

Therefore, the LANL staff had to make subjective estimates on grouping the MTRU volumes according to TWBIR number. That effort was reflected in the FY 2005 Annual STP Update submitted to your office in March 2006. Upon NMED review of the FY 2005 STP Update, LANL staff was informed by NMED during subsequent telephone conversations and e-mail message exchanges that incorrect TWBIR numbers were used to categorize the waste volumes reported in Table 2.1-2.

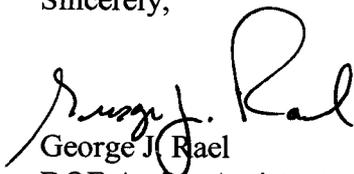
After extended discussions with DOE staff and LANL Waste Operations personnel it has become evident that it may not be possible to categorize LANL's MTRU waste in a manner that will allow NMED to achieve its stated goal, i.e., being "...able to more readily verify the inventory reported to NMED and U.S. Environmental Protection Agency."

The problems with categorizing mixed TRU waste according to the TWBIR number are:

1. The 1995 TWBIR is an antiquated system no longer in use within the DOE complex. The waste volumes in that report were, at best, rough estimates of the amount of TRU waste stored at the various DOE facilities. Since that report, there have been at least two major revisions to TWBIR; the 1996 TWBIR Revision 3 and the 2003 Waste Stream Update. A crosswalk of TWBIR revisions 2-3 to the 2003 Update Report Waste Streams attachment from the 2004 WIPP re-certification application is attached; only the pages directly applicable to LANL are included. As seen in the attachment, the 2003 Waste Streams Update in many instances replaces a single TWBIR code with numerous waste stream codes. For example, the 1996 TWBIR Revision 2 category "LA-W005" has been replaced with twenty-three distinct 2003 Waste Stream Update codes. Further, there is not a one-to-one conversion between the TWBIR Revision 2 and 2003 codes. The 2003 code "LA-TA-55-30" corresponds to ten different TWBIR Revision 2 codes (LA-T001, LA-T004, LA-T005, LA-T006, LA-T009, LA-W001, LA-W004, LA-W005, LA-W006, LA-W066). As such, it is very difficult to provide accurate volumes based on the TWBIR codes.
2. MTRU waste at LANL is characterized on acceptable knowledge provided by the waste generators. Both TRU and MTRU waste transferred to the WIPP Central Characterization Project (CCP) may be re-categorized by CCP personnel based on WIPP requirements. Therefore waste volume reports from WIPP may not match the data managed by LANL and reported in the STP.

Based on these difficulties it is requested that you not require the FY 2005 STP Update Table 2.1-2 to include the TWBIR waste categories. If you deem it necessary to have the TWBIR codes in the STP, then please be aware of the limitations involved when comparing the LANL MTRU data with that reported by WIPP. The DOE will review facility policies regarding tracking of MTRU waste and, if needed, will propose modifications to those policies. Please contact Mr. Albert Dye at (505) 667-4715 or by email at dyea@lanl.gov, or Mr. James Nunz at (505) 667-0573 or by email jnunz@doeal.gov, if you have any questions on the STP.

Sincerely,



George J. Rael
DOE Acting Assistant
Manager for Environmental Operations

Sincerely,



Richard S. Watkins
LANL Associate Director
Environment, Safety, Health, and Quality

Ms. Lee Winn
ESH&Q-06-032

-3-

September 25, 2006

GPR:RSW:AD/lm

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IRM-RMMSO, w/enc., MS A150

ANNEX C to ATTACHMENT F

*CROSSWALK OF TRANSURANIC WASTE BASELINE INVENTORY REPORT REVISION
2/3 AND 2003 UPDATE WASTE STREAMS*

1

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1 **DATA-F-C-1.0 INTRODUCTION**

2 *This 2003 Update Report contains the update to the Transuranic Waste Baseline Inventory*
3 *Report, Revision 2 (TWBIR Revision 2) (DOE 1995) and TWBIR Revision 3 (DOE 1996).*
4 *The U.S. Environmental Protection Agency (EPA) is interested in the differences in the*
5 *inventory between TWBIR Revisions 2/3 and this 2003 Update Report. The EPA used the*
6 *TWBIR Revisions 2/3 data for the Compliance Certification Decision (EPA 1998) to initially*
7 *certify Waste Isolation Pilot Plant (WIPP).*

8 *A crosswalk of the waste streams and a qualitative discussion of the changes are provided in*
9 *this annex. Each transuranic (TRU) waste site with changes in their waste streams was*
10 *requested to provide an explanation for the changes. There were no changes in the waste*
11 *streams from the University of Missouri Research Reactor (MURR). New sites have been*
12 *included in this update but are not included in this Annex. The new sites are: Framatome*
13 *(FR), Hanford-River Protection (RP), General Electric Vallecitos Nuclear Center (GE),*
14 *Separations Process Research Unit (SPRU), Babcock & Wilcox-Lynchburg (BL), and Knolls*
15 *Atomic Power Laboratory-Nuclear Fuels Services (KN). Waste streams presented in this*
16 *section include waste streams from both Annex I and Annex J.*

17 *In addition, several sites no longer have TRU waste on their sites. Those sites are: ARCO*
18 *Medical Products (AM), Pantex (PX), Teledyne-Brown (TB), and Ames Laboratory (AL).*
19 *Mound (MD) TRU waste is being shipped to and accounted for at Savannah River Site (SRS).*

20 *In the tables "NA" in the TWBIR Revision 2 Waste Streams column identifies a new waste*
21 *stream in the 2003 Update. "NA" in the 2003 Update Report Waste Streams column identifies*
22 *a deleted waste stream from TWBIR Revision 2.*

23 **DATA-F-C-1.1 Argonne National Laboratory-East**

24 *During the Argonne National Laboratory-East (ANL-E) 1996 data generation period for the*
25 *TWBIR, the information submitted was the best available at the time. The ANL-E had a large*
26 *number of bins (typically 3.5 m³ (123 ft³)¹ in size), in inventory that contained waste dating*
27 *back to the late 1980s. These bins, containing various sized containers, were assigned a TRU*
28 *waste designation by the generators based on the knowledge of the waste generation process.*
29 *As a result, some of the waste may or may not have been TRU. There also was a quantity of*
30 *various-sized containers that contained liquids or solids that made it difficult to determine*
31 *what the final volume would be.*

32 *Subsequent to the TWBIR Revision 3 submittal, ANL-E embarked on an aggressive campaign*
33 *to characterize, treat, and where appropriate repackage the TRU waste from the bins and*
34 *containers identified and reported in the TWBIR Revision 3. Whenever possible, repackaging*
35 *was performed that resulted in the waste being placed into 55-gallon drums for enhanced*
36 *inventory identification and tracking, and also in preparation for eventual characterization*
37 *and disposal. This repackaging process has resulted in a refinement of ANL-E's ability to*
38 *more accurately quantify the TRU waste.*

¹ The conversion factor used throughout this section is 1 m³ (35.32 ft³).

1 **DATA-F-C-1.11.1 Redefinition of Waste Streams**

2 *Following the guidance in the draft WIPP Waste Analysis Plan (WAP) (NMED 1999), LANL*
 3 *reorganized waste streams beginning in 1998 with publication of the "LANL Waste*
 4 *Characterization Sampling Plan, R.0." Waste streams in the 1996 TWBIR were defined based*
 5 *on major waste material parameter content (e.g., metals, combustible debris, etc.). These were*
 6 *further subdivided beginning in 1998 according to the waste generation facility. Waste stream*
 7 *assignments, especially involving the mixed or non-mixed status of wastes, were further*
 8 *refined using additional acceptable knowledge studies in subsequent versions of the*
 9 *"Acceptable Knowledge Information Summary." There is no simple rule for correspondence*
 10 *in waste stream assignment between the two submittals; improved AK resulted in numerous*
 11 *waste stream reassignments.*

12 **DATA-F-C-1.11.2 Addition of Waste**

13 *Los Alamos National Laboratory (LANL) continues to generate waste – approximately 1,600*
 14 *containers were generated between 1996 and the latest 2003 Update submittal. These have*
 15 *been added to the LANL inventory in the latest data submittal.*

16 **DATA-F-C-1.11.3 Radiography Characterization Data**

17 *LANL has obtained real-time radiography (RTR) data for about 5,000 waste drums from*
 18 *almost all of the defined waste streams. This actual data has been used to complete the*
 19 *information on average, minimum, and maximum waste material parameter content for each*
 20 *waste stream. Isotopic information for each waste stream is still based primarily on AK*
 21 *(generator assays).*

22 *Table DATA-F-C-9 contains the crosswalk of waste streams from TWBIR Revision 2 to the*
 23 *2003 Update Report for the LANL.*

**Table DATA-F-C-9. Los Alamos National Laboratory Crosswalk of Waste Streams
 TWBIR Revision 2 vs 2003 Update Report**

<i>TWBIR Revision 2 Waste Streams</i>	<i>2003 Update Report Waste Streams</i>
<i>LA-M002</i>	<i>LA-TA-00-05, LA-TA-03-28, LA-TA-21-13, LA-TA-21-43, LA-TA-50-17, LA-TA-50-18</i>
<i>LA-T001</i>	<i>LA-TA-00-01, LA-TA-21-42, LA-TA-50-15, LA-TA-55-19, LA-TA-55-30, LA-TA-55-44</i>
<i>LA-T002</i>	<i>LA-TA-50-17</i>
<i>N/A</i>	<i>LA-0S-00-01</i>
<i>LA-T004</i>	<i>LA-IT-00-01, LA-PX-00-01, LA-TA-00-02, LA-TA-00-05, LA-TA-00-06, LA-TA-03-12, LA-TA-03-13, LA-TA-03-19, LA-TA-03-20, LA-TA-03-24, LA-TA-03-26, LA-TA-03-30, LA-TA-21-06, LA-TA-21-12, LA-TA-21-15, LA-TA-21-42, LA-TA-48-01, LA-TA-50-11, LA-TA-50-15, LA-TA-50-40, LA-TA-55-19, LA-TA-55-20, LA-TA-55-21, LA-TA-55-30, LA-TA-55-33, LA-TA-55-38, LA-TA-55-43, LA-TA-55-44, LA-TA-55-48, LA-TA-55-49</i>

24

**Table DATA-F-C-9. Los Alamos National Laboratory Crosswalk of Waste Streams
TWBIR Revision 2 vs 2003 Update Report — Continued**

<i>TWBIR Revision 2 Waste Streams</i>	<i>2003 Update Report Waste Streams</i>
<i>LA-T005</i>	<i>IT-00-01, SL-00-01, LA-TA-00-01, LA-TA-00-02, LA-TA-00-04, LA-TA-00-05, LA-TA-00-06, LA-TA-00-07, LA-TA-03-12, LA-TA-03-19, LA-TA-03-24, LA-TA-03-42, LA-TA-21-12, LA-TA-48-01, LA-TA-50-11, LA-TA-50-15, LA-TA-55-18, LA-TA-55-19, LA-TA-55-20, LA-TA-55-21, LA-TA-55-22, LA-TA-55-23, LA-TA-55-24, LA-TA-55-25, LA-TA-55-26, LA-TA-55-28, LA-TA-55-30, LA-TA-55-32, LA-TA-55-33, LA-TA-55-34, LA-TA-55-38, LA-TA-55-39, LA-TA-55-42, LA-TA-55-43, LA-TA-55-44, LA-TA-55-49, LA-TA-55-53, LA-TA-55-56, LA-TA-55-60</i>
<i>LA-T006</i>	<i>LA-TA-00-02, LA-TA-00-05, LA-TA-21-15, LA-TA-48-01, LA-TA-50-15, LA-TA-55-30, LA-TA-55-32, LA-TA-55-33, LA-TA-55-38, LA-TA-55-49</i>
<i>LA-T007</i>	<i>LA-TA-03-24, LA-TA-03-26</i>
<i>LA-T008</i>	<i>TA-00-01, LA-TA-21-14, LA-TA-21-44, LA-TA-50-20</i>
<i>LA-T009</i>	<i>LA-IT-00-01, LA-OS-00-02, LA-TA-00-01, LA-TA-00-04, LA-TA-00-07, LA-TA-03-12, LA-TA-03-19, LA-TA-03-20, LA-TA-03-24, LA-TA-03-26, LA-TA-03-40, LA-TA-03-42, LA-TA-21-41, LA-TA-21-42, LA-TA-21-44, LA-TA-50-10, LA-TA-50-15, LA-TA-50-17, LA-TA-50-19, LA-TA-50-41, LA-TA-55-19, LA-TA-55-30, LA-TA-55-33, LA-TA-55-34, LA-TA-55-38, LA-TA-55-44, LA-TA-55-48, LA-TA-55-49, LA-TA-55-53, LA-TA-55-56, LA-TA-55-60, LA-TA-55-62, LA-TA-55-63</i>
<i>LA-TR04</i>	<i>LA-TA-03-27</i>
<i>LA-TR05</i>	<i>N/A</i>
<i>LATR07</i>	<i>LA-TA-00-02, LA-TA-03-27</i>
<i>LA-W001 is LA-M001 (This is LANL Local ID.)</i>	<i>LA-TA-00-02, LA-TA-00-04, LA-TA-00-05, LA-TA-03-12, LA-TA-03-19, LA-TA-03-24, LA-TA-03-40, LA-TA-21-12, LA-TA-21-40, LA-TA-21-42, LA-TA-49-01, LA-TA-50-11, LA-TA-50-15, LA-TA-50-40, LA-TA-55-19, LA-TA-55-30, LA-TA-55-44</i>
<i>LA-W003 is LA-M003 (This is LANL Local ID.)</i>	<i>LA-TA-00-05, LA-TA-50-19</i>
<i>LA-W004 is LA-M004 (This is LANL Local ID.)</i>	<i>LA-TA-00-05, LA-TA-00-06, LA-TA-00-07, LA-TA-03-12, LA-TA-03-13, LA-TA-03-20, LA-TA-21-06, LA-TA-55-19, LA-TA-55-20, LA-TA-55-30, LA-TA-55-44, LA-TA-55-56</i>
<i>LA-W005 is LA-M005 (This is LANL Local ID.)</i>	<i>LA-TA-00-02, LA-TA-00-04, LA-TA-00-06, LA-TA-03-13, LA-TA-03-19, LA-TA-03-24, LA-TA-55-19, LA-TA-55-20, LA-TA-55-21, LA-TA-55-22, LA-TA-55-23, LA-TA-55-28, LA-TA-55-30, LA-TA-55-32, LA-TA-55-34, LA-TA-55-38, LA-TA-55-39, LA-TA-55-43, LA-TA-55-44, LA-TA-55-53, LA-TA-55-56, LA-TA-55-60, LA-TA-55-61</i>
<i>LA-W006 is LA-M006</i>	<i>LA-TA-00-05, LA-TA-03-30, LA-TA-21-16, LA-TA-50-19, LA-TA-55-30, LA-TA-55-32, LA-TA-55-38, LA-TA-55-41, LA-TA-55-44, LA-TA-55-49, LA-TA-55-53, LA-TA-03-31</i>
<i>LA-W009 is LA-M009 (This is LANL Local ID.)</i>	
<i>LA-W066 is LA-M001 (This is LANL Local ID.)</i>	<i>LA-TA-00-02, LA-TA-00-04, LA-TA-00-05, LA-TA-03-12,</i>

**Table DATA-F-C-9. Los Alamos National Laboratory Crosswalk of Waste Streams
TWBIR Revision 2 vs 2003 Update Report — Continued**

<i>TWBIR Revision 2 Waste Streams</i>	<i>2003 Update Report Waste Streams</i>
	<i>LA-TA-03-19, LA-TA-03-24, LA-TA-03-40, LA-TA-21-12, LA-TA-21-42, LA-TA-49-01, LA-TA-50-11, LA-TA-50-15, LA-TA-50-40, LA-TA-55-19, LA-TA-55-30, LA-TA-55-44</i>
<i>LA-W067 is LA-T004 (This is LANL Local ID.)</i>	<i>See LANL LA-T004</i>
<i>LA-W068 is LA-T005 (This is LANL Local ID.)</i>	<i>See LANL LA-T005</i>
<i>LA-WR01 is LA-MR01 (This is LANL Local ID.)</i>	<i>LA-TA-00-01, LA-TA-03-27</i>
<i>LA-WR05 is LA-MR05 (This is LANL Local ID.)</i>	<i>LA-TA-03-27</i>

1 **DATA-F-C-1.12 Nevada Test Site**

2 *The Nevada Test Site (NTS) has one new waste stream identified in the 2003 Update from the*
 3 *National Nuclear Security Administration. That new waste stream results from activities from*
 4 *the Joint Actinide Shock Physics Experimental Research (JASPER) Facility.*

5 *Table DATA-F-C-10 contains the crosswalk of waste streams from TWBIR Revision 2 to the*
 6 *2003 Update Report for the NTS.*

7 **Table DATA-F-C-10. Nevada Test Site Laboratory Crosswalk of Waste Streams**
 8 **TWBIR Revision 2 vs 2003 Update Report**

<i>TWBIR Revision 2 Waste Streams</i>	<i>2003 Update Report Waste Streams</i>
<i>NT-W001</i>	<i>NT-W001</i>
<i>NT-W021</i>	<i>NT-W021</i>
<i>N/A</i>	<i>NT-JAS-01</i>

9 **DATA-F-C-1.13 Oak Ridge National Laboratory**

10 **DATA-F-C-1.13.1 Waste Streams**

11 *The number of waste streams was reduced from 16 to 9. The reason for the change is to better*
 12 *represent the waste streams that WIPP will receive. The previously identified waste streams*
 13 *were reflective of the stored inventory. The new waste stream information reflects the*
 14 *repackaged waste after sorting, treatment, recharacterization, and repackaging.*

15 *Corresponding to the WIPP-ID changes, the matrix codes have been updated to reflect the*
 16 *waste stream parameters.*

17 **DATA-F-C-1.13.2 TRUCON Codes**

18 *There were no significant changes in the TRUCON codes. Oak Ridge will need to work with*
 19 *WIPP to obtain TRUCON codes for the various waste streams as Oak Ridge approaches*

1

REFERENCES

2 ***Department of Energy (DOE). 1995. Transuranic Waste Baseline Inventory Report, Revision***
3 ***2, DOE/CAO-95-1121, December 1995.***

4 ***Department of Energy (DOE). 1996. Transuranic Waste Baseline Inventory Report, Revision***
5 ***3, DOE/CAO-95-1121, June 1996.***

6 ***Environmental Protection Agency (EPA). 1998. "Criteria for the Certification and***
7 ***Recertification of the Waste Isolation Pilot Plant's Compliance with the Disposal Regulations:***
8 ***Certification Decision: EPA Final Rule." Federal Register 63:27353-27406, May 18, 1998,***
9 ***Radiation Protection Division, Washington, D.C.***

10 ***New Mexico Environment Department (NMED). 1999. "Waste Isolation Pilot Plant***
11 ***Hazardous Waste Facility Permit." NM4890139088-TSDF, Attachment B, Waste Analysis***
12 ***Plan. Santa Fe, New Mexico.***