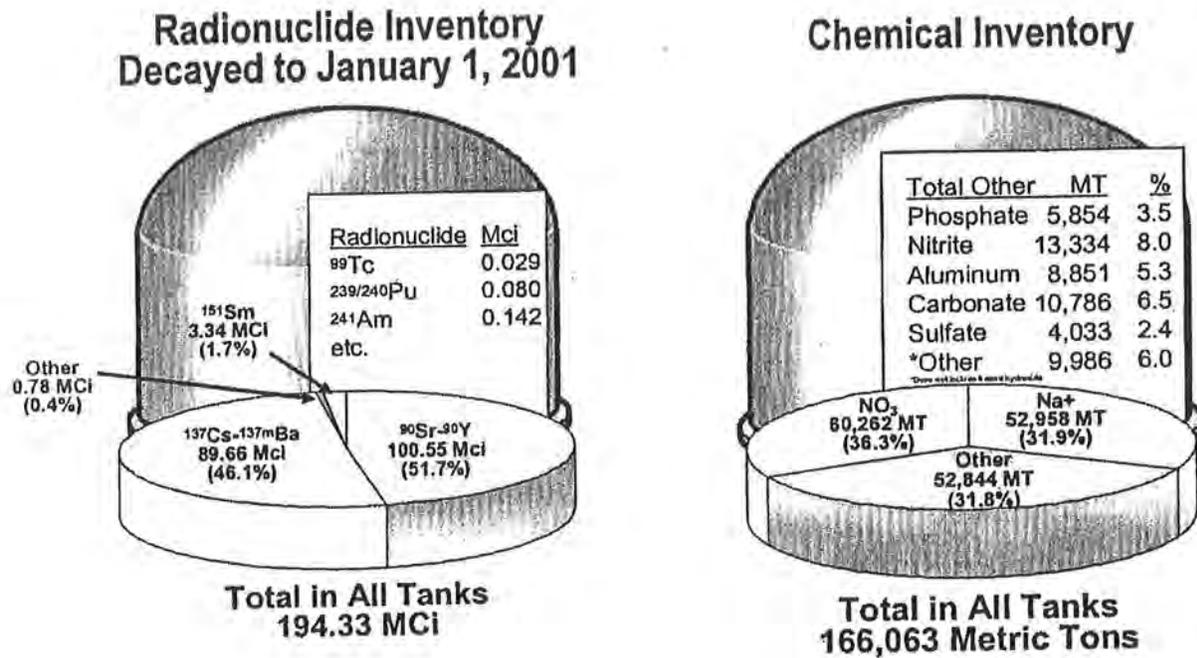


Figure 3: Approximate Hanford Tank Waste Inventory

Source: Presentation by Ms. Suzanne Dahl

In addition to the 177 large tanks at Hanford. There are approximately 40 miscellaneous underground storage tanks (MUST) which also contain various wastes. Single shell tank ancillary equipment, (i.e.: diversion boxes, valve pits, flush pits, single shell tank pits, waste transfer vaults, and transfer lines) also contain waste. The MUST and ancillary equipment are mentioned here for completeness, but were not the subject of the March 16, 2004 Workshop.

4. Abstract of Presentations and Discussions

a) R. Paul Detwiler, DOE Office of the General Counsel and Acting Manger of the DOE Carlsbad Field Office

Dr. Detwiler presented three definitions of High Level Waste:

The WIPP Land Withdrawal Act (which referred to the definition in the Nuclear Waste Policy Act of 1982)

The Nuclear Waste Policy Act of 1982: (12) the term “high-level radioactive waste means—(A) the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from liquid waste that contains fission products in sufficient concentrations; and (B) other highly radioactive material that the Commission, consistent with existing law, determines by rule requires permanent isolation. 42 U.S.C. §1010(12)

The State of New Mexico and the U.S. Department of Energy Agreement for Consultation and Cooperation: G. The term “high level waste” means defense waste, in the form of the solidified product of the first cycle solvent extraction or similar process by which uranium and plutonium are recovered from irradiated reactor fuel. Article II (G) {emphasis added}

He then discussed the prohibitions on the disposal of high-level waste at the WIPP contained in the WIPP Land Withdrawal Act (Sec. 12) and the 1981 State of New Mexico and U.S. Department of Energy Agreement for Consultation and Cooperation.

He discussed the definition of transuranic waste contained in the WIPP Land Withdrawal Act: waste containing more than 100 nanocuries of alpha-emitting transuranic isotopes per gram of waste with half-lives greater than 20 years except for (A) high-level waste; (B) waste that the Secretary has determined, with the concurrence of the Administrator, does not need the degree of isolation required by disposal regulations, or (C) waste that the Nuclear Regulatory Commission has approved for disposal on a case-by case basis in accordance with part 61 of title 10, CFR.

He went on to indicate that the early on problem (ed note: at Hanford) was the indefinite storage of tank waste and it did not make sense to impose different management regimes on tanks that contained high-level waste and those that contained other wastes.

Indeed, based upon discussions following the presentation and the subsequent presentation by Dr. John Kristofzski, Waste Disposal Strategic Planning Director and Mr. Rob Yasek, TRU Project Manager, Office of River Protection, U.S. Department of Energy, the tanks contain a mixture of chemical waste, high-level radioactive waste and transuranic isotopes.

b) Suzanne Dahl, Project Manager for the Hanford Tank Waste Issues, Washington State Department of Ecology

The Department of Ecology's (Ecology) mission at Hanford is to provide environmental regulatory oversight to protect human health and the environment and the ecosystem around the site. Ecology is the State Agency responsible for the Tri Party Agreement which began in 1989 with the Hanford Federal Facility Agreement and Consent Order. The three parties involved are Ecology, the US Environmental Protection Agency, and the DOE. The Agreement establishes the primary framework, both in CERCLA and RCRA, for the Hanford cleanup. The Agreement addresses the radioactive mixed waste in the tank farms through the RCRA provisions. Washington State issues permits for tank farms, treatment facilities, and disposal facilities that involve radioactive mixed waste through its delegated RCRA authority. The Agreement establishes milestones to define the cleanup mission at Hanford. Three milestones relevant to this workshop are: (1) M-44-00 Characterization of tank waste; (2) M-45-00 Retrieval and Closure of all the single shell tanks by 2018; and (3) M-62-00 Pretreatment and Vitrification of both high level and low activity waste by 2028.

Pathways to disposal include pretreatment and separation into a HLW fraction (10%) and low activity fraction (90%). The low activity waste (LAW) would go through a vitrification process and disposed onsite. HLW would go through a vitrification process and sent to a geological disposal facility. Various timelines have been established in the Agreement and some schedules have already slipped. Recently, the DOE has begun discussions with Ecology to escalate the cleanup process by abandoning the HLW and LAW vitrification processes. DOE and Ecology are in discussions of different treatment processes and resulting waste forms that could shorten the timeline to closure. Ecology's primary concern is that eventually all waste will be properly treated and disposed. There is a fear that some plans of action could result in some of the tank waste being "orphaned" either in the tanks or onsite without proper treatment.

Ecology has received and agreed to a Notice of Intent for the location of a TRU Mixed Waste (TRUM) treatment and packaging facility. Ecology has agreed that the siting of this facility meets the criteria for siting. However, Ecology recognizes that they are not the decision maker for determination of TRUM or for disposal at WIPP. They will not approve a TRUM treatment facility until DOE has obtained all approvals necessary for disposal at WIPP.

In response to a question about the MUST tanks, Ms. Dahl said that little was known about them, they were not included in any of the timelines, and were not believed to contain TRUM. There was discussion about the NRC's determination of "waste incidental to reprocessing" at Hanford. Ms Dahl said this was the definition that led to the plan to dispose the 90% of the waste that was LAW onsite.

- c) John Kristofzski, Waste Disposal Strategic Planning Director, CH2MHill and Rob Yasek, TRU Project Manager, Office of River Protection, DOE

The presentation provided background of the Hanford Site, including the structure of single shell and double shell tanks, waste routing from the 221-T Plant, waste routing from the 224-B Plant, waste routing from the 221-T Plutonium Concentration Building, waste routing from the 224-B Plutonium Concentration Building, history of the surface level in the waste tanks, color photographs of the interior of several tanks and concentrations of TRU, Cs-137 and Sr-90 in tank sludges. The Bismuth Phosphate Chemical Separations Process was used at both the 221-T and 221-B Plants. T Plant was the first chemical separations plant at Hanford and B Plant was a duplicate of T Plant.

Contents of 20 tanks were identified in the presentation as candidates for disposal at WIPP:

T-104, T-105, T-107, T-110, T-111, T-112, T-201, T-202, T-203 and T-204 (associated with the operations of T-Plant, 221-T, and the T-Plant Plutonium Concentration Facility, 224-T);

B-107, B-110, B-111, B-201, B-202, B-203, B-204, (associated with the operations of B-Plant, 221-B, and the B Plant Concentration Facility, 224-B);

SY-102 originating from the Plutonium Finishing Plant; and

AW-103, AW-105 originating from PUREX reprocessing, a process that replaced both the Bismuth Phosphate and the subsequent REDOX chemical separations.

The presentation also alluded "each tank and its contents are different". During the subsequent discussions it appeared that, over the years, from 1943 until perhaps 1980, there was co-mingling of wastes from various tanks and it did not appear that origin of wastes in tanks accurately reflect the wastes that were added or transferred to the tanks over the time period.

d) Allen W. Conklin, Air Emissions and Defense Waste Section, Office of Radiation Protection, Washington State Department of Health

The Washington State Department of Health (DOH) has a supporting role to Washington's Department of Ecology, and is also an independent regulator for radioactive air emissions at the Hanford Reservation. Hanford has 300 radioactive emission units, 30 of which are significant. Most of these 30 units are tank farms and are considered to be HLW. HLW activities licensed by the DOH include: management of wastes and transfers; pumping to remove free liquid; tank sluicing of SST's; maintenance of facilities; evaporation to save tank space; and treatment and stabilization of wastes. In regulating these activities, the DOH attempts to establish a balance between environmental protection and added risks to workers performing the cleanup.

The DOH considers the eight B and T 200 series tanks proposed as TRU to be among the best characterized tanks. Some tanks have not been sampled at all and their characterization is based on tanks with similar types of waste. Some tanks have had only a few samples and others have been sampled only for total alpha activity and total organic carbon. For these tanks, uncertainties can be high. The DOH is uncertain about the accuracy of inventory estimates in the current application.

Most tanks are considered to be HLW and some are clearly LLW. However, the DOH considers 8 to 20 of the tanks to be TRU. Their definition of TRU considers "how far is the waste removed from the first cycle of fuel dissolution". They recognize that the ambiguity of the definition of HLW in the Nuclear Waste Policy Act allows for differences of opinion in classifying TRU. Also, waste

classification is not important to the DOH because they base their licensing conditions on radiation dose to the public.

- e) Thomas Cochran, Senior Scientist, Natural Resources Defense Council, Washington, D.C.

Dr. Cochran discussed the July 2, 2003 court judgment regarding the validity of DOE Order 435.1 and the implications of the court decision for disposal of radioactive waste contained in the high level waste tanks at Hanford, Savannah River (SRS), Idaho National Engineering Laboratory (INEEL), and the West Valley Demonstration Project. The Case {NRDC v. Abraham, 271 F. Supp.2d 1260 (D.ID.2003)} was argued before Judge B. Lynn Winmill of the U.S. District Court in Idaho. This lawsuit was about the waste remaining in the tanks and not about waste removed from the tanks, treated, and solidified.

A central issue in the case was the definition of HLW in the Nuclear Waste Policy Act (NWPA) of 1982. In 1999 the DOE promulgated DOE Order 435.1 which permitted DOE to unlawfully redefine HLW as "incidental waste" if the waste met criteria set forth in the Order. Include in the criteria was the concluding phrase "or must meet such alternative requirements for waste classification and characterization as DOE may authorize." The NRDC argued that the DOE Order conflicted with the NWPA definition of HLW and the concluding phrase gave DOE unfettered discretion to reclassify any HLW as "incidental waste."

Judge Winmill ruled that "DOE had violated the NWPA by promulgating Order 435.1 as it relates to incidental waste, and that portion of Order 435.1 is declared invalid." He also said that DOE does not have the discretion to dispose of defense HLW somewhere other than a repository established under NWPA. This judgment has been appealed by DOE and they are also trying for a legislative reversal.

The waste in the 251 HLW tanks at Hanford, SRS, and INEEL is by definition HLW. The court clearly stated:

"It is undisputed that the waste at Hanford, INEEL, and SRS is highly radioactive and the result of reprocessing. No solids have yet been extracted from the liquid waste at those sites and treated to reduce fission products. Thus the waste at issue in this case falls within NWPA's definition of HLW. (Memorandum Decision, July 2, 2003, p.11)"

Therefore DOE must remove the HLW from the tanks and treat it in a form suitable for final disposal in a repository. The Court's opinion did not prohibit DOE from creating a variety of types of solid wastes after treating the HLW extracted from the tanks. High activity solid waste must be sent to a HLW repository, but HLW liquids could potentially be reclassified. The Court did not address the question of what entity is ultimately responsible for a reclassification decision.

Dr. Cochran summarized the CH2M Hill arguments concerning the 12 tanks at Hanford:

1. The plutonium concentration process is not an integral part of the chemical separation process (i.e. reprocessing);
2. Building 224-T and 224-B were not an integral part of the T- and B-Plants. Therefore these buildings were not part of the reprocessing which occurred in Buildings 221-B and 221-T; and;
3. Waste leaking from first cycle solvent extraction process and wastes from decontamination of first cycle solvent extraction processing equipment are not HLW.

Dr. Cochran disagreed with each of these claims because all of these tanks appear to contain some raffinate from reprocessing.

In Dr. Cochran's opinion, Judge Winmill's opinion does not preclude waste from the 12 tanks from going to WIPP if it is first removed from the tanks, treated to reduce its fission product content and solidified. He recognizes that the waste would have to meet the WIPP waste acceptance criteria.

Detwiler asked if Judge Winmill's decision necessarily applied to all the tanks. Cochran believes it does and that all of the tanks are considered HLW. Some speakers tried, inconclusively, to connect the radioactivity concentrations of waste fractions separated out of the tank waste as a means of classifying TRUM rather than origin and contamination with HLW.

f) David Bartus, U.S. Environmental Protection Agency

Dr. Bartus stated that the perspective of the US Environmental Protection Agency, Region 10 was consistent with that of the Washington State Department of Ecology and was effectively summarized by Susan Dahl. Region 10 is interested in technically viable proposals for the tank wastes and will remain engaged in discussions concerning these proposals. He recognized the complexity of this issue and expressed a concern about rushing into an early decision that could, for example, result in waste being “orphaned” in Washington State. Dr. Bartus emphasized that Region 10 was not a decision maker in the determination of waste classification in the tanks. He believes that the key issue is whether the uranium separation phase is defined as fuel reprocessing.

In response to a question, Dr. Bartus declined to speculate on whether the wastes in the 20 tanks were TRU or HLW. Also, he offered no opinion about the classification of a waste where TRU and HLW was mixed.

5. References:

“DOE’s Evaluation of Whether Some Tank Wastes Meet the Requirements for Disposal at WIPP: An Overview”, Paul Detwiler, DOE (Handout)

“Hanford Tank Waste”, Suzanne Dahl, State of Washington Department of Ecology (Handout)

“Origin of Waste in Selected Hanford Single-Shell Tanks”, Dr. John Kristofzski, CH2MHill and Mr. Robert Yasek, DOE (Handout)

“Department of Health and High-Level Waste at Hanford”, Allen Conklin, State of Washington Department of Health (Handout)

“Potential Disposal at WIPP of Materials Contained in High-Level Radioactive Waste Tanks”, Dr. Thomas Cochran, Senior Scientist, Natural Resources Defense Council (Handout)

“Role of EPA”, Mr. David Bartus, Region 10, U.S. Environmental Protection Agency (No handout, notes were taken of his presentation)

For the discussions presented in this Report, notes of the discussions were used to reconstruct highlighted items.

BRIEFING PAPER

2004 Proposal by the U.S. Department of Energy (DOE) to

Dispose of Hanford High Level Tank Waste at

The Waste Isolation Pilot Plant (WIPP)

Located Near Carlsbad, New Mexico

Prepared by George Anastas, PE, CHP, FHPS, FARPS, DEE

April 29, 2013

Summary: Based upon the presentations and open discussions at a public Workshop held on March 16, 2004 attendees and EEG were convinced that the waste contained in the tanks identified by the DOE Hanford Contractor (CH2MHill) was high level radioactive waste and thus not allowed for disposal at the WIPP. Moreover, the DOE announced in December 2009 (FR 67189) that "DOE is now expressing its preference that no Hanford tank wastes would be shipped to WIPP."

Background: During the fall of 2003 DOE expressed a desire to dispose of Hanford high level radioactive waste at the WIPP. In order to bring transparency to the issue, the Environmental Evaluation Group (EEG) convened a public Workshop on March 16, 2004 in Albuquerque, New Mexico. Over fifty persons attended the Workshop. The Attachment lists the speakers and topics of their presentations. After each speaker, the Participants (the other speakers) were allowed to ask questions. Additional questions were then asked of the Speaker by the attendees.

Dr. John Kristofzski, CH2MHill (DOE Contractor at Hanford) Waste Disposal Strategic Planning Director identified 12 tanks at Hanford potentially containing TRU (Transuranic waste). These 12 tanks were used to store radioactive waste associated with early (1940 era) reactor fuel chemical separations (the Bismuth-Phosphate Process) to recover Plutonium 239 for defense purposes. The chemical process separated Plutonium from a waste stream that contained fission product high level radioactive waste, Uranium and any metal waste.

It was noted that over the years high level radioactive waste has been transferred between the many single shell and double shell high level radioactive waste tanks and thus there has been a "homogenization" of tank waste. The data Dr. Kristofzski presented indicated that as of 2004 these 12 tanks contained a variety of fission products (for example, Cesium 137 and strontium 90) in large quantities as well as Uranium and Plutonium.

ATTACHMENT to Briefing Paper

List of Speakers and Topics

George Anastas, Chairman of the Workshop, Environmental Evaluation Group of New Mexico (EEG)

Dr. Matthew Silva, Director, Environmental Evaluation Group of New Mexico (EEG); Welcome

Mr. Paul Detwiler, DOE Office of the General Counsel and Acting Manager of the Carlsbad Field Office; "DOE's Evaluation of Whether Some Tank Wastes Meet the Requirements for Disposal at WIPP: An Overview"

Ms. Suzanne Dahl, State of Washington Department of Ecology; "Hanford Tank Waste"

Dr. John Kristofzski, CH2MHill (DOE Contractor at Hanford) Waste Disposal Strategic Planning Director and Mr. Robert Yasek, DOE, Office of River Protection for the Hanford Tank Farms Transuranic Waste Project; "Origin of Waste in Selected Hanford Single-Shell Tanks"

Mr. Allen Conklin, State of Washington Department of Health; "Department of Health and High-Level Waste at Hanford"

Dr. Thomas Cochran, Senior Scientist, Natural Resources Defense Council; "Potential Disposal at WIPP of Materials Contained in High-Level Radioactive Waste Tanks"

Mr. David Bartus, Region 10, U.S. Environmental Protection Agency. "Role of EPA"

Notes:

The Environmental Evaluation Group (EEG) provided an independent technical review of the WIPP planning, construction and operation from 1978 to 2004.

Attendees at the Workshop included members of the Press, representatives of the New Mexico Environment Department, U.S. Environmental Protection Agency, Los Alamos National Laboratory, Oregon Department of Energy, and New Mexico stakeholders.

WIPP PERMITTED VS. ACTUAL CAPACITY				Attachment 6		
(in cubic meters)						
	<u>CH-Permitted</u>	<u>Actual</u>	<u>% Used</u>	<u>RH-Permitted</u>	<u>Actual</u>	<u>% Used</u>
Panel 1	18,000	10,500	58.33%	0		
Panel 2	18,000	17,998	99.99%	0		
Panel 3	18,750	17,092	91.16%	0		
Panel 4	18,750	14,258	76.04%	356	176	49.44%
Panel 5	18,750	15,927	84.94%	445	235	52.81%
Panel 6	18,750			534		
Panel 7	18,750			650		
Panel 8	18,750			650		
Panel 9*	18,750			650		
Panel 10*	18,750			650		
Totals	186,000	75,775	40.74%	3,935	411	10.44%
Panels 1-5	92,250	75,775	82.14%	801	411	51.31%
Panels 1-8**	148,500	132,025	88.91%	2,635	2,245	85.20%
Legal Capacity	168,485		78.36%	7,079		31.71%
Panels 9-10***		169,525	100.62%		3,545	50.08%
Notes: *Panels 9 and 10 expected capacities. ** If Panels 6-8 are filled to capacity.						
***Total capacity if Panels 9 and 10 filled to expected capacities.						
"CH" is Contact-Handled waste; "RH" is Remote-Handled						
"Permitted" refers to the limits in the New Mexico WIPP permit						
Compiled by: Don Hancock, Southwest Research and Information Center; 505/262-1862; sricdon@earthlink.net						



U.S. Department of Energy
Office of Inspector General
Office of Audits and Inspections

Audit Report

The Office of Environmental Management's Disposition of Transuranic Waste

OAS-L-13-09

May 2013



Department of Energy
Washington, DC 20585

May 28, 2013

**MEMORANDUM FOR THE DEPUTY ASSISTANT SECRETARY FOR WASTE
MANAGEMENT**

A handwritten signature in black ink, appearing to read "David Sedillo".

FROM: David Sedillo, Director
Western Audits Division
Office of Inspector General

SUBJECT: INFORMATION: Audit Report on "The Office of Environmental
Management's Disposition of Transuranic Waste"

BACKGROUND

The Waste Isolation Pilot Plant (WIPP) is the Department of Energy's (Department) underground repository for contact-handled (CH) and remote-handled (RH) transuranic (TRU) waste. The WIPP Land Withdrawal Act limits WIPP's total capacity for TRU waste to 175,600 cubic meters (m³), of which no more than 7,080 m³ can be RH waste. Under the Act, the U.S. Environmental Protection Agency regulates repository waste disposal operations and shares that responsibility with the State of New Mexico. In October 1999, the New Mexico Environment Department (New Mexico) granted a Hazardous Waste Facility Permit to the Department to begin storage and disposal of TRU waste, although RH disposal did not commence until 2007. The Permit requires approval by New Mexico of any planned changes to the permitted facility that may result in noncompliance with permit requirements.

At the beginning of Fiscal Year (FY) 2011, the Office of Environmental Management (EM) established a strategic goal, in addition to operational goals, to complete disposition of 90 percent of the Department's legacy TRU waste by the end of FY 2015. While EM is also responsible for the TRU waste that the Department continues to generate, newly generated waste is not specifically included in the strategic goal. To achieve the 90 percent goal, EM needed to dispose of approximately 40,000 m³ of waste, or an average of 8,000 m³ per year. EM did not establish specific goals for CH or RH disposal within the overall metric. The planned annual metric was reduced to 6,000 m³ for FY 2012 and 4,500 m³ for FY 2013 because of funding limitations. We initiated this audit to determine whether EM was effectively managing and disposing of its TRU waste relative to its strategic 90 percent waste disposal goal.

RESULTS OF AUDIT

We found that while EM had made progress in meeting its operational disposal goals, it was not on track to meet its goal to dispose of 90 percent of the Department's legacy TRU waste by the end of FY 2015. In particular, EM faces a number of challenges in meeting its planned 90

percent waste disposal goal by 2015. Additionally, without further modifications to the repository or existing waste disposal practices, WIPP may not have capacity for disposal of the current RH inventory. EM is aware of the challenges and has identified alternative actions to alleviate the situation.

EM TRU Waste Goals

We found that EM surpassed its annual TRU waste disposition metrics for FYs 2011 and 2012. Specifically, EM disposed of a cumulative 14,866 m³ compared to its revised 2-year target of 14,000 m³. However, we determined that EM is behind schedule and is not likely to achieve its goal to dispose of 90 percent of legacy TRU waste by the end of FY 2015. To achieve this goal, EM needed to achieve its original metrics, which totaled 16,000 m³ in FYs 2011 and 2012. EM officials recognize that they are behind and explained that when this goal was formulated it was an ambitious measure requiring sustained funding at levels obtained under the American Recovery and Reinvestment Act of 2009 (Recovery Act). WIPP's peak annual funding during the Recovery Act in FYs 2010 and 2011 exceeded \$270 million while its FY 2012 budget dropped to approximately \$228 million. Its FY 2013 budget further decreased to \$202 million. EM officials also told us that recent funding decreases at generator sites adversely affected achievement of the goal by limiting the amount of waste processed for disposal.

EM officials told us that they focused on removing the easiest to process waste first and that remaining waste will be more difficult and potentially more expensive to process because of its current storage condition. Accordingly, meeting disposal goals with less funding will be difficult. EM Program officials told us that they will not be able to achieve the 90 percent goal under current funding scenarios, but noted that EM had not completely abandoned the 90 percent goal. However, one Program official acknowledged that annual TRU waste disposal performance targets do not support achieving the 90 percent goal by the end of FY 2015. EM officials also explained that progress toward the 90 percent goal was adversely affected by recent New Mexico wildfires that caused them to reprioritize their efforts and not focus solely on legacy TRU waste.

Although EM faces challenges in achieving its 90 percent TRU disposition goal, at the time of our audit, it was on-track to meet its current state commitments for waste disposal. For example, the Department and New Mexico established a non-binding agreement to address the highest risk, above-ground TRU waste at Los Alamos National Laboratory. This agreement, known as the Framework Agreement, committed the Department to dispose of approximately 3,706 cubic m³ of above-ground TRU waste by June 30, 2014. EM surpassed its FY 2012 metric for meeting the Framework Agreement requirements. Similarly, the 1995 Settlement Agreement between the Department and the State of Idaho requires the Department to disposition all of the TRU waste at Idaho National Laboratory's Advanced Mixed Waste Treatment Project, estimated at 65,000 m³, prior to December 31, 2018. While the Department is currently on schedule to meet its commitments to New Mexico and Idaho, potential budget cuts may affect waste disposal progress.

RH Disposal Capacity at WIPP

We also found that EM has underutilized WIPP's approved disposal capacity for RH TRU waste. Specifically, as of the end of FY 2012, EM had used only 299 m³ of RH TRU disposal capacity

of the potential 1,023 m³ capacity. This equates to a loss of 71 percent of RH waste disposal capacity available to date. WIPP's current regulatory approved design allows waste disposal in eight underground disposal units that are referred to as panels. EM emplaces RH waste into the walls of the panels then places the CH waste on the floors of those same panels. EM loses any unused RH capacity as they fill a panel with CH waste, since the RH positions in the walls can no longer be accessed. We previously identified the underutilization of RH capacity in our report on *Disposal of Remote-Handled Transuranic Waste at the Waste Isolation Pilot Plant* (DOE/IG-0613, July 2003), which concluded that if EM continued to focus on CH waste emplacement, the repository would not be able to accommodate all of the planned RH shipments. In response, the Department disagreed with the results and recommendations of the report. Since that report was issued, EM's emplacement practices have not changed significantly and the Department has continued to underutilize WIPP's RH capacity, thus narrowing its options to remedy the situation. Assuming current waste emplacement practices, WIPP may run out of RH waste disposal capacity. Specifically, we found that EM estimates that it has approximately 3,538 m³ of RH TRU waste to dispose of and that WIPP currently has a remaining RH disposal capacity of 2,912 m³. This potential lack of disposal capacity exists without factoring in about 1,500 m³ of additional RH waste that may eventually require disposal at WIPP.

According to EM, factors other than the full utilization of WIPP's RH disposal capacity were the primary drivers of the program. In particular, EM has focused on large volume reductions of legacy TRU waste, the majority of which is CH waste, which requires less time, effort and money to process compared to RH waste. Further, large volumes of CH waste were readily available for disposal, thus allowing large volume reductions by focusing on CH waste. In addition, EM's current focus is meeting states' compliance commitments, which focus primarily on CH waste. EM officials also told us they recognize the need to continually refocus the TRU waste program and indicated that its focus going forward is more balanced and will include maximizing repository capacity.

Currently, EM is considering two options that could enable WIPP to accommodate more RH waste. First, in August 2011, EM submitted a request to the Environmental Protection Agency to relocate two of WIPP's planned disposal panels from the main access tunnels to the area south of the other disposal panels, which could allow emplacement of additional RH waste. Second, in November 2012, New Mexico granted a Permit modification to allow disposal of RH waste in shielded containers. Shielded containers allow certain RH waste streams to meet the reduced radiation dose rate limits for CH waste containers so that they can be emplaced in the repository in a manner similar to CH waste. While these two options may increase RH disposal capacity, we determined that they may not be sufficient to completely solve the problem. We found that only a little more than half of the RH inventory could potentially qualify for shipment and disposal in shielded containers. Furthermore, based on previous production costs of shielded containers, we estimate the cost to manufacture enough shielded containers for the potentially qualifying RH inventory to be more than \$200 million which, given the current budget situation, may be cost-prohibitive. While EM officials asserted that transportation and other efficiencies will likely more than offset the costs of the shielded containers, the details of these efficiencies were not provided.

EM officials told us that they recognize the potential repository capacity issues and believe that other factors may come into play that would affect its plans for resolving the issue. In particular,

because funding levels have decreased and CH waste streams are anticipated to be more difficult to dispose of than they have been in the past, the rate of emplacement of CH waste may decrease allowing EM to utilize a greater percentage of WIPP's RH capacity. EM officials also recognize, however, that the cost to dispose of RH waste is higher than that for CH and that funding levels may not provide for higher RH waste disposition rates. Further, while we were told that some of EM's Department-wide projected RH inventory may qualify as either CH or low-level waste, the extent to which this may occur is unknown. EM officials also stated that another possible solution would be to physically separate RH waste disposal from CH waste disposal, but they did not explain how this would occur under the current design of the repository.

Future Plans

EM is at risk of not having sufficient RH TRU waste disposal capacity at the WIPP under existing disposal practices. While EM's planned actions may improve RH capacity utilization, until these actions are fully implemented WIPP's ability to accommodate all of EM's RH waste is uncertain. In addition, by not achieving disposition of 90 percent of legacy TRU waste by the end of FY 2015, the risk reduction originally envisioned when the goal was established may not occur. This change may lead to increased costs and a decrease in public confidence and credibility with states. EM officials asserted that its current priorities actually achieve greater risk reduction sooner than would have been realized if the focus remained on achieving the 90 percent goal.

SUGGESTED ACTIONS

In recognition of the potential risks facing the National TRU Program, we suggest that the Deputy Assistant Secretary for Waste Management continue to assess and monitor the options for meeting the challenges facing the TRU disposition program.

Attachment

cc: Deputy Secretary
Acting Administrator, National Nuclear Security Administration
Senior Advisor for Environmental Management
Chief of Staff

OBJECTIVE, SCOPE AND METHODOLOGY

OBJECTIVE

The audit objective was to determine whether the Office of Environmental Management (EM) was effectively managing and disposing of its transuranic (TRU) waste relative to its strategic 90 percent waste disposal goal.

SCOPE

The audit was performed between April 2012 and May 2013. We conducted the audit at the Waste Isolation Pilot Plant (WIPP) and Carlsbad Field Office (Carlsbad), located in Carlsbad, New Mexico; Los Alamos National Laboratory (Los Alamos) in Los Alamos, New Mexico; and the Idaho National Laboratory (Idaho), near Idaho Falls, Idaho.

METHODOLOGY

To accomplish the audit objective, we:

- Reviewed applicable laws, regulations, and state commitments pertaining to TRU waste disposal;
- Held discussions with Federal and contractor personnel at Carlsbad, Los Alamos, and Idaho;
- Assessed EM's past performance and their future plans regarding TRU waste disposal; and,
- Reviewed WIPP's design and capabilities.

We conducted this performance audit in accordance with generally accepted Government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our conclusions based on our audit objective. The audit included tests of controls and compliance with laws and regulations to the extent necessary to satisfy the audit objective. In particular, we assessed the Department's implementation of the *GPR Modernization Act of 2010* and concluded that the Department had established performance measures for managing the disposition of TRU waste. Because our review was limited, it would not necessarily have disclosed all internal control deficiencies that may have existed at the time of our audit. We conducted an assessment of computer-processed data relevant to our audit objective and concluded that it was sufficiently reliable.

An exit conference was held on May 3, 2013.

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