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

February 23, 2022

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

Subject: Approval of the AMWTP Waste Stream Profile Form IN-BN-RF003, *S3000 Solidified Organics, Rocky Flats Building 774 Organic Setups*

Dear Mr. Shean:

The Department of Energy, Carlsbad Field Office and the Nuclear Waste Partnership LLC, as co-permittees of the Waste Isolation Pilot Plant (WIPP) have reviewed the Advanced Mixed Waste Treatment Project (AMWTP) Waste Stream Profile Form (WSPF) and the Characterization Information Summary (CIS) for waste stream *IN-BN-RF003,S3000 Solidified Organics, Rocky Flats Building 774 Organic Setups*. With this letter, we are providing notification and enclosed is a copy of the approved WSPF and CIS as required by the WIPP Hazardous Waste Facility Permit, No. NM4890139088-TSDF, Attachment C, Section C-1d, *Control of Waste Acceptance,* prior to waste stream shipment to WIPP.

We certify under penalty of law that this document and all attachments were prepared under our direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on our inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of our knowledge and belief, true, accurate, and complete. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions, please contact Mr. Kenneth E. Princen, Assistant Manager Office of the National TRU Program Waste Certification & Disposal, at (575) 234-7053.

Sincerely,

REINHARD KNERR Digitally signed by REINHARD KNERR Date: 2022.02.22 17:12:55 -07'00'

Reinhard Knerr
Manager
Carlsbad Field Office

SEAN DUNAGAN (Affiliate) Digitally signed by SEAN DUNAGAN (Affiliate) Date: 2022.02.22 12:57:19 -07'00'

Sean Dunagan
President and Project Manager
Nuclear Waste Partnership LLC

Enclosure

cc: w/enclosure
D. Biswell, NMED *ED
M. McLean, NMED ED
WIPP Operating Record ED
CBFO M&RC
*ED denotes electronic distribution

CBFO:ONTPWCD:KEP:RB:22-0430:UFC 5486.00

220213

Nuclear Waste Partnership
An Amentum-led partnership with BWXT and Orano

RES:22:109
UFC:5822.00

February 9, 2021

Mr. Kenneth Princen, Assistant Manager
National TRU Program
Carlsbad Field Office
U.S. Department of Energy
P.O. Box 3090
Carlsbad, NM 88221-3090

Subject: CONTRACT DE-EM0001971, REVIEW AND APPROVAL OF WASTE STREAM PROFILE FORM, IN-BN-RF003, ROCKY FLATS BUILDING 774 ORGANIC SETUPS, HAZARDOUS WASTE FACILITY PERMIT NUMBER NM4890139088-TSDF

Dear Mr. Princen:

Regulatory Environmental Services (RES) has completed the review of the Waste Stream Profile Form (WSPF) for waste stream IN-BN-RF003, ROCKY FLATS BUILDING 774 ORGANIC SETUPS, in accordance with the provisions of WP 08-NT.03, *Waste Stream Profile Form Review and Approval Program*. As the representative of Co-Permittee, Nuclear Waste Partnership, RES recommends approval of the subject WSPF.

For your convenience, enclosed is the complete WSPF IN-BN-RF003, RPT-1688, Acceptable Knowledge Summary Report for Rocky Flats Building 774 Organic Setups, Characterization Information Summary Report and DRR with comments and resolutions from the review team.

If you have any questions, please contact me at Extension 3225.

Sincerely,

John Hasbets for:

R. R. Chavez, Manager
Regulatory Environmental Services

JCH:lar

Enclosures (4)

cc: (with enclosures)
CBFO M&RC

UNIQUE #	DOE UFC	DATE RECVD	ADDRESSEES
2200171	5822.00	FEB 08 2022	K. Princen

P.O. Box 2078 • Carlsbad, New Mexico USA 88221-2078
Phone: (575) 234-7200 • Fax: (575) 234-7063

220213

WASTE STREAM PROFILE FORM

TEM-6 (03/07/18 – Rev. 0)
This form is the current revision per EDMS.

JASON KETTEL (Affiliate) Digitally signed by JASON KETTEL (Affiliate) Date: 2021-03-03 08:28:11 -07'00'
Signature/Date

Waste Stream Profile Number: (1) IN-BN-RF003

Generator site name: Advanced Mixed Waste Treatment Project Technical contact: (2) Jason Kettel

Generator site EPA ID: ID4890008952 Technical contact phone number: (2) (208)533-6365

Date(s) of audit report approval by NMED: (3) A-19-26, Approved 09/11/2020

Title, version number, and date of documents used for WAP certification: (4) AMWTP CH TRU Waste Certification Plan, PLN-5198, Rev. 4,08/11/2020; Quality Assurance Project Plan, PLN-5199, Rev. 2, 07/31/2018

Did your facility generate this waste? ☐ Yes ☒ No If no, provide the name and EPA ID of the original generator:

(5) Rocky Flats Environmental Technology Site, EPA ID CO7890010526

Waste Stream Information

WIPP ID: (6) IN-BN-RF003, BIR IN-W309, MWIR IN-W309 Summary Category Group: (7) S3000

Waste Matrix Code Group: (8) Solidified Organics Waste Stream Name: (9) Rocky Flats Building 774 Organic Setups

Description from the ATWIR (10) See Reference 1

Defense TRU Waste: (11) ☒ Yes ☐ No Check One: ☒ CH ☐ RH

Number of SWBs (12) 0 Number of Drums (12) 20 Number of Canisters (12) 0

Batch Data report numbers supporting this waste stream characterization: (13) See Characterization Information Summary Report, Table 1

List applicable EPA Hazardous Waste Numbers:[2] (14) D008, D022, D026, D027, D028, D029, D030, D032, D034, D036, D037, F001, F002, and F005

Applicable TRUCON Content Codes: (15) ID 112/ ID 212

Acceptable Knowledge Information[1]

(For the following, enter the supporting documentation used [i.e., references and dates]) (16) See attached Reference List

Required Program Information

Map of site: (17) Reference 1

Facility mission description: (17) Reference 3

Description of operations that generate waste: (17) References 1 and 3

Waste identification/categorization schemes: (17) References 1 and 3

Types and quantities of waste generated: (17) Reference 1

Correlation of waste streams generated from the same building and process, as appropriate: (17) References 1 and 3

Waste certification procedures: (18) Reference 2

Required Waste Stream Information

Area(s) and building(s) from which the waste stream was generated: (19) References 1 and 3

Waste stream volume and time period of generation: (19) References 1 and 3

Waste generating process description for each building: (19) References 1 and 3

Documentation regarding how site has historically managed the waste: (19) References 1 and 3

Process flow diagrams: (19) References 1 and 3

WASTE STREAM PROFILE FORM

JASON KETTEL (Affiliate) Digitally signed by JASON KETTEL (Affiliate) Date: 2022.02.03 09:35:04 -07'00'
Signature/Date

Material inputs or other information identifying chemical/radionuclide content and physical waste form: (19) References 1 and 3

Waste Material Parameter Weight Estimates per unit of waste (20) Reference 1

WASTE STREAM PROFILE FORM

Which Defense Activity generated the waste: (check all that apply) (21) Reference 1

☒ Weapons activities including defense inertial confinement fusion
☐ Naval Reactors development
☐ Verification and control technology
☐ Defense research and development
☐ Defense nuclear waste and material by-products management
☐ Defense nuclear materials production
☐ Defense nuclear waste and materials security and safeguards and security investigations

Additional Acceptable Knowledge Documentation

Process design documents: (22) Reference numbers P002A, P016A, P024A, P052A, P053A, P077A, P085A, P090A, P368A, and P373A in the attached RPT-1688

Standard operating procedures: (22) References 4, 5, 6, 7, 8, 9

Safety Analysis Reports: (22) None

Waste packaging records: (22) Reference numbers C1727A and P3405A (ICP Waste Tracking System Database) in the attached RPT-1688

Test plans/research project reports: (22) None

Site databases: (22) Reference number P3405A (ICP Waste Tracking System Database) in the attached RPT-1688

Information from site personnel: (22) Reference numbers C032A, C057A, C086A, C130A, C134A, C137A, C154A, C159A, C171A, C184A, C185A, and C281A in the attached RPT-1688

Standard industry documents: (22) None

Analytical data relevant to the waste stream: (22) References U098A, P015A, P016A, P368A, and P1100A in the attached RPT-1688

Material safety data sheets: (22) References P084A, P142A, P426S, and P2171S in the attached RPT-1688

Sampling and analysis data from comparable/surrogate waste streams: (22) References P666A and P2124A in the attached RPT-1688

Laboratory notebooks: (22) None

Characterization Information[2]

For the following, when applicable, enter procedure title(s), number(s) and date(s) (16)

Radiography: (23) References 6, 7, 9

Visual Examination: (23) None

Waste Stream Profile Form Certification:

I hereby certify that I have reviewed the information in this Waste Stream Profile Form, 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.

(24) JASON KETTEL (Affiliate) Digitally signed by JASON KETTEL (Affiliate) Date: 2022.02.03 09:37:17 -07'00'	Jason Kettel	
Signature of Site Project Manager	Printed Name	Date

NOTE: (1) Use back of sheet or continuation sheets, if required.
(2) If radiography, visual examination were used to determine EPA Hazardous Waste Codes, attach signed Characterization Information Summary documenting this determination.

WASTE STREAM PROFILE FORM

Continuation Page

Reference List

Reference Number	Reference [Alphanumeric Identifiers in brackets are AK Database Tracking Numbers]
1	P3466A, RPT-1688, Acceptable Knowledge Summary Report for Rocky Flats Building 774 Organic Setups (IN-BN-RF003), Rev. 0, March 1, 2021, Idaho Cleanup Project (ICP) Core
2	P2067S, WIP-1, TRU Waste Certification, Rev. 2, July 29, 2020, ICP Core
3	P649A, RPT-TRUW-56, Acceptable Knowledge Document for INL Stored Transuranic Waste-Rocky Flats Plant Waste, Rev. 8, December 2018, ICP Core
4	P1131S, INST-OI-14, Drum Assay Operations, (Controlled Activity), Advanced Mixed Waste Treatment Project, Rev. 35, December 17, 2013
5	P1131S, TPR-8094, Drum Assay Operations, Rev. 2, June 9, 2017, Rev. 3, January 4, 2018, ICP Core
6	P407A, INST-OI-12, Real-Time Radiography Examinations (Certification Scans), Rev. 51, April 9, 2013, ICP Core
7	P407A, TPR-8089, Real-Time Radiography Examinations (Certification Scans); Rev. 3, June 8, 2017, Rev. 4, November 10, 2017, Rev. 6, March 20, 2019, ICP Core
8	P4018A, TPR-8182, ISOCS Technical Operations; Rev. 3, June 20, 2019, ICP Core
9	P433A, TPR-8041, Visual Examination Operations; Rev. 8, July 9, 2019, ICP Core

CHARACTERIZATION INFORMATION SUMMARY REPORT

TEM-6 (03/07/18 – Rev. 0)
This form is the current revision per EDMS.
George Byram Digitally signed by George Byram Date: 2021 03 01 10:30:56 -07'00'
SIGNATURE/DATE

WSPF Number: IN-BN-RF003 **Lot Number:** .01

Characterization Information Summary

Comments to Address the PLN-5199, Section C3-6b(2) Required Elements:

A. **Data Reconciliation with DQOs:** See attached FRM-1999 (Reconciliation with Data Quality Objectives).

B. **Radiography and VE summary to document that all prohibited items are absent in the waste and to verify that the physical form of the waste matches the waste stream description as determined by AK (if applicable):** See Table 2.

A justification for the selection of radiography and/or VE as an appropriate method for characterizing the waste: As required in WIPP Permit Attachment C (Waste Analysis Plan), Section C-3b (Radiography and Visual Examination), Radiography, or the equivalent, will be used as necessary on the existing/stored waste containers to verify the physical characteristics of the TRU mixed waste correspond with its waste stream identification/waste stream Waste Matrix Code and to identify prohibited items. RTR was selected as the characterization method for the containers in this lot because the containers in this lot were previously packaged at the generator site (Rocky Flats Plant).TPR-8094, Real-Time Radiography Examinations (Certification Scans) is a WIPP approved method for verification of waste physical characterization and identification of prohibited items. RTR is an effective and non-invasive method for S3000 materials with sufficient AK regarding generation processes, waste materials, and potential prohibited items. Some containers used RTR/VE Update in conjunction with RTR to certify the waste. TPR-8041, Visual Examination Operations is a WIPP approved method for verification of waste physical characterization and identification of prohibited items.

C. **A complete listing of all container identification numbers used to generate the WSPF, cross-referenced to each Batch Data Report:** See Table 1.

D. **Complete AK summary:** See attached RPT-1688 (Acceptable Knowledge Summary Report for Rocky Flats Building 774 Organic Setups [IN-BN-RF003]).

E. **Method for determining Waste Material Parameter Weights per unit of waste:** See attached RPT-1688.

F. **List of any AK Sufficiency Determinations requested for the waste stream:** Not applicable.

G. **Certification through acceptable knowledge or testing that any waste assigned the hazardous waste number of U134 (hydrofluoric acid) no longer exhibits the characteristic of corrosivity:** Not applicable.

Characterization Description

CHARACTERIZATION INFORMATION SUMMARY REPORT

The Advanced Mixed Waste Treatment Project (AMWTP) has compiled AK information for the Rocky Flats Building 774 Organic Setups waste stream IN-BN-RF003 as required by the WIPP WAP and WIPP WAC as implemented through PLN-5198, *AMWTP CH TRU Waste Certification Plan* and PLN-5199, *Quality Assurance Project Plan*. In addition, AMWTP has conducted confirmatory testing using real time radiography (RTR) and radioassay. The DQO checklist provides confirmation that the RTR and NDA methods utilized confirmed the AK description of the waste for waste form and radionuclides.

Table 1. Correlation of container identification numbers to data package.

Container No.	RTR Data Package	RA Data Package	VE Data Package
10086836	RTR13-00156	ASY14-01301	Not Applicable*
10623963	RTR17-00126	ASY17-02681	Not Applicable
10637795	RTR18-00003	ASY18-00114	Not Applicable
10641757	RTR19-00022	ASY18-00676	Not Applicable
10603342	RTR19-00026	ASY19-01564	Not Applicable*

Notes:
* RTR information was augmented by RTR Update/Verification (RVU). The Data Package Number is the RTR Data Package Number.

Table 2. RTR/VE summary of prohibited items.

Container No.	RTR Prohibited Items	VE Prohibited Items
10086836	None	Not Applicable
10623963	None	Not Applicable
10637795	None	Not Applicable
10641757	None	Not Applicable
10603342	None	Not Applicable

CHARACTERIZATION INFORMATION SUMMARY REPORT

SPM

Printed Name: George Byram Signature: George Byram Digitally signed by George Byram Date: 2021.03.01 16:31:41 -07'00' Date: 3/1/21

2nd SPM

Printed Name: Wes Skaar Signature: Wes Skaar Digitally signed by Wes Skaar Date: 2021.03.01 15:59:48 -07'00' Date: 3/1/21

SPM signature indicates that the information presented in this package is consistent with batch data reports and indicates concurrence with all information presented in this report.

RECONCILIATION WITH DATA QUALITY OBJECTIVES

George Byram Digitally signed by George Byram Date: 2021.03.01 16:26:45 -07'00'
Signature/Date

I certify by signature below that data of sufficient type, quality, and quantity are collected to meet WAP DQOs.

WSPF No.: IN-BN-RF003

Data Quality Objective	Yes	No	N/A	Comment
1. Have all containers in the lot been assigned the correct Waste Matrix Code?	☒	☐	☐	
2. Have waste material parameter weights been established for each container in the lot?	☒	☐	☐	
3. Does each waste container of waste contain transuranic (TRU) radioactive waste?	☒	☐	☐	
4. Does the waste stream exhibit a toxicity characteristic (TC) under 40 CFR Part 261, Subpart C?	☒	☐	☐	
5. Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR, Part 261, Subpart D?	☒	☐	☐	
6. Can the waste stream be classified as hazardous or nonhazardous?	☒	☐	☐	Hazardous
7. Have the overall completeness, comparability, and representativeness quality assurance objectives (QAOs) been met for each of the testing procedures as specified inPLN-5199, Sections C3-2 and C3-3, for the lot?	☒	☐	☐	
8. Was an Open nonconformance report (NCR) search performed for all containers/pucks/source containers on the final list for the waste stream profile/reconciliation lot?	☒	☐	☐	

RECONCILIATION WITH DATA QUALITY OBJECTIVES

WSPF No.: IN-BN-RF003

Data Quality Objective	Yes	No	N/A	Comment
9. Was an Open NCR search performed for all batches in the final list for the waste stream profile/reconciliation lot?	☒	☐	☐	
10. Were all batches identified in the waste stream profile form (WSPF) or reconciliation lot complete through site project manager (SPM) signature release? List any batches identified as not complete through validation.	☒	☐	☐	
11. Were any open NCRs found that are applicable to the waste stream profile/reconciliation lot? List NCR, container, and batch.	☐	☒	☐	
12. Is there an approved AK Sufficiency Determination for this waste stream?	☐	☒	☐	

Site Project Manager: George Byram (Printed name) | George Byram Digitally signed by George Byram Date: 2021.03.01 16:29:12 -07'00' (Signature) | 3/1/21 (Date)

2nd Site Project Manager: Wes Skaar (Printed name) | Wes Skaar Digitally signed by Wes Skaar Date: 2021.03.01 16:02:01 -07'00' (Signature) | 3/1/21 (Date)