TA 55

March 17, 2000

Memo To File

From Lee Winn LW

RE: LANL WAP SITE TOUR
Waste Analysis Plan

On Wednesday February 16, 2000, Michael Chacon and I went to LANL to learn about their waste acceptance/waste verification procedures at the Solid Waste Office. Our purpose was to determine if the waste stream *vs.* waste process was acceptable. We choose a random Waste Profile Form to determine if verification sampling was made and how discrepancies were resolved. Furthermore we choose a waste stream at TA 55 to see if they had acceptable knowledge to document the waste. In this case they were still working on the acceptable knowledge documentation and will be done by mid May (as part of the WIPP WAP).

The attached presentation details the waste acceptance/ waste verification process.

PU242	0.000E+00	2.190E-06	CIG
U235	0.000E+00	1.290E-09	CIG
U238	0.000E+00	2.000E-10	CIG
NP237	0.000E+00	1.470E-06	CIG
PU244	0.000E+00	3.050E-12	CIG
AM241	0.000E+00	3.300E-04	CIG
PU238	0.000E+00	1.040E-04	CIG
PU239	0.000E+00	3.490E-05	CIG
PU240	0.000E+00	2.750E-05	CIG
PU241	0.000E+00	2.060E-03	CIG

Rad Contamination Type : **VOLUME CONTAMINATION**

WASTE CHARACTERIZATION INFORMATION

Radioactivity Category : **RADIOACTIVE-TRU**

RCRA Category : **NON-HAZARDOUS WASTE**

Misc. Category : N/A

Waste Classification : **TRANSURANIC WASTE**

EPA Hazardous Waste Code : N/A

Toxicity Characteristic Organic Compounds:

Contaminant	Method	Limit	Min	Max	Unit
BENZENE		**Y**			**ppm**
CARBON TETRACHLORIDE		**Y**			**ppm**
CHLOROBENZENE		**Y**			**ppm**
CHLOROFORM		**Y**			**ppm**
CRESOL		**Y**			**ppm**
1,4-DICHLOROBENZENE		**Y**			**ppm**
1,2-DICHLOROETHANE		**Y**			**ppm**
1,1-DICHLOROETHYLENE		**Y**			**ppm**
2,4-DINITROTOLUENE		**Y**			**ppm**
HEXACHLOROBENZENE		**Y**			**ppm**
HEXACHLOROBUTADIENE		**Y**			**ppm**
HEXACHLOROETHANE		**Y**			**ppm**
METHYL ETHYL KETONE		**Y**			**ppm**
NITROBENZENE		**Y**			**ppm**
PENTACHLOROPHENOL		**Y**			**ppm**
PYRIDINE		**Y**			**ppm**
PERCHLOROETHYLENE OR TETRACHLOROETHYLENE		**Y**			**ppm**
TRICHLOROETHYLENE		**Y**			**ppm**
2,4,5-TRICHLOROPHENOL		**Y**			**ppm**
2,4,6-TRICHLOROPHENOL		**Y**			**ppm**
VINYL CHLORIDE		**Y**			**ppm**

Additional Chemical Constituents and Contaminants :

CAS NO	Constituent	MIN	MAX	UOM
	ALUMINUM	**0**	**50**	**%**
	AMMONIA	**0**	**1**	**%**
	ASH	**0**	**10**	**%**
	CALCIUM	**0**	**50**	**%**
	CHLORINE	**0**	**50**	**%**
	FLUORINE	**0**	**50**	**%**
	GRAPHITE POWDER	**0**	**10**	**%**
	PORTLAND CEMENT	**50**	**60**	**%**
	HEPA FILTER MEDIA	**0**	**10**	**%**
	HYDROGEN IONS	**0**	**50**	**%**
	ION EXCHANGE RESIN	**0**	**10**	**%**
	IRON	**0**	**50**	**%**
	LEACHED RESIDUES	**0**	**10**	**%**
	MAGNESIUM	**0**	**50**	**%**
	NICKEL	**0**	**1**	**%**
	NITRATE	**0**	**50**	**%**
	OXALATES	**0**	**50**	**%**
	POTASSIUM	**0**	**50**	**%**
	SILICA SOLIDS	**0**	**10**	**%**
	SODIUM	**0**	**50**	**%**
	SULFATES	**0**	**50**	**%**
	THALLIUM	**0**	**1**	**%**

Radiological Characteristics:

Radionuclide	Min	Max	Unit

LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM
WPF #: 25338

Generator :	GRUETZMACHER, KATHLE	MS :	E501	PH :	54356	Z#:	099731
WMC :	GRUETZMACHER, KATHLE	MS :	E501	PH :	54356	Z#:	099731
Contact :							
CSR :	STAFFORD, DARRIK	MS :	J595	PH :	71638	Z#:	110010
Status :	ACTIVE	Activation Date :	23-DEC-96		Expiration Date:		23-DEC-99
Group :	NMT7	TA :	55	Bldg :	000004	Room:	401

You are required to keep a copy of the WPF(s) in your files for at least three years. This WPF(s) is valid for one year or as long as the composition of the waste you have characterized remains the same and the generator remains the same. Should your waste or generator change, please submit a new WPF to EM-SWO Customer Service, and attach a copy of the WPF which is being replaced.

RMMA : **RADIOACTIVE MATERIALS MANAGEMENT AREA (RMMA)**
Waste Accumu : **None of the Above Site ID#**
Method of Char : **Knowledge of Process**

Waste Type : **Process Waste/Spent Chemical/Other**
Waste Classes: RCA Waste - **Not RCA Waste**
RAD Waste - **Radioactive-TRU**
Assoc Docum: **WM SOP# DP-01**
Other SOP# WODF

Waste Category: **Treated Hazardous waste residue**

Waste Sources : **Materials Processing/Production**

Waste Matrix : **Solid**

Matrix Type : **Homogeneous**

Waste/Proc Desc : TRUCON CODE 114A AND 114B, SOLIDIFIED INORGANIC TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN PORTLAND-BASED CEMENT WITH NO KNOWN HAZARDOUS CONSTITUENTS. LEACHED RESIDUES ARE RESIDUES FROM NONCOMBUSTIBLE LEACHING PROCESSES AND INCLUDE PAPER, PLASTICS AND NONHAZARDOUS METALS. PROCEDURE TRUWM-TA55-DP-04 CEMENT FIXATION OF PROCESS RESIDUES IN 55-GAL. DRUMS. WASTE ORIGINATION AND DISPOSITION FORM - CEMENT (WODF-C).

Ignitability : **Not ignitable**

Corrosivity : **Non-aqueous**

Reactivity : **Non-reactive**

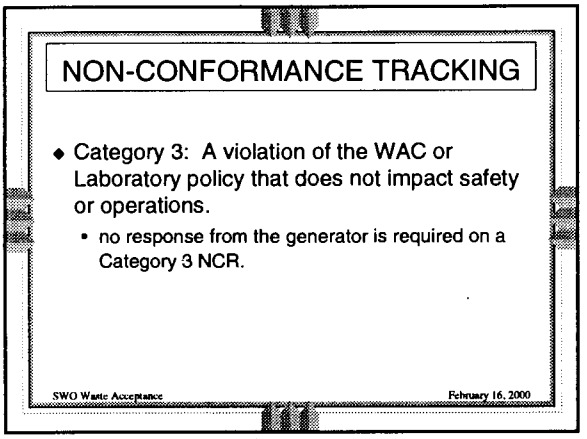
Boiling Point : **Not applicable**

Toxicity Characteristic Metals :

Contaminant	Method	Limit	Min	Max	Unit
ARSENIC	**TCLP**	**Y**			**ppm**
BARIUM	**TCLP**	**Y**			**ppm**
CADMIUM	**TCLP**	**Y**			**ppm**
CHROMIUM	**TCLP**	**Y**			**ppm**
LEAD	**TCLP**	**Y**			**ppm**
MERCURY	**TCLP**	**Y**			**ppm**
SELENIUM	**TCLP**	**Y**			**ppm**
SILVER	**TCLP**	**Y**			**ppm**

SWO Waste Acceptance Presentation to NMED
LANL, TA-54 **February 16, 2000**

	Name	Affiliation	Phone
1.	Sean French	LANL	7-5953
2.	Monica Noll	LANL	7-5999
3.	GIAN BACIGALUPA	ESH-19	7-1579
4.	RAY HAHN	FWO-SWO	5-6158
5.	Barbara McInroy	FWO-SWO	5-86666
6.	Michael Chacon	HRMB	827-5558 x1017
7.	LEE WINN	HRMB	827-1558 x1028
8.	FRANK PRIMOZIC	FWO-WFM	665-5871
9.	Jeff CARMichael	ESH-19	5-2505
10.	BENS GUTIERREZ	FWO-SWO	5-9893
11.	Tammy A. Lash	FWO-SWO	5-3454
12.			
13.			
14.			
15.			


NON-CONFORMANCE TRACKING
◆ Category 3: A violation of the WAC or Laboratory policy that does not impact safety or operations.
• no response from the generator is required on a Category 3 NCR.
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February 16, 2000

NON-CONFORMANCE TRACKING

DOP-FMU64-009

"Issuing & Tracking of Waste Nonconformance Reports"

- NCRs provide a record of corrective action
  - used for identification, trending and recurrence control
  - issued when discrepancy between waste & SWO WAC
  - tracked in SWO database

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database that discrepancies reports

<20 NCR/2000 waste streams/year

NON-CONFORMANCE TRACKING

- Category 1: Severe violation impacting health & safety of workers or public or regulatory compliance.
  - no waste will be accepted from a generator with a Category 1 NCR until corrective action is approved.

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NON-CONFORMANCE TRACKING

- Category 2: A violation of the WAC or Laboratory policy that impacts operations.
  - waste from a generator with a Category 2 NCR will be accepted as long as corrective action has not exceeded the defined time limits - 120 days

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SWO WASTE ACCEPTANCE

CWDR & TWSR

- CWDR/TWSR information entered into SWO database - auto. check for qualified WMC
- QA review for WAC compliance - issues resolved prior to approval
- active for 1 year with extension based on additional review
- DOT packaging instruction

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SWO WASTE VERIFICATION

DOP-FMU64-026

"MLLW, Chemical & Hazardous Waste Sample Verification"

- SWO verification process satisfies the requirements established in the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit

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Concentrates on AK

SWO WASTE VERIFICATION

- generator waste streams that are characterized using AK are verified (sampling & visual)
- generator waste streams that have repeated non-conformance reports may require increased verification

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LANLWASTE CHARACTERIZATION

Waste Profile Form (WPF)

- Generator
  - current, primary method of documenting generator's waste characterization
  - prepared by waste generator, reviewed by WMC, signed by both
- SWO
  - SWO tool for classifying waste
  - AP-SWO-002 - "Processing WPFs and CWDRs"
  - over 2000 WPFs processed per year

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Generator uses WPF & checked by the waste mgmt. coordinator

LANLWASTE CHARACTERIZATION

WPF

- WPF information entered into SWO database
- automatic check for qualified generator/WMC
- SWO QA review and classification - issues resolved prior to approval
- active for 1 year with extension based on second review
- characterization - Sampling and Analysis or Acceptable Knowledge with documentation

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SWO WASTE ACCEPTANCE

Chemical Waste Disposal Request
Transuranic Waste Storage Record

- WMC
  - used to initiate transfer of waste to TA-54
  - prepared and signed by WMC
- SWO
  - SWO tool for determining compliance with TA-54 WAP, WAC, and DOT requirements
  - AP-SWO-002 for CWDR review
  - DOP-54G-003 - "Review and Disposition of the TRU Waste Storage Record"

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ER waste generates a waste characterization strategy form

MIXED LOW LEVEL WASTE also before generated goes through an extra step to verify that they have a path forward (cannot be disposed of)

OVERVIEW OF LANL WASTE CHARACTERIZATION AND SWO WASTE ACCEPTANCE SWO WASTE VERIFICATION

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SWO = solid waste organization

LANLWASTE CHARACTERIZATION

★ **Characterization is Generator Responsibility** ★

- Generator waste characterization meets the requirements specified in the following:
  - LANL Hazardous Waste Facility Permit
  - 20 NMAC 4.1.300, 800 / 40 CFR 261, 268
  - DOE Order 5820.2A
  - LANL Waste Acceptance Criteria
  - Laboratory Implementation Requirements
    - LIR 404.00.02 - General Waste Management
    - LIR 404.00.03 - Haz. & MW Requirements

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- TSDF DOES Classification
- GENERATOR DOES characterization
- TSDF USES WASTE ACCEPTANCE CRITERIA (WAC) WAC not in the permit

LANLWASTE CHARACTERIZATION

- LANL Waste Generators
  - required training specified in LS 105-01 "Waste Management Coordinator Program"
  - typically a researcher with a process
- LANL Waste Management Coordinators
  - approximately 60 Lab-wide
  - qualification standard (LS 105-01)
  - WMC program provides information/consistency
  - primary point-of-contact for organizational waste management

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