



Department of Energy
 Carlsbad Field Office
 P. O. Box 3090
 Carlsbad, New Mexico 88221

AUG - 5 2010



Mr. James Bearzi, Chief
 Hazardous Waste Bureau
 New Mexico Environment Department
 2905 Rodeo Park Drive East, Building 1
 Santa Fe, NM 87505-6303

Subject: Review of Update for the WIPP Operating Record (Change Notice #3)
 Special Setups Waste (BN004, Rev. 0)

Dear Mr. Bearzi:

The Department of Energy, Carlsbad Field Office (CBFO) has approved the Change Notice Number 3 for Special Setups Waste (BN004, Rev. 0) by the Advanced Mixed Waste Treatment Project (AMWTP).

Enclosed is a copy of the form as required by Section B-5a of the WIPP Hazardous Waste Facility Permit, No. NM4890139088-TSDF.

If you have questions on this matter, please contact me at (575) 234-7300.

Sincerely,

David C. Moody
 Manager

Enclosure(s)

cc: w/enclosure
 S. Zappe, NMED * ED

cc: w/o enclosure
 J. Kieling, NMED ED
 G. Basabilvazo, CBFO ED
 N. Castaneda, CBFO ED
 C. Fesmire, CBFO ED
 C. Gadbury, CBFO ED
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*ED denotes electronic distribution



Update for WIPP Operating Record (Change Notice #3)
Special Setups Waste (BN004, Rev. 0)

Please add the following information to the WIPP Operating Record for Waste Stream Profile Form (WSPF) BN004, Revision 0. This waste stream is Special Setups Waste and was approved by DOE/CBFO on December 28, 2005. Change Notice #1 was approved on February 15, 2007 and Change Notice #2 was approved on April 2, 2008.

This WSPF is being revised. The WSPF Form-1195 and AK Summary components are bolded. The updates are:

- 1. WSPF Form-1195, Date of audit report approval by NMED**
Revise NMED audit dates to include 7/2/2004, 1/9/2009 and 1/8/2010
- 2. WSPF Form-1195, Title, version, number, and date of documents use for WAP Certification**
Update the following procedures:
Certification Plan for INL Transuranic Waste, MP-TRUW-8.1, Rev. 19, 6/30/2010
Quality Assurance Project Plan, MP-TRUW-8.2, Rev. 13, 6/30/2010
CCP Transuranic Authorized Methods For Payload Control (CCP CH-TRAMPAC), CCP-PO-003, Rev. 11, 6/4/2009
- 3. WSPF Form-1195, Waste Stream Information, WIPP ID**
Add IN-BN004
- 4. WSPF Form-1195, Waste Stream Information, Description from the WTWBIR**
Change description to:
See Section 1.2.10 of AK Summary
- 5. WSPF Form-1195, Waste Stream Information, Number of Drums**
Change Number of Drums to 2,302 (55 gallon drums)

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6. AK Summary for Special Setups Waste (BN004) (RPT-TRUW-59), Acronyms

Add the following acronyms:

ATWIR	Annual Transuranic Waste Inventory Report
CH-TRAMPAC	Contact Handled Transuranic Waste Authorized Methods for Payload Control
CFR	Code of Federal Regulations
DOE	Department of Energy
EDMS	Electronic Document Management System
HF	hydrofluoric acid
nCi/g	nanocuries per gram
ppm	parts per million
PRQL	program required quantitation limit
RFETS	Rocky Flats Environmental Technology Site
SDA	Subsurface Disposal Area
TSA-RE	Transuranic Storage Area-Retrieval Enclosure
UCL ₉₀	90% upper confidence limit
VE	Visual Examination
VOCs	Volatile Organic Compounds
WTS	Waste Tracking System

Also spell out the above acronyms in their first use in the AK Summary, as required.

7. AK Summary for Special Setups Waste (BN004) (RPT-TRUW-59), Section 1.2.3, Waste Stream Volume

Replace first line with the following:

2,302 55-gallon containers (480 m³) – current volume ⁽³⁾

8. AK Summary for Special Setups Waste (BN004) (RPT-TRUW-59), Section 1.2.4, Generation Dates

Change first sentence as follows:

AMWTP stored containers of Rocky Flats Special Setups waste generated from 1968 to 1988. ⁽⁶⁶⁾

9. AK Summary for Special Setups Waste (BN004) (RPT-TRUW-59), Section 1.2.6, Transuranic Waste Baseline Inventory Report (TWBIR) Information

Change title to:

Waste Isolation Pilot Plant (WIPP) Waste Stream ID

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Change Section 1.2.6 as follows:

Annual Transuranic Waste Inventory Report (ATWIR) Waste Stream ID: IN-BN004
[formerly identified as Transuranic Waste Baseline Inventory Report (TWBIR) Waste
Stream ID: IN-W157]^(5, 67)

**10. AK Summary for Special Setups Waste (BN004) (RPT-TRUW-59), Section 1.2.10,
Description from the TWBIR**

Change title to:

Descriptions from the TWBIR and ATWIR

Replace Section 1.2.10 as follows:

TWBIR waste stream description:

This waste, generated at RF, consists of liquids absorbed on a cement mixture. The liquid wastes were not compatible with aqueous treatment processes and are handled separately due to their plutonium complexing nature.⁽⁵⁾

ATWIR waste stream description:

IN-BN004 (Special Setups) waste was generated from a waste treatment process (predominately laboratory waste) generated in support of plutonium operations at RFETS. Resins and electrochemical milling sludges were also solidified with the liquid waste. This waste stream is comprised of solidified waste assigned IDC ID-RF-004 and ID-RF-802. Special Setups consists of waste >50% by volume inorganic solidified waste. Specifically, small quantities of liquids solidified in large quantities of cement.^{a (67)}

- a. The description in the Annual Transuranic Waste Inventory Report (ATWIR) will be revised in the next annual update to add IDC RF 744 and revise the waste stream description to "IN-BN004 (Special Setups) waste was generated from treating wastes (predominately laboratory waste) generated in support of plutonium operations at Rocky Flats. Resins and electrochemical milling sludges were also solidified with the liquid waste. This waste stream is comprised of solidified waste assigned IDC ID-RF-004, ID-RF-744 and ID-RF-802."

**11. AK Summary for Special Setups Waste (BN004) (RPT-TRUW-59), Section 1.3.1,
Description**

Replace third sentence of first paragraph as follows:

This waste stream is comprised of solidified waste assigned Item Description Codes (IDCs) RF 004, RF 744, and RF 802.

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Replace Table 1-1 as follows:

IDC	WMC	Description
RF 004	S3150	Special Setups Waste – Building 774
RF 744	S3150	Pits 11 and 12 Special Setups
RF 802	S3150	Solidified Laboratory Waste – Building 774

Change second sentence in second paragraph as follows:

A mixture of Portland cement and insulation cement (magnesia cement) was placed in a lined 55-gallon drum and identified with container prefix 744.

Insert following as 3rd paragraph:

Pits 11 and 12 Special Setups (RF 744). RF 744 was assigned by AMWTP to Special Setups containers retrieved from Subsurface Disposal Area (SDA) Pits 11 and 12 and identified with container prefix 744. The process and inputs were the same as waste containers identified as RF 004. The retrieved waste containers were originally generated prior to 1972, shipped to INL and buried in Pits 11 and 12. The waste containers were subsequently retrieved from the pits prior to 1979 and placed in the Transuranic Storage Area-Retrieval Enclosure (TSA-RE).⁽³⁾

12. AK Summary for Special Setups Waste (BN004) (RPT-TRUW-59), Section 1.5, Prohibited Items

Revise first paragraph as follows:

The following items are prohibited at the WIPP in accordance with Section B-1c of MP-TRUW-8.2, Quality Assurance Project Plan, and Section 3 of MP-TRUW-8.1, Certification Plan for INL Transuranic Waste.^(9, 63)

Add the following as the last bullet:

- Sealed containers greater than four liters.

Add the following sentence to the end of the last paragraph:

Non-hazardous solidification agents Aquaset[®], Aquaset II-G[®], and Micro-Cel[®] E may be added to the waste by AMWTP to treat liquid in excess of WIPP-WAC limits.^(64, 65)

13. AK Summary for Special Setups Waste (BN004) (RPT-TRUW-59), Section 1.6.2, Hazardous Determination

Add the following as the third sentence under Ignitability:

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Furthermore non-hazardous absorbents (i.e., cement, vermiculite, and Oil-Dri[®]) were added during packaging for purposes of absorbing liquids. Containers identified with liquid in excess of WIPP-WAC limits may be treated using non-hazardous solidification agents (e.g., Aquaset[®], Aquaset II-G[®], or Micro-Cel[®] E) to render the waste acceptable prior to shipment. ^(64, 65)

Replace the third sentence under Corrosivity with the following:

Furthermore, absorbents (i.e., cement, vermiculite, and Oil-Dri[®]) were added during packaging for purposes of absorbing liquids. ^(7, 18, 19, 20, 21) Containers identified with liquid in excess of WIPP-WAC limits may be treated using non-hazardous solidification agents to render the waste acceptable prior to shipment (e.g., Aquaset[®], Aquaset II-G[®], or Micro-Cel[®] E). ^(64, 65)

Add the following sentence under Reactivity, before the last sentence:

Containers identified with compressed gases or aerosol cans will have the prohibited items treated/removed prior to shipment. Containers with liquid in excess of WIPP-WAC limits may be treated with non-hazardous solidification agents to render the waste acceptable prior to shipment (e.g., Aquaset[®], Aquaset II-G[®], or Micro-Cel[®] E). ^(64, 65)

14. AK Summary for Special Setups Waste (BN004) (RPT-TRUW-59), Section 1.7, Radionuclides

Delete reference 3 from first sentence.

15. AK Summary for Special Setups Waste (BN004) (RPT-TRUW-59), Section 2.1, Waste Packaging

Add the following paragraph to the end of Section 2.1:

Some of the 55-gallon drums may be overpacked into 83- or 85-gallon drums. Either four 55-gallon drums or two 83- or 85-gallon drums, with either the drum lid filters or the drum lids removed, may be direct loaded into an SWB equipped with approved filters.

16. AK Summary for Special Setups Waste (BN004) (RPT-TRUW-59), Section 3, References

Revise the Note as follows:

AMWTP documents such as procedures, AK reports, and operating instructions, are cited without revision numbers or dates. The most recent revisions of these documents are available through the AMWTP Electronic Document Management System. Previous revisions are available on EDMS.

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Revise references as follows:

7. DOE/WIPP-02-3122, Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant, Rev. 6.5, June 30, 2010
61. CCP-PO-003, CCP Transuranic Authorized Methods For Payload Control (CCP CH-TRAMPAC), Central Characterization Project, Rev 11, June 4, 2009

Replace the following references:

3. NDK-001-10, Memo to file, Estimation of Number of Drums for BN004 Waste Stream, July 5, 2010 [C876A]
9. MP-TRUW-8.1, Certification Plan for INL Transuranic Waste
52. INST-OI-34, Non-Facility Visual Examination Operations [P387A]

Add the following references:

64. Material Safety Data Sheets, Aquaset[®] (sodium montmorillonite) and Aquaset II-G[®] (sepiolite), Fluid Tech, January 1, 2005 and November 1, 2008 [P881S]
65. Material Safety Data Sheet, Micro-Cel[®]E, Celite Corporation, January 17, 2007 [P808S]
66. RCM-001-10, Memo to file, Earliest Pack Date for Rocky Flats Waste Retrieved from Pits 11 and 12, July 5, 2010 [C875S]
67. DOE/TRU-2008-3425, Annual Transuranic Waste Inventory Report – 2009 [P838A]

Reason/Justification for the Changes

Item 1. WSPF Form-1195, the audit report approval dates were updated to reflect all audit dates.

Item 2. WSPF Form-1195, the documents used for WAP certification were revised to reflect the most recent revisions.

Items 3, 4, 9, and 10. WSPF Form-1195, TWBIR information was updated to reflect the WIPP ID and description from the most recent annual update of the TWBIR.

Items 5 and 7. WSPF Form-1195 and AK Summary Report Section 1.2.3, Volume was changed to waste stream due to the addition of Special Setups containers retrieved from the SDA Pits 11 and 12 and identified with container prefix 744. The retrieved waste containers were originally generated prior to 1972, shipped to INL and buried in Pits 11 and 12. The waste containers were subsequently retrieved from the pits prior to 1979 and placed in the TSA-RE. The Special Setups waste containers retrieved from Pits 11 and 12

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were generated from the same process as the waste containers already included in BN004. Therefore, there is no impact on the EPA hazardous waste numbers assigned to waste stream BN004.

Item 6. AK Summary Report Acronym and Abbreviation list was updated to reflect all acronyms and abbreviations used in the report. The text of the AK Summary was also updated to spell out the first use of each acronym.

Item 8. AK Summary Report Section 1.2.4 was changed to reflect an earlier waste generation date due to the addition of the Special Setups waste containers retrieved from Pits 11 and 12.

Item 11. AK Summary Report Section 1.3.1, Section revised to include a description of Special Setups waste containers retrieved from Pits 11 and 12 and assigned RF-744.

Item 12. AK Summary Report Section 1.5, Prohibited Items was changed to address all prohibited WIPP waste in accordance with MP-TRUW-8.1, Certification Plan for INL Transuranic Waste and MP-TRUW-8.2, Quality Assurance Project Plan. The last paragraph was modified to clarify disposition of containers identified as containing prohibited liquid with non-hazardous absorbents.

Item 13. AK Summary Report Section 1.6.2, Language under Ignitability, Corrosivity and Reactivity was changed to support the recent WIPP Permit Modification concerning prohibited liquids.

Item 14. AK Summary Report Section 1.7, Reference 3 no longer applies.

Item 15. AK Summary Report Section 2.1 was changed to add a paragraph describing potential direct loading of containers into SWBs.

Item 16. AK Summary Section 3, References, was changed to update the note to reflect current practices of Document Control and to identify references that support the information revised or updated in the AK Summary.

Update for the WIPP Operating Record (BN004) certification:

I hereby certify that I have reviewed this Update for WIPP Operating Record, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.



Signature of Site Project Manager

Eric P. Schweinsberg, SPM

Printed Name and Title

7/27/10

Date