7936 R-020-200.1

RESPONSE TO SITE SPECIFIC ADVISORY BOARD QUESTIONS

12/02/96

DOE-0246-97
DOE-FEMP DOE-OR
40
RESPONSES

DOE F 1325.8
(5-83)

7936

United States Government

Department of Energy
Fernald Area Office

memorandum

DATE: DEC 2 1996

DOE-0246-97

REPLY TO ATTN OF: FEMP:Rast

SUBJECT: RESPONSE TO SITE SPECIFIC ADVISORY BOARD QUESTIONS

TO: Bryan Westich, DOE-OR

Attached is the Fernald Environmental Management Project response to questions regarding material and waste received from Oak Ridge Operations. Also attached is a package that addresses the thorium shipments observed at the Nevada Test Site by the Site Specific Advisory Board.

These materials should help to resolve questions regarding the subject questions. If you need any additional support or information, please contact David Rast at (513) 648-3138.

Johnny Reising

Johnny W. Reising
Associate Director
Environmental Management

Attachments: As Stated

cc:

K. Morgan, DOE-OH
K. Leary, DOE-NV
K. Rohrer, DOE-NV
V. Daub, FDF/16-2
F. Ito, FDF/50
AR Coordinator/78
EDC/FDF/52-7

000001

Recycled and Recyclable

M-733 DOE (REV. 11/21/95)

Attachment 1
Response to Questions

1. Are radioactive materials or wastes generated at Oak Ridge Reservation (ORR) presently stored at Fernald?

Fernald was the initial step for Uranium production in the Atomic Energy Commission/Department of Energy weapons complex, and until 1991 was part of the Oak Ridge Operations Office. Fernald's mission was to recover uranium from residues and process uranium oxides and salts to form uranium metal and to manufacture metallic uranium into required patterns. Prior to 1991 numerous shipments of material were made between Fernald and other Oak Ridge managed sights on as required basis.

The majority of these shipments from ORR took place in 1988, with the last shipment of material logged in August 7, 1990. This last shipment was the return of one container of sample material returned to the FEMP.

Waste were returned to FEMP for recovery of uranium materials or for disposition sample analysis wastes derived from FEMP analytical efforts. Since, 1988 Fernald has been prohibited from accepting hazardous waste without the prior approval of the State of Ohio through a Consent Decree. The Fernald Area Office has expanded this agreement to include the acceptance of any waste onto the Fernald site without the prior approval of the State of Ohio.

Fernald has not accepted waste from any ORR, or other DOE facility for the express purpose of shipping that material to the Nevada Test Site.

Most waste shipments to the FEMP were received prior to the 1988 agreement date with a few minor exceptions:

Year	Sample Materials and Secondary Wastes Received
1989	Four thirty gallon containers, gross weight 4503 pounds were received from Y-12
1990	One fifty five gallon container, gross weight 100 pounds was received from ORNL
1992	Two fifty five gallon containers, gross weight 249 pounds was received from K-25

These sample materials and secondary wastes originated from the FEMP and

were returned for disposition and storage.

Specifically the thorium materials you observed at the Nevada Test Site were shipped to Fernald during the early 1960's. Fernald was directed to serve as the repository for government thorium supplies. Thorium materials were delivered to the site from some 38 different facilities including Y-12, and ORNL, in Oak Ridge.

The changes in the development of nuclear power precipitated a further evaluation of the necessity for the thorium inventory at Fernald. In 1992 the thorium materials were declared waste and efforts to ship and dispose of the material initiated. The current thorium shipments are part of the disposal of the last significant inventory of thorium waste remaining at Fernald.

Uranium materials that remain in inventory at the site are currently being evaluated to determine a need in the DOE complex or commercial sector prior to declaring the materials to be waste.

2. **If so, is Fernald shipping any of this ORR waste or material to the Nevada Test Site (NTS)?**

Inevitably some of the materials received from other Oak Ridge sites were processed through the facilities at Fernald and may have been shipped as waste to the Nevada Test Site. All these waste streams were shipped under the FEMP Application to Ship Waste to the Nevada Test Site with a Fernald identifier.

3. **Is radioactive material or waste generated at ORR and stored at Fernald repackaged? Upon Fernald's receipt? Sometime during storage? Prior to shipment to final disposal?**

Materials shipped to the Fernald site were properly packaged and inspected upon receipt at the site during the time frame they were shipped. Given the numerous changes in the Department of Transportation requirements, and potential degradation of the containers from years of storage, repackaging is required prior to offsite shipment. In addition, some materials are repackaged if container degradation is observed during periodic inspections while the material is in storage. Specific criteria for container evaluation and procedures on the frequency of container inspections are in place and reviewed by regulatory officials, these procedures also govern corrective actions taken to mitigate container degradation.

4. **If Fernald is storing ORR waste, does the waste from ORR retain its Waste**

Stream Identification Number assigned to it at ORR while being stored, repackaged, and shipped?

As stated previously waste received from ORR and shipped to FEMP was done so historically (prior to 1991) and was to be processed for recovery at FEMP. Later waste shipments were returns of sample or analytical wastes. Since the wastes were not being transported to NTS for disposal or were shipped prior to the issuance of NVO-325 "Nevada Test Site Defense Waste Acceptance Criteria, Certification, and Transfer Requirements" the Waste Identification Number would not be applicable and so would not be retained. Analytical and sample wastes returned originated from the FEMP and would be classified under the FEMP Application to Ship Waste to the Nevada Test Site.

5. If Fernald is storing ORR material, does the material retain its nuclear material accountability number while being stored, packaged, and shipped.

Nuclear materials retain their accountability classification through disposal. Until a material from an offsite source was processed through a FEMP unit operation it would retain a site inventory designator indicating that it was from an offsite source. Present inventories indicate that there is over 700,000 pounds of material from three Oak Ridge facilities including ORNL, Portsmouth, and Paducah.

Attachment 2
Thorium Package Review

In her letter to K. Rohrer at DOE-NV, R. Traylor, Oak Ridge Reservation Environmental Management Site Specific Advisory Board, raises some questions regarding markings on a blue Thorium Overpack Container (TOC) at the Nevada Test Site Disposal Area she observed while touring the area. Specifically she is concerned that the boxes were marked "Oak Ridge" in white stenciled lettering on TOC observed.

Information was checked regarding the specific shipments that arrived October 22, 1996. Three thorium shipments arrived on the date in question: WML 97-001, WML 97-012, WML 97-013, and WML 97-014. A package of information has been prepared with information regarding each shipment. This package includes:

- Shipping Order for Nuclear Material for each shipment that is provided to NTS as notification for an incoming shipment.

- Quality L-LRW Trailer Examination at Loading, this form indicates the inspections for loading and the number placed on the Radiological Survey seal and Tamper Indicator Seal for loaded vans.

- Copies of photographs taken while the shipment is being prepared. Photos are take when the shipment is half and fully loaded. All photos are marked with shipment number, trailer number, and are initialed and dated by inspectors. Please note that all TOCs bear the manufacturers mark:

  MFR: SCS, INC. 1996
  OAK RIDGE, TN.

- Circle Copy for each shipment that checks each container to be loaded for shipment. This document includes the package serial numbers for the packages in the shipment.

- Package Storage and Disposal form. This document provides specific information on the contents of each package that is part of the designated.

- The Supplier Quality Release forms for each TOC serial number in the shipment are provided. These documents demonstrate the inspection and approval of each container prior to dispatch to the FEMP.

- Quality Evaluation Plan receipt inspection forms for each container serial number in the shipment.

Site representatives reviewed each shipment package and data to substantiate the claim of containers with a mark different than the one noted above and could not find supporting evidence. Inspections were conducted on November 20 and 21, 1996 of all TOCs remaining in inventory at the FEMP and all were marked on opposing corners with the manufacturers mark:

MFR: SCS, INC. 1996
OAK RIDGE, TN.

Photographs 1 through 3 show the TOC storage area. Photograph 4 is an incoming shipment of empty TOC that arrived while inspection of storage area was being conducted.

Interviews of vendor source inspectors and receipt inspectors confirmed that they had never noted a manufacturers mark that varied from the one described above. Vendor source inspectors noted that only one stencil for marking containers had been used for the manufactures labeling of TOC containers.

WML 97-001

Fluor Daniel Fernald, Inc.
SHIPPING ORDER FOR NUCLEAR MATERIAL

Date Prepared: 10/14/96

SHIP TO: BECHTEL NEVADA CO. INC.	ROUTING: Ranger Transportation, Inc.		SHIPPERS AUTHORIZATION NO.:	SHIPPING ORDER No.: 5611
STREET: U.S. DEPT. OF ENERGY, P.O. BOX 229	[X] PREPAID [ ] COLLECT	CAR OR TRAILER No.: 93154	SEAL No.: 00494	SHIPPED FROM PLANT:	ORIGINATOR'S No.: WML97001
CITY: MERCURY STATE: NV	ZIP CODE: 89023	BILL OF LADING No.: 7008	QUALITY CONTROL APPROVAL: D. G. Miller 10-18-96	DATE SHIPPED: 10-18-96
SPECIAL INSTRUCTIONS:		COUNTRY CONTROL NO.:	PROJECT No.:	TIME SHIPPED:

Type of Material: THORIUM TRASH
FEMP Production Order No. N003
Originator's Signature [signature]
Station RIS: VAB
DOE 741 No. GVC-VAB-001
Shipment Authorized By [signature] 10-18-96
NUCLEAR MATERIALS REPRESENTATIVE

NMC DATA			ORIGINATOR'S DATA						MATERIAL CONTROL DATA					
FROM MBA	COST CODE	741 No.	P.O. No.	LOT NUMBER	QUANTITY	WEIGHT (LBS) GROSS	TARE	NET	ANAL CODE	ELE. ANAL.	ELE. LBS.	ELE. GRAMS. OR KGS	ISO. ANAL.	U235 GRAMS OR KGS
549	G01	001	0000	375 T003 A413	9	27,040	20,664	6,376		1.22	78	35289		
				TOTALS:	9	27,040	20,664	6,376			78	35,289		

ETA: 7:00 A.M., TUESDAY, OCTOBER 22, 1996

DISTRIBUTION OF COPIES			
1	NMA (Record Copy)	4	Environmental Restoration
2	TRAFFIC	5	Quality Certification
3	NMA (Cost)	6	Originator

I, Marjorie Cain certify that this shipment was made on the above date after complying with all regualtions.

Audited by _____ Date _____

000008

PACKAGE STORAGE AND DISPOSAL

Shipment No: WML97001

Prepared by: [signature] Date: 10/16/96

Approved by: [signature] Date: 10/16/96

Package No: 420531 WS/ID: ONL0000000011 Operation Type: B Container Code: 107 Package Date: 05/10/9
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 10/08/
Int. Vol(Cu M): 2.719E+00 Ext Vol(Cu M): 3.172E+00 Gross Wt(Kg): 1.289E+03 Net Wt(Kg): 3.447E+02 Tot Curie: 1.675E-
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: .50 1 Meter: .50

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantit
U233ci	1.517E-05	U234ci	0.000E+00	U235ci	0.000E+00	U236ci	0.000E+00	U238ci	3.447E-
TC99ci	7.929E-06	PU238ci	7.653E-05	PU239ci	5.860E-06	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.609E-04	TH230ci	1.203E-04	TH232ci	4.588E-04	RA226ci	1.051E-04	RA228ci	4.240E-
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.0057	TH232gm	4,206	Tot Thorium Grm	4,206		

Background info: Lot- 0000 375 T 003 A413 GW- 2842.00 NW- 760.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM PPE, CRUSHED DRUMS Cont Desc- THORIUM WASTE

Package No: 420621 WS/ID: ONL0000000011 Operation Type: B Container Code: 107 Package Date: 05/16/
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 10/08,
Int. Vol(Cu M): 2.719E+00 Ext Vol(Cu M): 3.172E+00 Gross Wt(Kg): 1.178E+03 Net Wt(Kg): 2.495E+02 Tot Curie: 1.212E-
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 1.00 1 Meter: .50

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quanti
U233ci	1.098E-05	U234ci	0.000E+00	U235ci	0.000E+00	U236ci	0.000E+00	U238ci	2.495E
TC99ci	5.738E-06	PU238ci	5.538E-05	PU239ci	4.241E-06	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	3.335E-04	TH230ci	8.707E-05	TH232ci	3.321E-04	RA226ci	7.609E-05	RA228ci	3.069E
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.0041	TH232gm	3,044	Tot Thorium Grm	3,044		

Background info: Lot- 0000 375 T 003 A413 GW- 2596.00 NW- 550.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM PPE, CRUSHED DRUMS Cont Desc- THORIUM WASTE

Package No: 420587 WS/ID: ONL0000000011 Operation Type: B Container Code: 107 Package Date: 05/16/
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 10/08
Int. Vol(Cu M): 2.719E+00 Ext Vol(Cu M): 3.172E+00 Gross Wt(Kg): 1.252E+03 Net Wt(Kg): 2.731E+02 Tot Curie: 1.327E
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: .50 1 Meter: .5

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quanti
U233ci	1.201E-05	U234ci	0.000E+00	U235ci	0.000E+00	U236ci	0.000E+00	U238ci	2.731E
TC99ci	6.280E-06	PU238ci	6.062E-05	PU239ci	4.642E-06	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	3.651E-04	TH230ci	9.530E-05	TH232ci	3.634E-04	RA226ci	8.328E-05	RA228ci	3.359E
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.0045	TH232gm	3,331	Tot Thorium Grm	3,331		

Background info: Lot- 0000 375 T 003 A413 GW- 2760.00 NW- 602.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM PPE, CRUSHED DRUMS Cont Desc- THORIUM WASTE

PACKAGE STORAGE AND DISPOSAL

Shipment No: WML97001

Prepared by: [signature] Date: 10/16/96

Approved by: [signature] Date: 10/16/96

Package No: 420749 WS/ID: ONL0000000011 Operation Type: B Container Code: 107 Package Date: 05/21/
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 10/02
Int. Vol(Cu M): 2.719E+00 Ext Vol(Cu M): 3.172E+00 Gross Wt(Kg): 1.410E+03 Net Wt(Kg): 2.994E+02 Tot Curie: 1.455E
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: .80 1 Meter: .5

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quant
U233ci	1.317E-05	U234ci	0.000E+00	U235ci	0.000E+00	U236ci	0.000E+00	U238ci	2.994
TC99ci	6.885E-06	PU238ci	6.646E-05	PU239ci	5.089E-06	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.003E-04	TH230ci	1.045E-04	TH232ci	3.985E-04	RA226ci	9.131E-05	RA228ci	3.682
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.0050	TH232gm	3,652	Tot Thorium Grm	3,652		

Background info: Lot- 0000 375 T 003 A413 GW- 3108.00 NW- 660.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM PPE, CRUSHED DRUMS Cont Desc- THORIUM WASTE

Package No: 420763 WS/ID: ONL0000000011 Operation Type: B Container Code: 107 Package Date: 05/21
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 10/0
Int. Vol(Cu M): 2.719E+00 Ext Vol(Cu M): 3.172E+00 Gross Wt(Kg): 1.489E+03 Net Wt(Kg): 3.075E+02 Tot Curie: 1.494
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: .50 1 Meter: .

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quant
U233ci	1.353E-05	U234ci	0.000E+00	U235ci	0.000E+00	U236ci	0.000E+00	U238ci	3.075
TC99ci	7.073E-06	PU238ci	6.827E-05	PU239ci	5.228E-06	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.112E-04	TH230ci	1.073E-04	TH232ci	4.093E-04	RA226ci	9.380E-05	RA228ci	3.783
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.0051	TH232gm	3,752	Tot Thorium Grm	3,752		

Background info: Lot- 0000 375 T 003 A413 GW- 3282.00 NW- 678.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM PPE, CRUSHED DRUMS Cont Desc- THORIUM WASTE

Package No: 420764 WS/ID: ONL0000000011 Operation Type: B Container Code: 107 Package Date: 05/1C
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 10/C
Int. Vol(Cu M): 2.719E+00 Ext Vol(Cu M): 3.172E+00 Gross Wt(Kg): 1.308E+03 Net Wt(Kg): 3.402E+02 Tot Curie: 1.653
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: .50 1 Meter: .

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quant
U233ci	1.497E-05	U234ci	0.000E+00	U235ci	0.000E+00	U236ci	0.000E+00	U238ci	3.402
TC99ci	7.824E-06	PU238ci	7.552E-05	PU239ci	5.783E-06	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.548E-04	TH230ci	1.187E-04	TH232ci	4.528E-04	RA226ci	1.038E-04	RA228ci	4.184
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.0057	TH232gm	4,150	Tot Thorium Grm	4,150		

Background info: Lot- 0000 375 T 003 A413 GW- 2884.00 NW- 750.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM PPE, CRUSHED DRUMS Cont Desc- THORIUM WASTE

PACKAGE STORAGE AND DISPOSAL

Shipment No: WML97001

Prepared by: [signature] Date: 10/16/96

Approved by: [signature] Date: 10/16/96

Package No: 420781 WS/ID: ONL0000000011 Operation Type: B Container Code: 107 Package Date: 05/09/9
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 10/08/
Int. Vol(Cu M): 2.719E+00 Ext Vol(Cu M): 3.172E+00 Gross Wt(Kg): 1.416E+03 Net Wt(Kg): 3.402E+02 Tot Curie: 1.653E-
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: .80 1 Meter: .50

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantit
U233ci	1.497E-05	U234ci	0.000E+00	U235ci	0.000E+00	U236ci	0.000E+00	U238ci	3.402E-
TC99ci	7.824E-06	PU238ci	7.552E-05	PU239ci	5.783E-06	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.548E-04	TH230ci	1.187E-04	TH232ci	4.528E-04	RA226ci	1.038E-04	RA228ci	4.184E-
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.0057	TH232gm	4,150	Tot Thorium Grm	4,150		

Background info: Lot- 0000 375 T 003 A413 GW- 3122.00 NW- 750.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM PPE, CRUSHED DRUMS Cont Desc- THORIUM WASTE

Package No: 420864 WS/ID: ONL0000000011 Operation Type: B Container Code: 107 Package Date: 05/21/9
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 10/08/
Int. Vol(Cu M): 2.719E+00 Ext Vol(Cu M): 3.172E+00 Gross Wt(Kg): 1.662E+03 Net Wt(Kg): 4.200E+02 Tot Curie: 2.041E-
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: .70 1 Meter: .50

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantit
U233ci	1.848E-05	U234ci	0.000E+00	U235ci	0.000E+00	U236ci	0.000E+00	U238ci	4.200E-
TC99ci	9.661E-06	PU238ci	9.325E-05	PU239ci	7.140E-06	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	5.616E-04	TH230ci	1.466E-04	TH232ci	5.591E-04	RA226ci	1.281E-04	RA228ci	5.166E-
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.0070	TH232gm	5,124	Tot Thorium Grm	5,124		

Background info: Lot- 0000 375 T 003 A413 GW- 3664.00 NW- 926.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM PPE, CRUSHED DRUMS Cont Desc- THORIUM WASTE

Package No: 420792 WS/ID: ONL0000000011 Operation Type: B Container Code: 107 Package Date: 05/10/9
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 10/08/
Int. Vol(Cu M): 2.719E+00 Ext Vol(Cu M): 3.172E+00 Gross Wt(Kg): 1.262E+03 Net Wt(Kg): 3.175E+02 Tot Curie: 1.543E-
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 1.20 1 Meter: .50

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quanti
U233ci	1.397E-05	U234ci	0.000E+00	U235ci	0.000E+00	U236ci	0.000E+00	U238ci	3.175E-
TC99ci	7.303E-06	PU238ci	7.049E-05	PU239ci	5.398E-06	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.245E-04	TH230ci	1.108E-04	TH232ci	4.226E-04	RA226ci	9.684E-05	RA228ci	3.905E-
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.0053	TH232gm	3,874	Tot Thorium Grm	3,874		

Background info: Lot- 0000 375 T 003 A413 GW- 2782.00 NW- 700.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM PPE, CRUSHED DRUMS Cont Desc- THORIUM WASTE

PACKAGE STORAGE AND DISPOSAL

Shipment No: WML97001

Prepared by: [signature] Date: 10/16/96

Approved by: [signature] Date: 10/16/96

Final Totals

Int. Vol(Cu M): 2.447E+01 Ext Vol(Cu M): 2.855E+01 Gross Wt(Kg): 1.227E+04 Net Wt(Kg): 2.892E+03 Tot Curie: 1.405E-02

Total Th Grams: 35,283

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity
U233	1.273E-04	U234	0.000E+00	U235	0.000E+00	U236	0.000E+00	U238	2.892E-04
TC99	6.652E-05	PU238	6.420E-04	PU239	4.917E-05	PU241	N/A	NP237	N/A
PB210	N/A	SR90	N/A	CS137	N/A	NI63	N/A	K40	N/A
TH228	3.867E-03	TH230	1.009E-03	TH232	3.849E-03	RA226	8.821E-04	RA228	3.557E-03
AM241	N/A								

QUALITY L-LRW TRAILER EXAMINATION AT LOADING

7936

SHIPMENT NO WML97 001 LOADING LOCATION: Chem Warehouse

CARRIER: RANGER TRAILER NO.: 93154

	Stamp	Date
1. Verify a Preliminary Visual Trailer Inspection was completed for empty trailer prior to having been unhooked from tractor.	FEMP CA 40	10-17-96
2. Verify a EBL radiological survey (FS-F-1596-1) is complete for trailer, and results meet 49 CFR 173.441 requirements.	FEMP CA 40	10/17/96

(For Vans Only) SEAL# 0002855

****

3a. Prior to loading, verify seal number is the same as that applied by the RC technician.	FEMP CA 40	10-17-96
3b. Verify each package has a signed and dated NV-211 label affixed and TID(s) are present.	FEMP CA 40	10-17-96
3c Verify each package is free of dirt/loose rock and has no significant deformations or holes.	FEMP CA 40	10-17-96
3d. Verify there is no free liquid emitting from packages.	FEMP CA 40	10-17-96
3e. Verify that packages have been properly tied-down as specified by procedure SOP 50-C-109.	FEMP CA 40	10-17-96
3f. Verify the trailer envelope is affixed to the last package inside the trailer.	FEMP CA 40	10-17-96
3g. Verify that the loaded trailer rear doors are secured with the DOT approved seal. Seal No. 00494 RAD 0001449	FEMP CA 40	10-17-96

VANS ONLY

4a. Verify there is no free liquid emitting from the package.	N/A	
4b. Verify each package has been cleaned of dirt/loose rock and has no significant deformations or holes.	N/A	
4c. Verify that the doors of each Sea/Land container are banded and secured with a tamper proof DOT approved seal.	N/A	

FLATBEDS

Package#1 Serial# N/A Seal# N/A (Sea/Land) or N/A (TL WMB)

Package#2 Serial# N/A Seal# N/A (Sea/Land) or N/A (TL WMB)

PLACE A SIGNED & DATED NV-211 ON SEA/LAND OR TL/WMB WHEN CRITERIA 4 A-C IS MET AND TAKE ONE (1) PHOTO OF LABEL TO VERIFY IT IS SIGNED AND DATED.

Signed: Susan A. Schah (Quality Verification) Date: 10-17-96

ORIGINAL

FS-F-4416 (Rev. 05/10/94) LOADTRAI.04 *WRITE COMMENTS ON BACK OF FORM 000013

CERTIFICATION STATEMENT

LOW-LEVEL WASTE SHIPMENT FROM FEMP TO NEVADA TEST SITE

Bill of Lading# 7008	Seal Number(s) 00494
Trailer# 93154	

I certify that the packages in Shipment No. WML97 001 as listed on the attached Package Storage & Disposal Data report do not contain hazardous waste as defined in Title 40 CFR 261 or OAC 3745-54 hazardous waste regulations:

(1) according to the results of tests performed in accordance with the requirements as specified in Subpart C of Title 40 CFR 261; and/or

(2) according to the supporting documentation provided to me about the materials and processes that produced the waste.

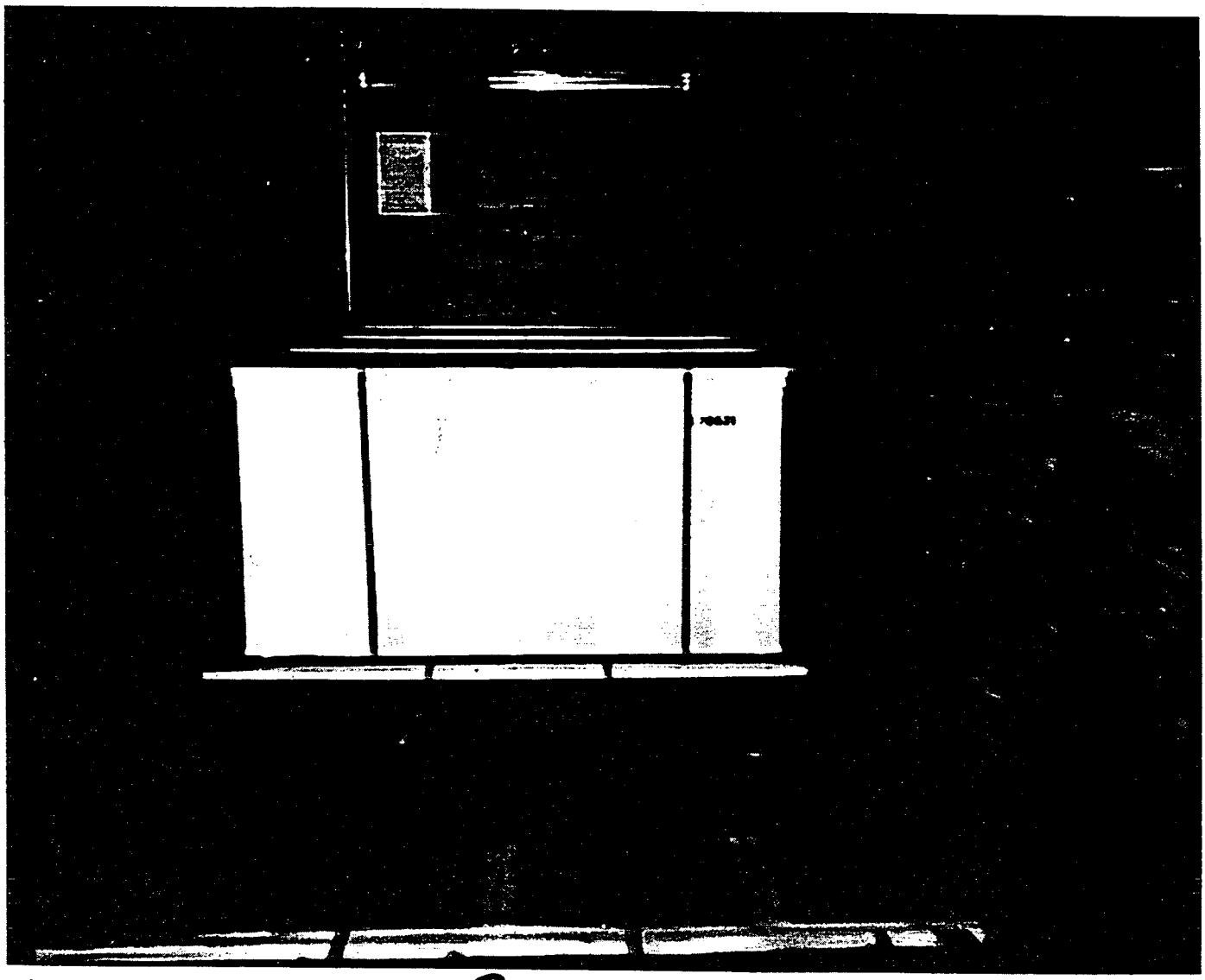
To the best of my knowledge, I believe the information I have submitted is true, accurate, and complete.

D. G. Miller
FEMP Waste Certification Official

Date: 10-18-96

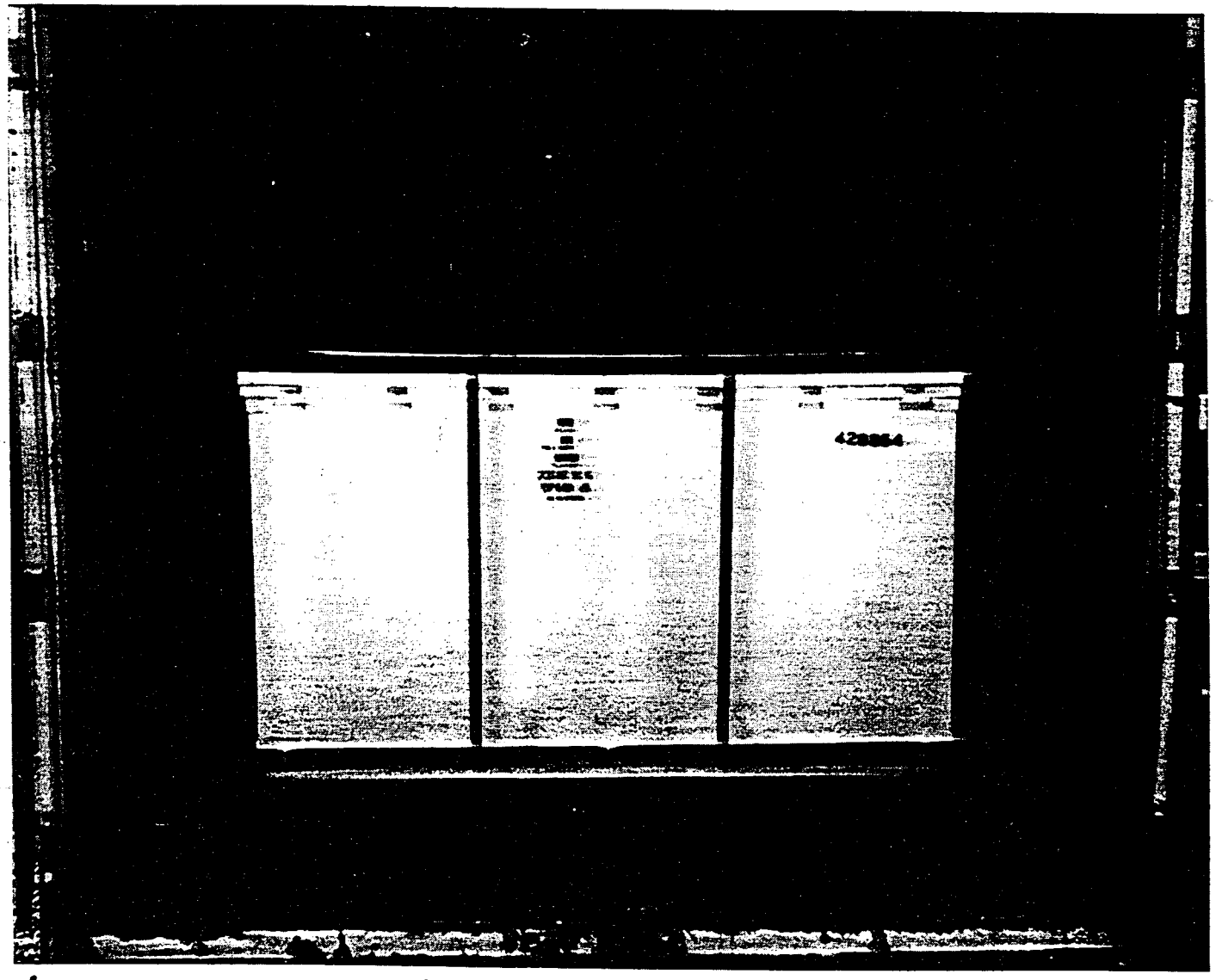
FS-F-4431 (Rev. 10/14/94) CERT-ST.07

Y2 PALL



Shipment #97-001 9 WMB'o
Trailer #93154 6A3
Chem 10-17-96

FILE



Slipment #97-001 SAS
Trailer # 93154 9 WMB's
10-17-96 Chem

QUALITY EVALUATION PLAN ORIGINAL

QEP No. 96-0831 Rev. 0

1. Source [ ] Receiving [X] Const./Remediation [ ] Maint./Operations [ ] Waste [ ] Sampling [ ] Recycling [ ]

2. Item/Title/Description STRONG-TIGHT CONTAINER (WHITE METAL BOX) P.O. # 95MB004830 (QEP Rev. 2)

CGR COMPACTING INC., N. ADAMS, MA.

3. Project/Task: Waste Programs	4. Spec./DWG:
5. Prepared By: Don Kalar Date: 02-27-96	6. Reviewed By: Frank Thompson Date: 3-11-96
7. NDE Level III: (When Required) N/A Date:	8. Approved By: (When Required) Date:

9. Char. No.	10. Evaluation Characteristic	11. Status Stamp & Date	12. General Remarks
	Receipt Inspection of (white metal box) Container FULL-HEIGHT - 4' x 4' x 7' HALF-HEIGHT - 2' x 4' x 7'		Verification of the closure tab alignment shall be 100%
1.	VERIFY the closure tabs of the lid are in alignment with the tab openings on the box to allow the tab to be fully crimped during closure.	A BP 5-2-96	RECORD SERIAL NUMBERS: FULL HEIGHT QUANTITY RECEIVED 26 EA.
2.	VERIFY no damage has occured in transit.	A BP 5-2-96	QUANTITY INSPECTED 26 EA.
3.	VERIFY Seller's Inspection Report(s) and/or Inspection/Test Data has been provided with shipment.	A BP 5-2-96	SERIAL NUMBERS 420858 THRU 420883
4.	VERIFY serial numbers of containers shipped match serial numbers listed on either FERMCO Supplier Quality Release and/or Seller's provided documentation.	A BP 5-2-96	
5.	VERIFY Certificate of Conformance(s) have been provided to cover the following: • primer/rust inhibitor • enamel paint • rated capacity • DOT Regulations	A BP 5-2-96	

13. Quality Evaluator: BP Date: 5-2-96

14. Open QEP: Yes [ ] No [X] P/QA Manager Review: Bruce Davis

15. Performance/Quality Assurance Manager: Bruce Davis Date: 5/6/96

CGR Compacting Inc.

Sold to:

Fernald Environmental Restoration
Management Corporation
P.O. Box 538704
Cincinnati, OH 45253-8704

Ship to:

USDOE C/O FERMCO
7400 Willey Road
Fernald, OH 45030

CERTIFICATE OF CONFORMANCE

Purchase Order 95MB004830-001-00 Shipping Date April 24, 1996

Container Size C-95 Full-Height White Metal Shipping Container

Container # 420858,420859,420860,420861,420862,420863, 420864,420865,420866,420867,420868,420869, 420870,420871,420872,420873,420874,420875, 420876,420877,420878,420879,420880,420881, 420882,420883.

CGR Compacting, Inc., certifies that all containers meet the requirements of Contract 95MB004830.

CGR Compacting, Inc., certifies that all primer and paint used is mercury free, lead free and zinc chromate free and the primer containers a rust inhibiting agent.

Signed this twenty-forth day of April, 1996, on behalf of CGR Compacting, Inc. by Bill R. Lyons, its President.

CGR Compacting, Inc.

Bill R. Lyons
President

000018

7 Roberts Drive • North Adams, MA 01247 • TEL. (413) 664-1076 • FAX: (413) 664-1079

Shipment WML 97-012

Fernald Environmental Restoration Management Corporation
SHIPPING ORDER FOR NUCLEAR MATERIAL

Date Prepared: 10/07/96

SHIP TO: BECHTEL NEVADA CO. INC.	ROUTING: Ranger Transportation, Inc.		SHIPPERS AUTHORIZATION NO.:	SHIPPING ORDER No.: 5606
STREET: U.S. DEPT. OF ENERGY, P.O. BOX 229	[X] PREPAID [ ] COLLECT	CAR OR TRAILER No.: 716403	SEAL No.: 00488	SHIPPED FROM PLANT:	ORIGINATOR'S No.: WML97012
CITY: MERCURY STATE: NV	ZIP CODE: 89023	BILL OF LADING No.: 7002	QUALITY CONTROL APPROVAL: D. E. Miller 10-17-96	DATE SHIPPED: 10-17-96
SPECIAL INSTRUCTIONS:		COUNTRY CONTROL NO.:	PROJECT No.:	TIME SHIPPED:

Type of Materi THOR RESI\MISC\SCRAP SALTS\SUMPCAKE — FEMP Production Order No. N003 — Originator's Signature [signature] 10/8/96

Station RIS: VAB — DOE 741 No. GVC-VAB-012 — Shipment Authorized By [signature] 10-10-96 NUCLEAR MATERIALS REPRESENTATIVE

NMC DATA			ORIGINATOR'S DATA						MATERIAL CONTROL DATA					
FROM MBA	COST CODE	741 No.	P.O. No.	LOT NUMBER	QUANTITY	WEIGHT (LBS) GROSS	TARE	NET	ANAL CODE	ELE. ANAL.	ELE. LBS.	ELE. GRAMS. OR KGS	ISO. ANAL.	U235 GRAMS OR KGS
560	697	012	0000	716 T090 0418	1	4,236	1,440	2,796		29.43	823	373183		
560	697	012	0000	716 T090 0418	1	4,188	1,440	2,748		29.43	809	366777		
560	697	012	0000	716 T090 0418	1	4,258	1,440	2,818		29.43	829	376119		
560	697	012	0000	716 T090 0418	1	4,300	1,446	2,854		29.43	840	380924		
560	697	012	0000	716 T090 0418	1	4,290	1,440	2,850		29.43	839	380391		
560	697	012	0000	716 T090 0418	1	4,148	1,446	2,702		29.43	795	360637		
560	697	012	0000	716 T090 0418	1	3,972	1,445	2,527		29.43	744	337280		
560	697	012	0000	716 T090 0418	1	4,150	1,446	2,704		29.43	796	360904		
360	G01	012	W021	100 P094 1308	1	7,578	1,664	5,914		44.47	2630	1192942	0.207	2469
				TOTALS:	9	41,120	13,207	27,913			9,105	4,129,157		2,469

ETA: 7:00 A.M., MONDAY, OCTOBER 21, 1996

DISTRIBUTION OF COPIES			
1	NMA (Record Copy)	4	Environmental Restoration
2	TRAFFIC	5	Quality Certification
3	NMA (Cost)	6	Originator

I, Marjorie Cain certify that this shipment was made on the above date after complying with all regualtions.

Audited by _____ Date _____

000020

QUALITY L-LRW TRAILER EXAMINATION AT LOADING

7936

SHIPMENT NO WML97 012 LOADING LOCATION: Building 45 Dock

CARRIER: RANGER TRAILER NO.: 716403

	Stamp	Date
1. Verify a Preliminary Visual Trailer Inspection was completed for empty trailer prior to having been unhooked from tractor.	FEMP QA 43	9/30/96
2. Verify a EBL radiological survey (FS-F-1596-1) is complete for trailer, and results meet 49 CFR 173.441 requirements.	FEMP QA 43	9/30/96

(For Vans Only) SEAL# 0002036

****

3a. Prior to loading, verify seal number is the same as that applied by the RC technician.	FEMP QA 30	10-10-96
3b. Verify each package has a signed and dated NV-211 label affixed and TID(s) are present.	FEMP QA 30	10-10-96
3c Verify each package is free of dirt/loose rock and has no significant deformations or holes.	FEMP QA 30	10-10-96
3d. Verify there is no free liquid emitting from packages.	FEMP QA 30	10-10-96
3e. Verify that packages have been properly tied-down as specified by procedure SOP 50-C-109.	FEMP QA 30	10-10-96
3f. Verify the trailer envelope is affixed to the last package inside the trailer. (ENVELOPE TO BE HAND CARRIED BY DRIVER) 10-10-96 RMK	N/A	
3g. Verify that the loaded trailer rear doors are secured with the DOT approved seal. Seal No. 00488 / 0001268	DM	10-17-96

VANS ONLY

4a. Verify there is no free liquid emitting from the package.	N/A	
4b. Verify each package has been cleaned of dirt/loose rock and has no significant deformations or holes.	N/A	
4c. Verify that the doors of each Sea/Land container are banded and secured with a tamper proof DOT approved seal.	N/A	

FLATBEDS

Package#1 Serial# _____ Seal# _____ _____ (Sea/Land or TL WMB)

Package#2 Serial# _____ Seal# _____ _____ (Sea/Land or TL WMB)

PLACE A SIGNED & DATED NV-211 ON SEA/LAND OR TL/WMB WHEN CRITERIA 4 A-C IS MET AND TAKE ONE (1) PHOTO OF LABEL TO VERIFY IT IS SIGNED AND DATED.

Signed: D. G. Miller (Quality Verification) Date: 10-17-96

FS-F-4416 (Rev. 05/10/94) LOADTRAI.04 *WRITE COMMENTS OF BACK OF FORM

CERTIFICATION STATEMENT

LOW-LEVEL WASTE SHIPMENT FROM FEMP TO NEVADA TEST SITE

Bill of Lading# 7002	Seal Number(s) 00488
Trailer# 716403	

I certify that the packages in Shipment No. WML97 012 as listed on the attached Package Storage & Disposal Data report do not contain hazardous waste as defined in Title 40 CFR 261 or OAC 3745-54 hazardous waste regulations:

(1) according to the results of tests performed in accordance with the requirements as specified in Subpart C of Title 40 CFR 261; and/or

(2) according to the supporting documentation provided to me about the materials and processes that produced the waste.

To the best of my knowledge, I believe the information I have submitted is true, accurate, and complete.

D. G. Miller
FEMP Waste Certification Official

Date: 10·17·96

FS-F-4431 (Rev. 10/14/94) CERT-ST.07

CIRCLE COPY

Radioactive Waste Management-Storage & Disposal

Bechtel Nevada Co., Inc

WML97012

PACKAGE NO.	NET WT	TARE WT	GROSS WT	LSA	LQ	RQ	NR	SCO
420957	5914.00	1664.00	7578.00	X		X	Receipt 96-0899 /	
423196	2527.00	1445.00	3972.00	X		X	Receipt 96-1371 / Source 96-1696	
423230	2748.00	1440.00	4188.00	X		X	Receipt 96-1437 / Source 96-1698	
423240	2850.00	1440.00	4290.00	X	96-0154	X	Receipt 96-1437 / Source 96-1697	
423248	2854.00	1446.00	4300.00	X		X	Receipt 96-1460 / Source 96-1699	
423275	2704.00	1446.00	4150.00	X		X	Receipt 96-1460 / Source 96-1699	
423321	2818.00	1440.00	4258.00	X	1437	X	Receipt 96 ~~0046~~ / Source 96-1697	
423341	2796.00	1440.00	4236.00	X		X	Receipt 96-1437 / Source 96-1698	
423360	2702.00	1446.00	4148.00	X		X	Receipt 96-1460 / Source 96-1699	

PACKAGE STORAGE AND DISPOSAL

Shipment No: WNL97012

Prepared by: [signature] Date: 10/8/96

Approved by: [signature] Date: 10/10/96

Package No: 420957 WS/ID: ONL0000000006 Operation Type: B Container Code: 107 Package Date: 09/19/96
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 10/08/9
Int. Vol(Cu M): 2.719E+00 Ext Vol(Cu M): 3.172E+00 Gross Wt(Kg): 3.437E+03 Net Wt(Kg): 2.683E+03 Tot Curie: 5.289E-0
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 4.00 1 Meter: .70

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity
U233ci	N/A	U234ci	7.508E-02	U235ci	5.334E-03	U236ci	2.714E-04	U238ci	4.000E-0
TC99ci	3.179E-02	PU238ci	7.238E-07	PU239ci	7.237E-06	PU241ci	1.990E-04	NP237ci	2.759E-0
PB210ci	2.640E-03	SR90ci	1.590E-03	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	1.545E-04	TH230ci	1.149E-02	TH232ci	1.604E-04	RA226ci	1.604E-04	RA228ci	N/A
AM241ci	6.337E-05								
TH228gm	N/A	TH230gm	N/A	TH232gm	N/A	Tot Thorium Grm	N/A		

Background info: Lot- W021 100 P 094 1308 GW- 7578.00 NW- 5914.00 U- 44.470 U235- .207 Tch99- 26651.0
Desc- CO-PACKAGED URANIUM RESIDUES Cont Desc- SUMP CAKE/PROCESS RESIDUES/SCRAP SALTS

Package No: 423230 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/02/9
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.900E+03 Net Wt(Kg): 1.246E+03 Tot Curie: 1.381E-
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 50.00 1 Meter: 10.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantit
U233ci	2.119E-05	U234ci	3.004E-03	U235ci	1.670E-04	U236ci	N/A	U238ci	3.068E-
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.351E-02	TH230ci	8.346E-03	TH232ci	4.002E-02	RA226ci	N/A	RA228ci	4.002E-
AM241ci	N/A								
TH228gm	0.0001	TH230gm	0.3974	TH232gm	366,776	Tot Thorium Grm	366,777		

Background info: Lot- 0000 716 T 090 0418 GW- 4188.00 NW- 2748.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

Package No: 423321 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/02/9
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.931E+03 Net Wt(Kg): 1.278E+03 Tot Curie: 1.417E-
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 45.00 1 Meter: 10.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantit
U233ci	2.173E-05	U234ci	3.081E-03	U235ci	1.713E-04	U236ci	N/A	U238ci	3.146E-
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.462E-02	TH230ci	8.559E-03	TH232ci	4.103E-02	RA226ci	N/A	RA228ci	4.103E-
AM241ci	N/A								
TH228gm	0.0001	TH230gm	0.4076	TH232gm	376,119	Tot Thorium Grm	376,119		

Background info: Lot- 0000 716 T 090 0418 GW- 4258.00 NW- 2818.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

PACKAGE STORAGE AND DISPOSAL

Shipment No: WML97012

Prepared by: [signature] Date: 10/8/96

Approved by: [signature] Date: 10/10/96

Package No: 423341 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/02/9
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.921E+03 Net Wt(Kg): 1.268E+03 Tot Curie: 1.406E-
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 45.00 1 Meter: 10.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantit
U233ci	2.156E-05	U234ci	3.056E-03	U235ci	1.699E-04	U236ci	N/A	U238ci	3.121E-
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.427E-02	TH230ci	8.492E-03	TH232ci	4.071E-02	RA226ci	N/A	RA228ci	4.071E-
AM241ci	N/A								
TH228gm	0.0001	TH230gm	0.4044	TH232gm	373,183	Tot Thorium Grm	373,183		

Background info: Lot- 0000 716 T 090 0418 GW- 4236.00 NW- 2796.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

Package No: 423240 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/03/9
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.946E+03 Net Wt(Kg): 1.293E+03 Tot Curie: 1.433E-
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 45.00 1 Meter: 9.0C

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantit
U233ci	2.198E-05	U234ci	3.115E-03	U235ci	1.732E-04	U236ci	N/A	U238ci	3.181E-
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.512E-02	TH230ci	8.656E-03	TH232ci	4.150E-02	RA226ci	N/A	RA228ci	4.150E-
AM241ci	N/A								
TH228gm	0.0001	TH230gm	0.4122	TH232gm	380,390	Tot Thorium Grm	380,391		

Background info: Lot- 0000 716 T 090 0418 GW- 4290.00 NW- 2850.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

Package No: 423196 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/03/9
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.802E+03 Net Wt(Kg): 1.146E+03 Tot Curie: 1.270E-
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 35.00 1 Meter: 6.0C

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quanti
U233ci	1.949E-05	U234ci	2.762E-03	U235ci	1.536E-04	U236ci	N/A	U238ci	2.821E-
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.001E-02	TH230ci	7.675E-03	TH232ci	3.680E-02	RA226ci	N/A	RA228ci	3.680E-
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.3655	TH232gm	337,279	Tot Thorium Grm	337,280		

Background info: Lot- 0000 716 T 090 0418 GW- 3972.00 NW- 2527.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

PACKAGE STORAGE AND DISPOSAL

Shipment No: WML97012

Prepared by: [signature] Date: 10/8/96

Approved by: [signature] Date: 10/10/96

Package No: 423360 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/03/96
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/9
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.881E+03 Net Wt(Kg): 1.226E+03 Tot Curie: 1.358E-0
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 45.00 1 Meter: 8.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity
U233ci	2.084E-05	U234ci	2.954E-03	U235ci	1.642E-04	U236ci	N/A	U238ci	3.016E-0
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.278E-02	TH230ci	8.207E-03	TH232ci	3.935E-02	RA226ci	N/A	RA228ci	3.935E-0
AM241ci	N/A								
TH228gm	0.0001	TH230gm	0.3908	TH232gm	360,637	Tot Thorium Grm	360,637		

Background info: Lot- 0000 716 T 090 0418 GW- 4148.00 NW- 2702.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

Package No: 423275 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/03/96
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/9
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.882E+03 Net Wt(Kg): 1.227E+03 Tot Curie: 1.359E-0
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 30.00 1 Meter: 6.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity
U233ci	2.085E-05	U234ci	2.956E-03	U235ci	1.644E-04	U236ci	N/A	U238ci	3.018E-0
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.281E-02	TH230ci	8.213E-03	TH232ci	3.937E-02	RA226ci	N/A	RA228ci	3.937E-0
AM241ci	N/A								
TH228gm	0.0001	TH230gm	0.3911	TH232gm	360,903	Tot Thorium Grm	360,904		

Background info: Lot- 0000 716 T 090 0418 GW- 4150.00 NW- 2704.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

Package No: 423248 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/03/96
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/9
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.950E+03 Net Wt(Kg): 1.295E+03 Tot Curie: 1.435E-0
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 50.00 1 Meter: 9.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity
U233ci	2.201E-05	U234ci	3.120E-03	U235ci	1.735E-04	U236ci	N/A	U238ci	3.186E-0
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.519E-02	TH230ci	8.668E-03	TH232ci	4.156E-02	RA226ci	N/A	RA228ci	4.156E-0
AM241ci	N/A								
TH228gm	0.0001	TH230gm	0.4128	TH232gm	380,924	Tot Thorium Grm	380,924		

Background info: Lot- 0000 716 T 090 0418 GW- 4300.00 NW- 2854.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

PACKAGE STORAGE AND DISPOSAL

Shipment No: WNL97012

Prepared by: Date: 10/8/96

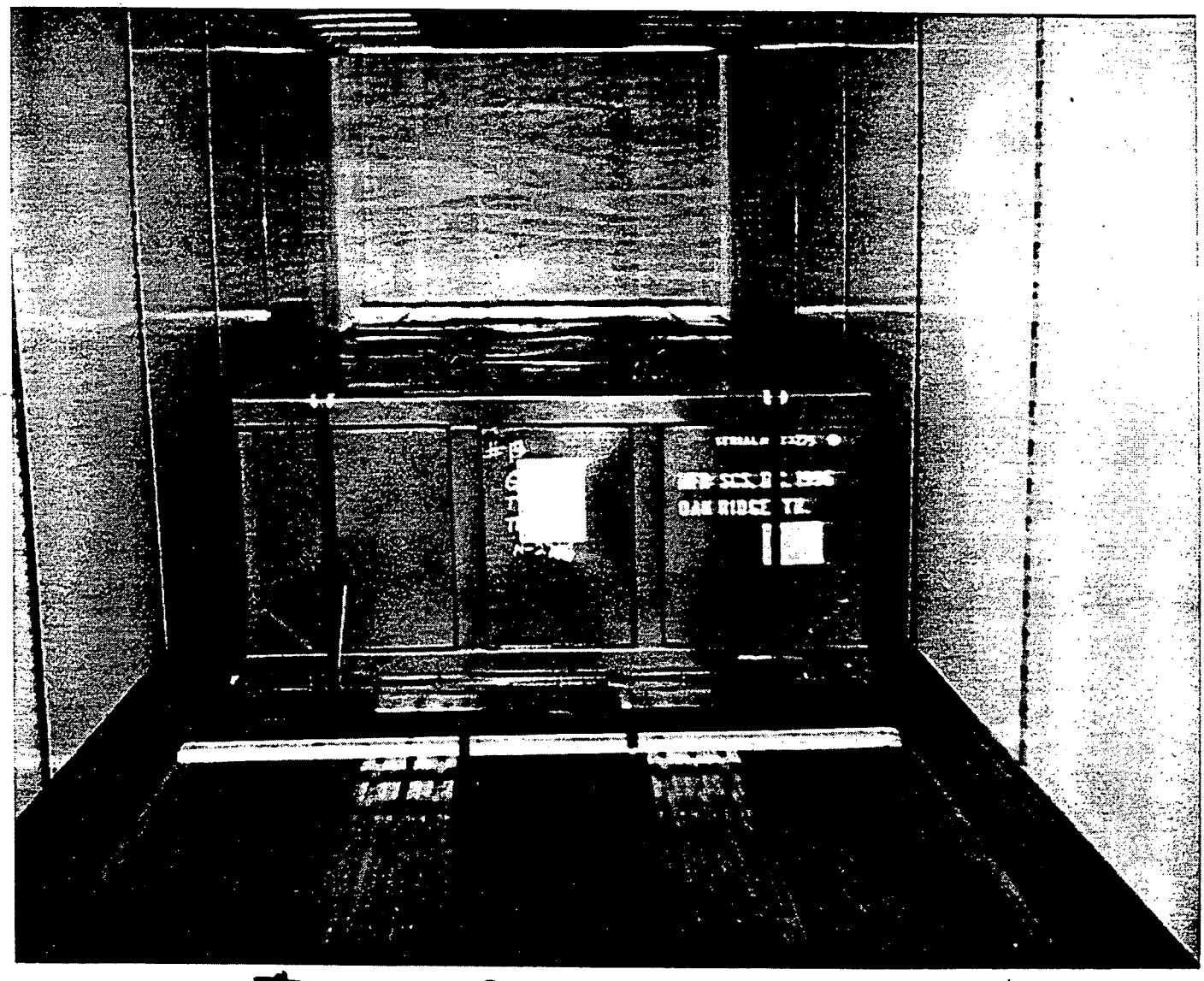
Approved by: Date: 10/10/96

Final Totals

Int. Vol(Cu M): 2.470E+01 Ext Vol(Cu M): 3.050E+01 Gross Wt(Kg): 1.865E+04 Net Wt(Kg): 1.266E+04 Tot Curie: 1.635E+00

Total Th Grams: 2,936,215

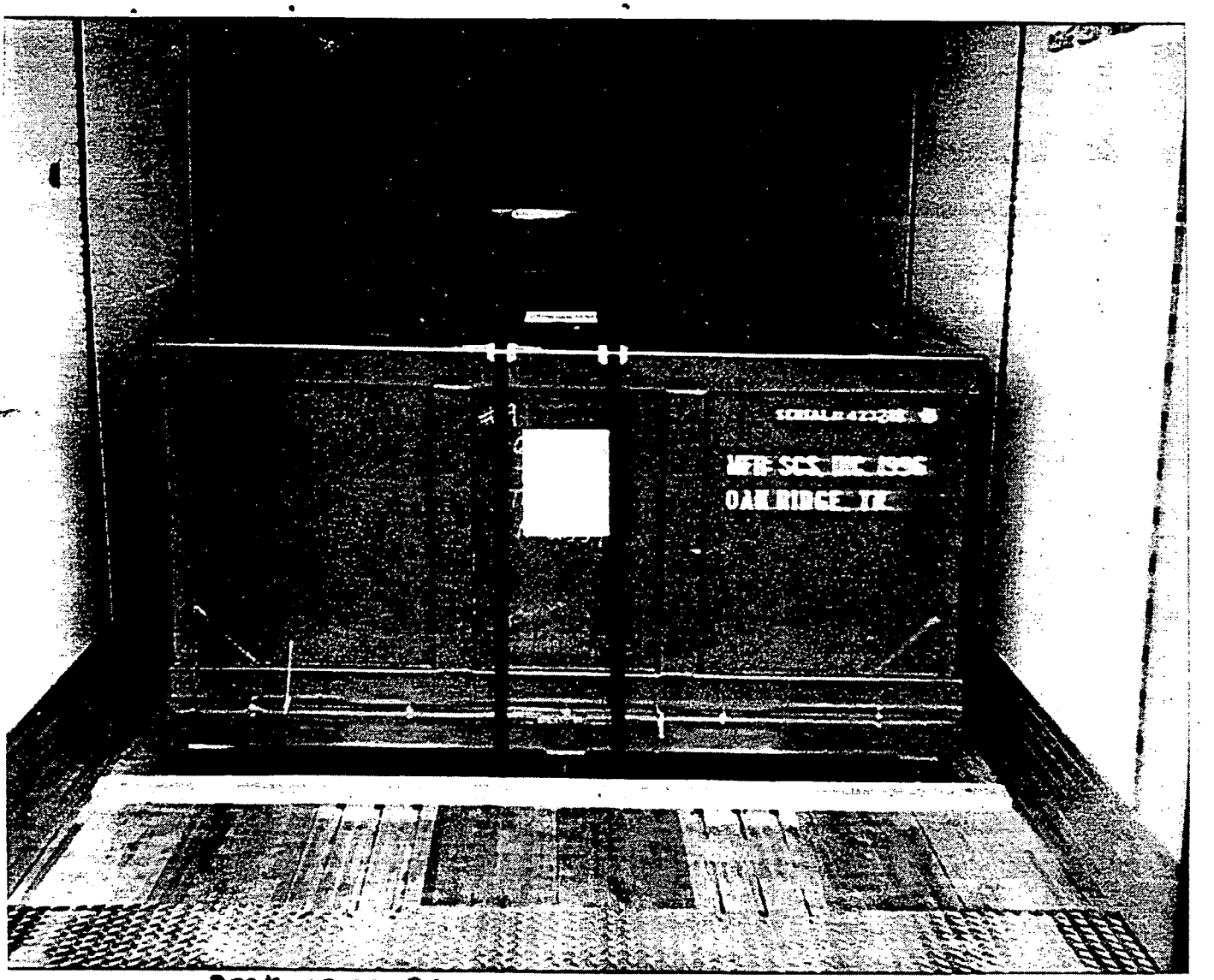
Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity
U233	1.696E-04	U234	9.913E-02	U235	6.671E-03	U236	2.714E-04	U238	4.246E-01
TC99	3.179E-02	PU238	7.238E-07	PU239	7.237E-06	PU241	1.990E-04	NP237	2.759E-06
PB210	2.640E-03	SR90	1.590E-03	CS137	N/A	NI63	N/A	K40	N/A
TH228	3.485E-01	TH230	7.830E-02	TH232	3.205E-01	RA226	1.604E-04	RA228	3.203E-01
AM241	6.337E-05								



SHIPMENT # WM(97-012

TRAILER # 716403 (1/2 LOAD)

RMK 10-10-96



~~WML 96~~ RMK 10-10-96

WML 97-012

TRAILER # 716403

(Full Load)

RMK 10-10-96

Fernald Environmental Restoration Management Corporation

[1] Date: 9-17-96

SUPPLIER QUALITY RELEASE

(INSTRUCTIONS ON REVERSE SIDE.

[2] PROJECT NAME/NUMBER:	[3] P.O./SUBCONTRACT NUMBER:	[4] SUPPLIER ORDER NUMBER:
THORIUM OVERPACKING CONTAINER	96MB000532	N/A

[5] SUPPLIER:	[6] Q.RELEASE:	[7] SUBCONTRACT ADMINISTRATO
SCS, INC. OAK RIDGE, TN	☒ Partial Shipment ☐ Final Shipment	BETH STRAUB

[8] MATERIAL DESCRIPTION: THORIUM OVERPACKING CONTAINER
QUANTITY RELEASED : 15
423171, 423229, 423248, 423256, 423271, 423275, 423291, 423297, 423354
423355, 423360, 423363, 423322, 423324, 423325

[9] Q. RELEASE CHECKLIST

A- Mill Test Reports	N/A	E- NDT Reports	N/A	I- CARs Cleared	N/A
B- Check Analysis	N/A	F- Radiographic Film	N/A	J- "As Built" Drawings	N/A
C- Certification of Material Conformance	FEMP QA 45	G- Functional Test Reports EXCEPT LOT 7	FEMP QA 45	K- Manual & Instructions	N/A
D- Weld Reports	N/A	H- SDRs Cleared	N/A		

[10] FINAL EXAMINATION OF PRODUCT

Envelope Dimensions	FEMP QA 45	Identification	FEMP QA 45	Packaging	N/A
Cleanliness	FEMP QA 45	Marking	FEMP QA 45	Crating	N/A

[11] COMMENTS:
* FINAL ACCEPTANCE BY RECEIPT INSPECTION PERFORMED AT THE FERMCO SITE

423354 CONTAINS EXTRA GASKET

[12] QFR RELEASE

STAMP: FEMP QA 45
9-17-96

Conditional (*) ☒
Unconditional ☐
Denial ☐

Reinhard Fiske — SIGNATURE — 9-17-96 DATE

(*) EXPLAIN CONDITIONAL QFR RELEASE IN "COMMENTS" SECTION

[13] Documentation Package:	Shipped Separately To:	With Shipment:	Not Required:
FERMCO	BETH STRAUB	X	

[14] Subcontract Administrator Notified of Shipment & Routing	BY:	DATE:	VIA:

[15] APPROVED FOR SHIPMENT

9-17-96 SUPPLIER SHIPPING DATE	Margie Hensley — SUPPLIER Q. REP. — 9-17-96 DATE	OTHER	DATE

sCs, Inc.
100 Meco Drive
Oak Ridge, Tennessee 37830

CERTIFICATE OF COMPLIANCE

Product:	Thorium Overpack Container
Customer:	Fermco
Customer's Facility:	Fermco, Cincinnati, Ohio
Customer Contact:	Beth Straub
Customer Purchase Order:	96MB000532
Steel	ASTM A569, ASTM A36
Welding	AWS D1.1 & D1.3
Primer:	Rust Inhibiting - Mercury free Lead free, & Zinc Chromate free
Paint	Blue Enamel, Federal Standard, 595A, 15090 - Mercury free, Lead free & Chromium free
Marking	Mfg: sCs, Inc., Oak Ridge, TN.
Gaskets:	5/8" Closed Cell Neoprene Foam - SCE 43
Model No.:	88A-12-00

Lot/Serial No.:	WO #50139	1/423171
	WO #60003	3/423229
	WO #60004	4/423248, 423256
	WO #60009	5/423271, 423275, 423291, 5/423297
	WO #60036	7/423322, 423324, 423325
	WO #60043	9/423354, 423355, 423360 9/423363

sCs, Inc. certifies that the above product has been inspected and/or tested by me or my designated inspector and that it meets or exceeds the quality control requirements identified in the above specification or sCs workmanship standards and Quality Control Manual.

Margie Hensley

Margie Hensley
Quality Assurance Manager

9/17/96

Fernald Environmental Restoration Management Corporation

1657

[1] Date: 9-4-96

SUPPLIER QUALITY RELEASE

(INSTRUCTIONS ON REVERSE SIDE)

[2] PROJECT NAME/NUMBER:	[3] P.O./SUBCONTRACT NUMBER:	[4] SUPPLIER ORDER NUMBER:
THORIUM OVERPACKING CONTAINER	96MB000532	N/A

[5] SUPPLIER:	[6] Q.RELEASE:	[7] SUBCONTRACT ADMINISTRATOR:
SCS, INC. OAK RIDGE, TN	☒ Partial Shipment ☐ Final Shipment	BETH STRAUB

[8] MATERIAL DESCRIPTION: THORIUM OVERPACKING CONTAINER
RELEASE NUMBER: R6
QUANTITY RELEASED: 16
LOT NUMBER: 423219, 423234, 423264, 423296, 423307, 423309, 423316, 423317, 423327, 423329, 423330, 423331, 423332, 423336, 423367, 423422

[9] Q. RELEASE CHECKLIST

A- Mill Test Reports		N/A	E- NDT Reports	9-4-96	RA	I- CARs Cleared	N/A
B- Check Analysis		N/A	F- Radiographic Film		N/A	J- "As Built" Drawings	N/A
C- Certification of Material Conformance	9-4-96	RA	G- Functional Test Reports	9-4-96	RA	K- Manual & Instructions	N/A
D- Weld Reports		N/A	H- SDRs Cleared	9-4-96	RA		

[10] FINAL EXAMINATION OF PRODUCT

Envelope Dimensions	9-4-96	RA	Identification	9-4-96	RA	Packaging	N/A
Cleanliness	9-4-96	RA	Marking	9-4-96	RA	Crating	N/A

[11] COMMENTS:
* FINAL ACCEPTANCE BY RECEIPT INSPECTION PERFORMED AT THE FERMCO SITE

[12] QFR RELEASE

STAMP:			
RA 9-4-96	Conditional (*) ☒	Reinhard Straube	9-4-96
	Unconditional ☐	SIGNATURE	DATE
	Denial ☐		

(*) EXPLAIN CONDITIONAL QFR RELEASE IN "COMMENTS" SECTION

[13] Documentation Package:	Shipped Separately To:	With Shipment:	Not Required:
FERMCO	BETH STRAUB	X	

[14] Subcontract Administrator Notified of Shipment & Routing	BY:	DATE:	VIA:

[15] APPROVED FOR SHIPMENT

9-4-96	Margie Hensley	9-4-96		
SUPPLIER SHIPPING DATE	SUPPLIER Q. REP.	DATE	OTHER	DATE

FQ-2643 (PAGE 1 OF 2) REV. 01/26/93

000032

1697

7936

Fernald Environmental Restoration Management Corporation

[1] Date: 9-4-96

SUPPLIER QUALITY RELEASE

(INSTRUCTIONS ON REVERSE SIDE)

[2] PROJECT NAME/NUMBER:	[3] P.O./SUBCONTRACT NUMBER:	[4] SUPPLIER ORDER NUMBER:
THORIUM OVERPACKING CONTAINER	96MB000532	N/A

[5] SUPPLIER:	[6] Q. RELEASE:	[7] SUBCONTRACT ADMINISTRATOR:
SCS, INC. Oak Ridge, TN.	☑ Partial Shipment ☐ Final Shipment	BETH STRAUB

[8] MATERIAL DESCRIPTION: THORIUM OVERPACKING CONTAINER

RELEASE NUMBER: R7

LOT NUMBER: 423183, 423200, 423220, 423213, 423238, 423240

QUANTITY RELEASED: 10

423321, 423326, 423333, 423335

[9] Q. RELEASE CHECKLIST

Mill Test Reports	N/A	NDT Reports 9-4-96	RA	CARs Cleared	N/A
Check Analysis	N/A	Radiographic Film	N/A	"As Built" Drawings	N/A
Certification of Material Conformance 9-4-96	RA	Functional Test Reports	N/A	Manual & Instructions	N/A
Weld Reports	N/A	SDRs Cleared	N/A		

[10] FINAL EXAMINATION OF PRODUCT

Envelope Dimensions 9-4-96	RA	Identification 9-4-96	RA	Packaging	N/A
Cleanliness 9-4-96	RA	Marking 9-4-96	RA	Crating	N/A

[11] COMMENTS: * FINAL ACCEPTANCE BY RECEIPT INSPECTION PERFORMED AT THE FERMCO SITE.

[12] QAR RELEASE

STAMP: RA 9-4-96 FEMP QA 45

Conditional (*) ☑
Unconditional ☐
Denied ☐

Reinhard Stricke — SIGNATURE — 9-4-96 DATE

(*) EXPLAIN CONDITIONAL QAR RELEASE IN "COMMENTS" SECTION

[13] Documentation Package:	Shipped Separately To:	With Shipment:	Not Required:
FERMCO	BETH STRAUB	X	

[14] Subcontract Administrator Notified of Shipment & Routing	BY:	DATE:	VIA:

[15] APPROVED FOR SHIPMENT

SUPPLIER SHIPPING DATE	Margie Hensley — SUPPLIER Q. REP. — 9-4-96 DATE	OTHER	DATE

FQ-2046 (PAGE 1 OF 2) REV. 01/05/96

000033

sCs, Inc.
100 Meco Drive
Oak Ridge, Tennessee 37830

1697

CERTIFICATE OF COMPLIANCE

Product:	Thorium Overpack Container
Customer:	Fermco
Customer's Facility:	Fermco, Cincinnati, Ohio
Customer Contact:	Beth Straub
Customer Purchase Order:	96MB000532
Steel	ASTM A569, ASTM A36
Welding	AWS D1.1 & D1.3
Primer:	Rust Inhibiting - Mercury free Lead free, & Zinc Chromate free
Paint	Blue Enamel, Federal Standard, 595A, 15090 - Mercury free, Lead free & Chromium free
Marking	Mfg: sCs, Inc., Oak Ridge, TN.
Gaskets:	5/8" Closed Cell Neoprene Foam - SCE 43
Model No.:	88A-12-00
Lot/Serial No.:	WO #60003 3/423219, 423234
	WO #60004 4/423264
	WO #60009 5/423296
	WO #60034 6/423307 423309 423316 423317
	WO #60036 7/423327 423329 423330
	7/423331 423332 423336
	WO #60043 9/423367
	WO #60060 13/423422

sCs, Inc. certifies that the above product has been inspected and/or tested by me or my designated inspector and that it meets or exceeds the quality control requirements identified in the above specification or sCs workmanship standards and Quality Control Manual.

Margie Hensley

Margie Hensley
Quality Assurance Manager

9/4/96

Fernald Environmental Restoration Management Corporation

1698

[1] Date: 9-11-96

SUPPLIER QUALITY RELEASE

(INSTRUCTIONS ON REVERSE SIDE)

[2] PROJECT NAME/NUMBER:	[3] P.O./SUBCONTRACT NUMBER:	[4] SUPPLIER ORDER NUMBER:
THORIUM OVERPACKING CONTAINER	96MB000532	N/A

[5] SUPPLIER:	[6] Q.RELEASE:	[7] SUBCONTRACT ADMINISTRATOR:
SCS, INC. OAK RIDGE, TN	☒ Partial Shipment ☐ Final Shipment	BETH STRAUB

[8] MATERIAL DESCRIPTION: THORIUM OVERPACKING CONTAINER

QUANTITY RELEASED: 10 423230, 423306, 423308, 423312, 423314, 423318, 423341, 423342, 423349, 423361

[9] Q. RELEASE CHECKLIST

A- Mill Test Reports	N/A	E- NDT Reports	RA	I- CARs Cleared	N/A
B- Check Analysis	N/A	F- Radiographic Film	N/A	J- "As Built" Drawings	N/A
C- Certification of Material Conformance	RA	G- Functional Test Reports	RA	K- Manual & Instructions	N/A
D- Weld Reports	N/A	H- SDRs Cleared	N/A		

[10] FINAL EXAMINATION OF PRODUCT

Envelope Dimensions	RA	Identification	RA	Packaging	RA
Cleanliness	RA	Marking	RA	Crating	N/A

[11] COMMENTS:

* FINAL ACCEPTANCE BY RECEIPT INSPECTION PERFORMED AT THE FERMCO SITE

[12] QFR RELEASE

STAMP:		
RA 9-11-96	Conditional (*) ☒	Reinhard Fiske — SIGNATURE; 9-11-96 — DATE
	Unconditional ☐	
	Denial ☐	

(*) EXPLAIN CONDITIONAL QFR RELEASE IN "COMMENTS" SECTION

[13] Documentation Package:	Shipped Separately To:	With Shipment:	Not Required:
FERMCO	BETH STRAUB	X	

[14] Subcontract Administrator Notified of Shipment & Routing	BY:	DATE:	VIA:

[15] APPROVED FOR SHIPMENT

9-12-96 SUPPLIER SHIPPING DATE	Margie Hensley — SUPPLIER Q. REP.	9-12-96 DATE	OTHER / DATE

sCs, Inc.
100 Meco Drive
Oak Ridge, Tennessee 37830

CERTIFICATE OF COMPLIANCE

Product:	Thorium Overpack Container
Customer:	Fermco
Customer's Facility:	Fermco, Cincinnati, Ohio
Customer Contact:	Beth Straub
Customer Purchase Order:	96MB000532
Steel	ASTM A569, ASTM A36
Welding	AWS D1.1 & D1.3
Primer:	Rust Inhibiting - Mercury free Lead free, & Zinc Chromate free
Paint	Blue Enamel, Federal Standard, 595A, 15090 - Mercury free, Lead free & Chromium free
Marking	Mfg: sCs, Inc., Oak Ridge, TN.
Gaskets:	5/8" Closed Cell Neoprene Foam - SCE 43
Model No.:	88A-12-00
Lot/Serial No.:	WO #50139 1/423183, 423200 WO #60003 3/423213, 423220, 423238 WO #60004 4/423240 WO #60036 7/423321, 423326, 423333, 423335

sCs, Inc. certifies that the above product has been inspected and/or tested by me or my designated inspector and that it meets or exceeds the quality control requirements identified in the above specification or sCs workmanship standards and Quality Control Manual.

Margie Hensley

Margie Hensley
Quality Assurance Manager

9/9/96

7936

Fernald Environmental Restoration Management Corporation

[1] Date: 8-21-96

SUPPLIER QUALITY RELEASE

(INSTRUCTIONS ON REVERSE SIDE)

[2] PROJECT NAME/NUMBER:	[3] P.O./SUBCONTRACT NUMBER:	[4] SUPPLIER ORDER NUMBER:
THORIUM OVERPACKING CONTAINER	96M8000532	N/A

[5] SUPPLIER:	[6] Q. RELEASE:	[7] SUBCONTRACT ADMINISTRATOR:
SCS, INC. Oak Ridge, TN.	☒ Partial Shipment ☐ Final Shipment	BETH STRAUB

[8] MATERIAL DESCRIPTION: THORIUM OVERPACKING CONTAINER

RELEASE NUMBER:

LOT NUMBER:

QUANTITY RELEASED: 16

423194, 423196, 423205, 423223, 423328, 423231, 423236, 423302, 423310, 423313, 423319, 423320, 423347, 423356, 423365, 423368

[9] Q. RELEASE CHECKLIST

A- Mill Test Reports	N/A	E- NDT Reports		I- CARs Cleared	N/A
B- Check Analysis	N/A	F- Radiographic Film	N/A	J- "As Built" Drawings	N/A
C- Certification of Material Conformance		G- Functional Test Reports		K- Manual & Instructions	N/A
D- Weld Reports	N/A	H- SORs Cleared			

[10] FINAL EXAMINATION OF PRODUCT

Envelope Dimensions		Identification	8-21	Packaging	N/A
Cleanliness		Marking	8-21	Crating	N/A

[11] COMMENTS: * FINAL ACCEPTANCE BY RECEIPT INSPECTION PERFORMED AT THE FERMCO SITE

423356 CONTAINS EXTRA GASKET

[12] QFR RELEASE

STAMP: 8-21-96 FEMP QA 45

Conditional (*) ☒
Unconditional ☐
Denied ☐

Reinhard Fiske — SIGNATURE — 8-21-96 DATE

(*) EXPLAIN CONDITIONAL QFR RELEASE IN "COMMENTS" SECTION

[13] Documentation Package:	Shipped Separately To:	With Shipment:	Not Required:
FERMCO	BETH STRAUB	X	

[14] Subcontract Administrator Notified of Shipment & Routing	BY:	DATE:	VIA:

[15] APPROVED FOR SHIPMENT

8-21-96 SUPPLIER SHIPPING DATE	Margi Hensley SUPPLIER Q. REP.	8/21/96 DATE	OTHER / DATE

V-7-3003 (PAGE 1 OF 2 REV. 01/26/95)

000037

sCs, Inc.
100 Meco Drive
Oak Ridge, Tennessee 37830

CERTIFICATE OF COMPLIANCE

Product:	Thorium Overpack Container
Customer:	Fermco
Customer's Facility:	Fermco, Cincinnati, Ohio
Customer Contact:	Beth Straub
Customer Purchase Order:	96MB000532
Steel	ASTM A569, ASTM A36
Welding	AWS D1.1 & D1.3
Primer:	Rust Inhibiting - Mercury free Lead free, & Zinc Chromate free
Paint	Blue Enamel, Federal Standard, 595A, 15090 - Mercury free, Lead free & Chromium free
Marking	Mfg: sCs, Inc., Oak Ridge, TN.
Gaskets:	5/8" Closed Cell Neoprene Foam - SCE 43
Model No.:	88A-12-00

Lot/Serial No.:	WO #60001	2/423194, 423196, 423205
	WO #60003	3/423223, 423231, 423236
	WO #60009	5/423302
	WO #60034	6/423310, 423313, 423319, 423320
	WO #60036	7/423328
	WO #60039	8/423347
	WO #60043	9/423356, 423365, 423368

sCs, Inc. certifies that the above product has been inspected and/or tested by me or my designated inspector and that it meets or exceeds the quality control requirements identified in the above specification or sCs workmanship standards and Quality Control Manual.

Margie Hensley

Margie Hensley
Quality Assurance Manager

8/19/96

QUALITY EVALUATION PLAN

ORIGINAL

QEP No. 96-1460 Rev. 4

1. Source ☐ Receiving X Const./Remediation ☐ Maint./Operations ☐ Waste ☐ Sampling ☐ Recycling ☐

2. Item/Title/Description: THORIUM OVERPACKING CONTAINERS A/K/A/ INVERTED BOXES

sCs Inc. Oak Ridge, Tn. P.O. # 96MB000532,

3. Project/Task: Thorium Overpacking Project	4. Spec./DWG: sCs Dwg. 88A-12-00
5. Prepared By: Bruce Davis Date: 6/4/96	6. Reviewed By: Miles Kopp Date: 6/4/96
7. NDE Level III: (When Required) Date: N/A	8. Approved By (When Required) Date: 6/4/96

9. Char. No.	10. Evaluation Characteristic (Code/Specification, Inspection/Test/Examination Techniques, Acceptance Criteria)	11. Status Stamp & Date	12. General Remarks
	NOTE: THESE CONTAINERS CONSIST OF THE PLATFORM BASE AND LID.		QUANTITY RECIEVED 14-EA QUANTITY INSPECTED 14-EA. SERIAL NUMBERS 423171 423322 423248 423324 423256 423325 423271 423354 423275 423355 423291 423360 423297 423363
1.	Verify no visual signs of water leaking from container.	A BP 9-18-96	
2.	Verify the thickness of paint on the outside of the container's sides and lid is no less than 4 mils dry film thickness. (2 mils primer plus 2 mils white enamel paint.)	A BP 9-18-96	
3.	Verify no damage has occurred in transit, to include the removal of any paint by the "hold down" straps.	A BP 9-18-96	
4.	Verify each container has both a metal stamped plate and matching stenciled serial number on the outside of the container.	A BP 9-18-96	
5.	Verify serial numbers of containers shipped match serial numbers listed on FERMCO Supplier Quality Release Form.	A BP 9-18-96	
6.	Verify Seller's Inspection Report(s) and/or Inspection/Test Data accompany shipment.	A BP 9-18-96	
7.	Verify FERMCO Supplier Quality Release Form accompanies shipment.	A BP 9-18-96	
8.	Verify Certificate of Conformance accompanies shipment stating the rust inhibitor is mercury free, lead free, and zinc chromate free.	A BP 9-18-96	
9.	Verify Certificate of Conformance accompanies shipment stating the paint is enamel, lead free, mercury free, and chromium free.	A BP 9-18-96	

13. Quality Evaluator: BP

14. Open QEP: YES ☐ NO ☒

15. P/QA Manager Review: Bruce Davis

16. P/QA Manager (completed QEP): Bruce Davis Date: 9/30/96

17. Distribution: ☐ Requesting Org. ☐ Participating Org. ☐ P/QA Project/Activity Representative ☐ Other

FS-F-4400 (05/06/96)

ORIGINAL

QUALITY EVALUATION PLAN

QEP No. 96-1437 Rev. 4

1. Source ☐ Receiving X Const./Remediation ☐ Maint./Operations ☐ Waste ☐ Sampling ☐ Recycling ☐

2. Item/Title/Description: THORIUM OVERPACKING CONTAINERS A/K/A/ INVERTED BOXES

sCs Inc. Oak Ridge, Tn. P.O. # 96M5000532,

3. Project/Task: Thorium Overpacking Project	4. Spec./DWG: sCs Dwg. 88A-12-00
5. Prepared By: Bruce Davis Date: 6/4/96	6. Reviewed By: Mike Kopp Date: 6/4/96
7. NDE Level III: (When Required) Date: N/A	8. Approved By: [illegible] Date: 6/4/96

9. Char. No.	10. Evaluation Characteristic (Code/Specification, Inspection/Test/Examination Techniques, Acceptance Criteria)	11. Status Stamp & Date	12. General Remarks
	NOTE: THESE CONTAINERS CONSIST OF THE PLATFORM BASE AND LID.		QUANTITY RECIEVED 20-EA.
1.	Verify no visual signs of water leaking from container.	A BP 9-13-96	QUANTITY INSPECTED 20-EA.
2.	Verify the thickness of paint on the outside of the container's sides and lid is no less than 4 mils dry film thickness. (2 mils primer plus 2 mils white enamel paint.)	A BP 9-13-96	SERIAL NUMBERS
3.	Verify no damage has occurred in transit, to include the removal of any paint by the "hold down" straps.	A BP 9-13-96	423183 423230 423200 423306 423220 423308
4.	Verify each container has both a metal stamped plate and matching stenciled serial number on the outside of the container.	A BP 9-13-96	423213 423312 423238 423314 423240 423318
5.	Verify serial numbers of containers shipped match serial numbers listed on FERMCO Supplier Quality Release Form.	A BP 9-13-96	423321 423341 423326 423342 423333 423349
6.	Verify Seller's Inspection Report(s) and/or Inspection/Test Data accompany shipment.	A BP 9-13-96	423335 423361
7.	Verify FERMCO Supplier Quality Release Form accompanies shipment.	A BP 9-13-96	
8.	Verify Certificate of Conformance accompanies shipment stating the rust inhibitor is mercury free, lead free, and zinc chromate free.	A BP 9-13-96	
9.	Verify Certificate of Conformance accompanies shipment stating the paint is enamel, lead free, mercury free, and chromium free.	A BP 9-13-96	

13. Quality Evaluator: Bill Pollins

14. Open QEP: YES ☐ NO ☒	15. P/QA Manager Review: Bruce Davis
16. P/QA Manager (completed QEP): Bruce Davis	Date: 9/30/96

17. Distribution: ☐ Requesting Org. ☐ Participating Org. ☐ P/QA Project/Activity Representative ☐ Other

FS-F-4400 (05/08/96)

7936

QUALITY EVALUATION PLAN

ORIGINAL

QEP No. 96-1371 Rev. 4

1. Source ☐ Receiving X Const./Remediation ☐ Maint./Operations ☐ Waste ☐ Sampling ☐ Recycling ☐

2. Item/Title/Description: THORIUM OVERPACKING CONTAINERS A/K/A/ INVERTED BOXES

sCs Inc. Oak Ridge, Tn. P.O. # 98MB000632.

3. Project/Task: Thorium Overpacking Project

4. Spec./DWG: sCs Dwg. 88A-12-00

5. Prepared By: Bruce Davis Date: 6/4/96

6. Reviewed By: Miles Kopp Date: 6/4/96

7. NDE Level III: (When Required) Date: N/A

8. Approved By: (When Required) Date: 6/4/96

9. Char. No.	10. Evaluation Characteristic (Code/Specification, Inspection/Test/Examination Techniques, Acceptance Criteria)	11. Status Stamp & Date	12. General Remarks
	NOTE: THESE CONTAINERS CONSIST OF THE PLATFORM BASE AND LID.		QUANTITY RECEIVED 16-EA.
1.	Verify no visual signs of water leaking from container.	A B.P. 8-22-96	QUANTITY INSPECTED 16-EA.
2.	Verify the thickness of paint on the outside of the container's sides and lid is no less than 4 mils dry film thickness. (2 mils primer plus 2 mils white enamel paint.)	A B.P. 8-22-96	SERIAL NUMBERS 423194 423328 423196 423231 423205 423236 423347 423302 423356 423310 423365 423313 423368 423319 423223 423320
3.	Verify no damage has occurred in transit, to include the removal of any paint by the "hold down" straps.	A B.P. 8-22-96	
4.	Verify each container has both a metal stamped plate and matching stenciled serial number on the outside of the container.	A B.P. 8-22-96	
5.	Verify serial numbers of containers shipped match serial numbers listed on FERMCO Supplier Quality Release Form.	A B.P. 8-22-96	REJECTED
6.	Verify Seller's Inspection Report(s) and/or Inspection/Test Data accompany shipment.	A B.P. 8-22-96	CONTAINER NUMBER 423368 HAS A SEAM WHICH HAS BEEN STICHED WELD THAT RUNS THE WHOLE LENGTH OF THE CONTAINER THIS SEAM SHOULD HAVE BEEN SEALED BUT WASN'T SEE ATTACHED COPY OF CONTRACT
7.	Verify FERMCO Supplier Quality Release Form accompanies shipment.	A B.P. 8-22-96	
8.	Verify Certificate of Conformance accompanies shipment stating the rust inhibitor is mercury free, lead free, and zinc chromate free.	A B.P. 8-22-96	
9.	Verify Certificate of Conformance accompanies shipment stating the paint is enamel, lead free, mercury free, and chromium free.	A B.P. 8-22-96	DR 96-0080 Close 9/19/96
10	SEE ATTACHED COPY OF CONTRACT "SPECIFIC REQUIREMENTS" 2-C HIGHLIGHTED	R B.P. 8-22-96	FERMCO QA 9/19/96

13. Quality Evaluator: Bill Pike

14. Open QEP: YES ☐ NO X

15. P/QA Manager Review: Bruce Davis

16. P/QA Manager (completed QEP): Bruce Davis Date: 9/19/96

17. Distribution: ☐ Requesting Org. ☐ Participating Org. ☐ P/QA Project/Activity Representative ☐ Other

FS-F-4400 (05/08/96)

Shipment WML 97-013

Fernald Environmental Restoration Management Corporation
SHIPPING ORDER FOR NUCLEAR MATERIAL

Date Prepared: 10/08/96

SHIP TO: BECHTEL NEVADA CO. INC.	ROUTING: Ranger Transportation, Inc.	SHIPPERS AUTHORIZATION NO.:	SHIPPING ORDER No.: 5607
STREET: U.S. DEPT. OF ENERGY, P.O. BOX 229	[X] PREPAID [ ] COLLECT; CAR OR TRAILER No.: 485617; SEAL No.: 00487	SHIPPED FROM PLANT:	ORIGINATOR'S No.: WML97013
CITY: MERCURY; STATE: NV	ZIP CODE: 89023; BILL OF LADING No.: 7003	QUALITY CONTROL APPROVAL: D. G. Miller 10-17-96	DATE SHIPPED: 10-17-96
SPECIAL INSTRUCTIONS:	COUNTRY CONTROL NO.:	PROJECT No.:	TIME SHIPPED:

Type of Materi THORIUM RESI\SCRAP SALTS\SUMP CAKE — FEMP Production Order No. N003 — Originator's Signature Pam Eldridge 10/8/96

Station RIS: VAB — DOE 741 No. GVC-VAB-013 — Shipment Authorized By _____ NUCLEAR MATERIALS REPRESENTATIVE

NMC DATA			ORIGINATOR'S DATA						MATERIAL CONTROL DATA					
FROM MBA	COST CODE	741 No.	P.O. No.	LOT NUMBER	QUANTITY	WEIGHT (LBS) GROSS	TARE	NET	ANAL. CODE	ELE. ANAL.	ELE. LBS.	ELE. GRAMS. OR KGS	ISO. ANAL.	U235 GRAMS OR KGS
560	697	013	0000	716 T090 0417	1	4,222	1,440	2,782		29.43	819	371315		
560	697	013	0000	716 T090 0417	1	2,952	1,552	1,400		29.43	412	186858		
560	697	013	0000	716 T090 0418	1	3,976	1,440	2,536		29.43	746	338481		
560	697	013	0000	716 T090 0418	1	4,260	1,440	2,820		29.43	830	376386		
560	697	013	0000	716 T090 0418	1	4,124	1,440	2,684		29.43	790	358234		
560	697	013	0000	716 T090 0418	1	4,296	1,440	2,856		29.43	840	381191		
560	697	013	0000	716 T090 0418	1	4,174	1,440	2,734		29.43	804	364908		
560	697	013	0000	716 T090 0418	1	2,950	1,508	1,442		29.43	424	192464		
360	G01	013	W071	100 P094 1305	1	4,818	1,779	3,039		1.98	60	27306	0.706	193
				TOTALS:	9	35,772	13,479	22,293			5,725	2,597,143		193

ETA: 7:00 A.M., MONDAY, OCTOBER 21, 1996

DISTRIBUTION OF COPIES			
1	NMA (Record Copy)	4	Environmental Restoration
2	TRAFFIC	5	Quality Certification
3	NMA (Cost)	6	Originator

I, Marjorie Cain certify that this shipment was made on the above date after complying with all regualtions.

Audited by _____ Date _____

000043

PACKAGE STORAGE AND DISPOSAL

Shipment No: WML97013

Prepared by: _____ Date: 10/9/96

Approved by: _____ Date: 10-10-9

Package No: 421641 WS/ID: ONL0000000006 Operation Type: B Container Code: 107 Package Date: 09/18/9
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 10/08/
Int. Vol(Cu M): 2.719E+00 Ext Vol(Cu M): 3.172E+00 Gross Wt(Kg): 2.185E+03 Net Wt(Kg): 1.378E+03 Tot Curie: 2.059E-
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: .50 1 Meter: .50

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantit
U233ci	N/A	U234ci	8.474E-03	U235ci	4.164E-04	U236ci	4.490E-04	U238ci	9.107E-
TC99ci	7.278E-04	PU238ci	1.274E-06	PU239ci	1.274E-05	PU241ci	3.503E-04	NP237ci	4.857E-
PB210ci	6.569E-05	SR90ci	3.639E-05	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	1.651E-04	TH230ci	2.796E-04	TH232ci	6.990E-05	RA226ci	1.609E-04	RA228ci	2.552E-
AM241ci	1.128E-05								
TH228gm	N/A	TH230gm	N/A	TH232gm	N/A	Tot Thorium Grm	N/A		

Background info: Lot- W071 100 P 094 1305 GW- 4818.00 NW- 3039.00 U- 1.980 U235- .706 Tch99- 26655.0
Desc- CO-PACKAGED URANIUM RESIDUES Cont Desc- SUMP CAKE/PROCESS RESIDUES/SCRAP SALTS

Package No: 423365 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/03/
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.338E+03 Net Wt(Kg): 6.541E+02 Tot Curie: 7.249E
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 45.00 1 Meter: 7.0

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quanti
U233ci	1.112E-05	U234ci	1.576E-03	U235ci	8.765E-05	U236ci	N/A	U238ci	1.610E
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	2.283E-02	TH230ci	4.380E-03	TH232ci	2.100E-02	RA226ci	N/A	RA228ci	2.100E
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.2086	TH232gm	192,464	Tot Thorium Grm	192,464		

Background info: Lot- 0000 716 T 090 0418 GW- 2950.00 NW- 1442.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

Package No: 423223 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 09/30/
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.915E+03 Net Wt(Kg): 1.262E+03 Tot Curie: 1.399E
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 45.00 1 Meter: 7.0

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quanti
U233ci	2.145E-05	U234ci	3.041E-03	U235ci	1.691E-04	U236ci	N/A	U238ci	3.106E
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.405E-02	TH230ci	8.450E-03	TH232ci	4.051E-02	RA226ci	N/A	RA228ci	4.051E
AM241ci	N/A								
TH228gm	0.0001	TH230gm	0.4024	TH232gm	371,314	Tot Thorium Grm	371,315		

Background info: Lot- 0000 716 T 090 0417 GW- 4222.00 NW- 2782.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

PACKAGE STORAGE AND DISPOSAL

Shipment No: WML97013 Prepared by: [signature] Date: 10/9/96

Approved by: [signature] Date: 10-10-96

Package No: 423213 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 09/30/96
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/9
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.339E+03 Net Wt(Kg): 6.350E+02 Tot Curie: 7.038E-0
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 50.00 1 Meter: 6.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity
U233ci	1.080E-05	U234ci	1.530E-03	U235ci	8.509E-05	U236ci	N/A	U238ci	1.563E-0
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	2.217E-02	TH230ci	4.252E-03	TH232ci	2.039E-02	RA226ci	N/A	RA228ci	2.039E-0
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.2025	TH232gm	186,858	Tot Thorium Grm	186,858		

Background info: Lot- 0000 716 T 090 0417 GW- 2952.00 NW- 1400.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

Package No: 423308 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/02/9
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.949E+03 Net Wt(Kg): 1.295E+03 Tot Curie: 1.436E-
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 50.00 1 Meter: 10.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantit
U233ci	2.202E-05	U234ci	3.122E-03	U235ci	1.736E-04	U236ci	N/A	U238ci	3.188E-
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.522E-02	TH230ci	8.674E-03	TH232ci	4.159E-02	RA226ci	N/A	RA228ci	4.159E-
AM241ci	N/A								
TH228gm	0.0001	TH230gm	0.4131	TH232gm	381,191	Tot Thorium Grm	381,191		

Background info: Lot- 0000 716 T 090 0418 GW- 4296.00 NW- 2856.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

Package No: 423312 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/02/9
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.932E+03 Net Wt(Kg): 1.279E+03 Tot Curie: 1.418E-
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 50.00 1 Meter: 10.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantit
U233ci	2.175E-05	U234ci	3.083E-03	U235ci	1.714E-04	U236ci	N/A	U238ci	3.148E-
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.465E-02	TH230ci	8.565E-03	TH232ci	4.106E-02	RA226ci	N/A	RA228ci	4.106E-
AM241ci	N/A								
TH228gm	0.0001	TH230gm	0.4079	TH232gm	376,386	Tot Thorium Grm	376,386		

Background info: Lot- 0000 716 T 090 0418 GW- 4260.00 NW- 2820.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

PACKAGE STORAGE AND DISPOSAL

Shipment No: WML97013

Prepared by: _____ Date: 10/9/96

Approved By: _____ Date: 10-10-96

Package No: 423183 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/02/9
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.803E+03 Net Wt(Kg): 1.150E+03 Tot Curie: 1.275E-
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 50.00 1 Meter: 10.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantit
U233ci	1.956E-05	U234ci	2.772E-03	U235ci	1.541E-04	U236ci	N/A	U238ci	2.831E-
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.015E-02	TH230ci	7.702E-03	TH232ci	3.693E-02	RA226ci	N/A	RA228ci	3.693E-
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.3668	TH232gm	338,480	Tot Thorium Grm	338,481		

Background info: Lot- 0000 716 T 090 0418 GW- 3976.00 NW- 2536.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

Package No: 423220 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/02/9
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.893E+03 Net Wt(Kg): 1.240E+03 Tot Curie: 1.374E-
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 55.00 1 Meter: 10.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantit
U233ci	2.108E-05	U234ci	2.989E-03	U235ci	1.662E-04	U236ci	N/A	U238ci	3.052E-
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.329E-02	TH230ci	8.304E-03	TH232ci	3.981E-02	RA226ci	N/A	RA228ci	3.981E-
AM241ci	N/A								
TH228gm	0.0001	TH230gm	0.3954	TH232gm	364,908	Tot Thorium Grm	364,908		

Background info: Lot- 0000 716 T 090 0418 GW- 4174.00 NW- 2734.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

Package No: 423318 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/02/9
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.871E+03 Net Wt(Kg): 1.217E+03 Tot Curie: 1.349E-
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 50.00 1 Meter: 11.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantit
U233ci	2.070E-05	U234ci	2.934E-03	U235ci	1.631E-04	U236ci	N/A	U238ci	2.996E-
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.249E-02	TH230ci	8.152E-03	TH232ci	3.908E-02	RA226ci	N/A	RA228ci	3.908E-
AM241ci	N/A								
TH228gm	0.0001	TH230gm	0.3882	TH232gm	358,234	Tot Thorium Grm	358,234		

Background info: Lot- 0000 716 T 090 0418 GW- 4124.00 NW- 2684.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

PACKAGE STORAGE AND DISPOSAL

Shipment No: WML97013

Prepared by: [signature] Date: 10/9/96

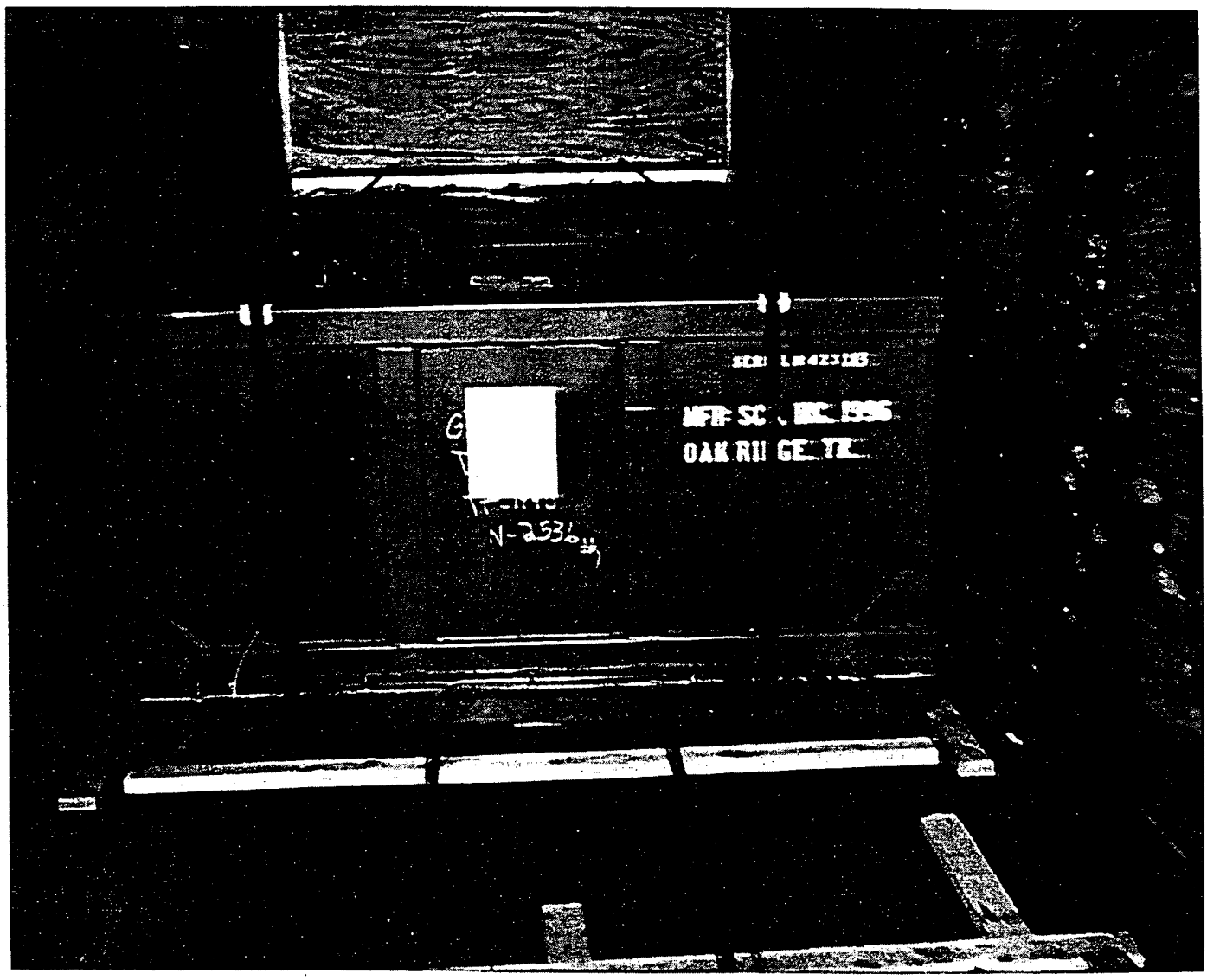
Approved by: John W. Stanzak Date: 10-10-96

Final Totals

Int. Vol(Cu M): 2.470E+01 Ext Vol(Cu M): 3.050E+01 Gross Wt(Kg): 1.623E+04 Net Wt(Kg): 1.011E+04 Tot Curie: 9.885E-(

Total Th Grams: 2,569,837

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantit
U233	1.485E-04	U234	2.952E-02	U235	1.587E-03	U236	4.490E-04	U238	3.060E-(
TC99	7.278E-04	PU238	1.274E-06	PU239	1.274E-05	PU241	3.503E-04	NP237	4.857E-(
PB210	6.569E-05	SR90	3.639E-05	CS137	N/A	NI63	N/A	K40	N/A
TH228	3.050E-01	TH230	5.876E-02	TH232	2.804E-01	RA226	1.609E-04	RA228	2.806E-(
AM241	1.128E-05								

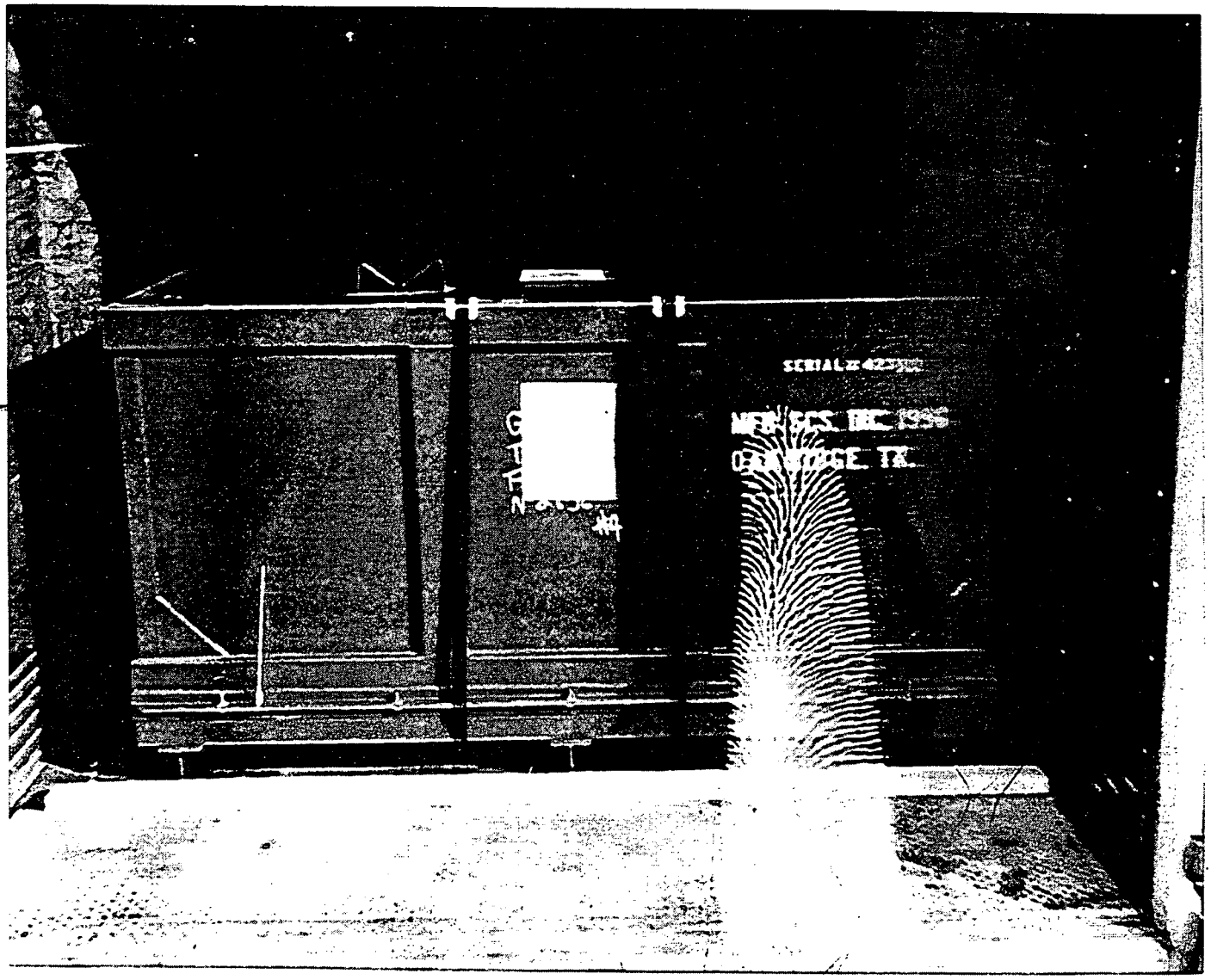


SHIPMENT #WML 97-013

TRAILER # 495617

(1/2 load)

10-15-96 RMK



SHIPMENT # WML 97-013

TRAILER # 485617 (Full Load)

10-15-96 RMK

QUALITY L-LRW TRAILER EXAMINATION AT LOADING

7936

SHIPMENT NO WML97 013 LOADING LOCATION: Building 65 Dock

CARRIER: RANGER TRAILER NO.: 485617

	Stamp	Date
1. Verify a Preliminary Visual Trailer Inspection was completed for empty trailer prior to having been unhooked from tractor.	FEMP QA 43	9/30/96
2. Verify a EBL radiological survey (FS-F-1596-1) is complete for trailer, and results meet 49 CFR 173.441 requirements.	FEMP QA 43	9/30/96

(For Vans Only) SEAL# 0001497

****

3a. Prior to loading, verify seal number is the same as that applied by the RC technician.	FEMP QA 30	10-15-96
3b. Verify each package has a signed and dated NV-211 label affixed and TID(s) are present.	FEMP QA 30	10-15-96
3c Verify each package is free of dirt/loose rock and has no significant deformations or holes.	FEMP QA 30	10-15-96
3d. Verify there is no free liquid emitting from packages.	FEMP QA 30	10-15-96
3e. Verify that packages have been properly tied-down as specified by procedure SOP 50-C-109.	FEMP QA 30	10-15-96
3f. Verify the trailer envelope is affixed to the last package inside the trailer. (DRIVER TO HAND CARRY ENVELOPE) 10-15-96 RMK.	N/A	
3g. Verify that the loaded trailer rear doors are secured with the DOT approved seal. Seal No. 00487 / 0002192	DM	10-17-96

VANS ONLY

4a. Verify there is no free liquid emitting from the package.		
4b. Verify each package has been cleaned of dirt/loose rock and has no significant deformations or holes.		
4c. Verify that the doors of each Sea/Land container are banded and secured with a tamper proof DOT approved seal.		

FLATBEDS

Package#1 Serial# _____ Seal# _____ _____ (Sea/Land or TL WMB)

Package#2 Serial# _____ Seal# _____ _____ (Sea/Land or TL WMB)

PLACE A SIGNED & DATED NV-211 ON SEA/LAND OR TL/WMB WHEN CRITERIA 4 A-C IS MET AND TAKE ONE (1) PHOTO OF LABEL TO VERIFY IT IS SIGNED AND DATED.

Signed: R. M. Fukham (Quality Verification) Date: 10-15-96

FS-F-4416 (Rev. 05/10/94) LOADTRAI.04 *WRITE COMMENTS OF BACK OF FORM

CERTIFICATION STATEMENT

LOW-LEVEL WASTE SHIPMENT FROM FEMP TO NEVADA TEST SITE

Bill of Lading# 7003	Seal Number(s) 00487
Trailer# 485617	

I certify that the packages in Shipment No. WML97 013 as listed on the attached Package Storage & Disposal Data report do not contain hazardous waste as defined in Title 40 CFR 261 or OAC 3745-54 hazardous waste regulations:

(1) according to the results of tests performed in accordance with the requirements as specified in Subpart C of Title 40 CFR 261; and/or

(2) according to the supporting documentation provided to me about the materials and processes that produced the waste.

To the best of my knowledge, I believe the information I have submitted is true, accurate, and complete.

D. G. Miller
FEMP Waste Certification Official

Date: 10.17.96

FS-F-4431 (Rev. 10/14/94) CERT-ST.07

Radioactive Waste Management-Storage & Disposal

Bechtel Nevada Co., Inc

WML97013

PACKAGE NO.	NET WT	TARE WT	GROSS WT	LSA	LQ	RQ	NR	SCO
421641	3039.00	1779.00	4818.00	X			Receipt 96-1231/	
423183	2536.00	1440.00	3976.00	X	96-0007	X	Receipt 96-1437/ 11697	
423213	1400.00	1552.00	2952.00	X		X	Receipt 96-1437/Source 96-169	
423220	2734.00	1440.00	4174.00	X		X	Receipt 96-1437/Source 96-169	
423223	2782.00	1440.00	4222.00	X		X	Receipt 96-1371/Source 96-169	
423308	2856.00	1440.00	4296.00	X		X	Receipt 96-1437/Source 96-1698	
423312	2820.00	1440.00	4260.00	X		X	Receipt 96-1437/Source 96-169	
423318	2684.00	1440.00	4124.00	X		X	Receipt 96-1437/Source 96-1698	
423365	1442.00	1508.00	2950.00	X		X	Receipt 96-1371/Source 96-169	

Source + Receipt Inspect QC Pkt S

ORIGINAL

QUALITY EVALUATION PLAN

QEP No. 96-1437 Rev. 4

1. Source ☐ Receiving X Const./Remediation ☐ Maint./Operations ☐ Waste ☐ Sampling ☐ Recycling ☐

2. Item/Title/Description: THORIUM OVERPACKING CONTAINERS A/K/A/ INVERTED BOXES

sCs Inc. Oak Ridge, Tn. P.O. # 96MB000632,

3. Project/Task: Thorium Overpacking Project	4. Spec./DWG: sCs Dwg. 88A-12-00
5. Prepared By: Bruce Davis Date: 6/4/96	6. Reviewed By: Miles Kopp Date: 6/4/96
7. NDE Level III: (When Required) Date: N/A	8. Approved By: [illegible] Date: 6/4/96

9. Char. No.	10. Evaluation Characteristic (Code/Specification, Inspection/Test/Examination Techniques, Acceptance Criteria)	11. Status Stamp & Date	12. General Remarks
	NOTE: THESE CONTAINERS CONSIST OF THE PLATFORM BASE AND LID.		QUANTITY RECIEVED 20-EA. QUANTITY INSPECTED 20-EA. SERIAL NUMBERS 423183, 423200, 423220, 423213, 423238, 423240, 423321, 423326, 423333, 423335, 423230, 423306, 423308, 423312, 423314, 423318, 423341, 423342, 423349, 423361
1.	Verify no visual signs of water leaking from container.	A BP 9-13-96	
2.	Verify the thickness of paint on the outside of the container's sides and lid is no less than 4 mils dry film thickness. (2 mils primer plus 2 mils white enamel paint.)	A BP 9-13-96	
3.	Verify no damage has occurred in transit, to include the removal of any paint by the "hold down" straps.	A BP 9-13-96	
4.	Verify each container has both a metal stamped plate and matching stenciled serial number on the outside of the container.	A BP 9-13-96	
5.	Verify serial numbers of containers shipped match serial numbers listed on FERMCO Supplier Quality Release Form.	A BP 9-13-96	
6.	Verify Seller's Inspection Report(s) and/or Inspection/Test Data accompany shipment.	A BP 9-13-96	
7.	Verify FERMCO Supplier Quality Release Form accompanies shipment.	A BP 9-13-96	
8.	Verify Certificate of Conformance accompanies shipment stating the rust inhibitor is mercury free, lead free, and zinc chromate free.	A BP 9-13-96	
9.	Verify Certificate of Conformance accompanies shipment stating the paint is enamel, lead free, mercury free, and chromium free.	A BP 9-13-96	

13. Quality Evaluator: Bill Pollinger

14. Open QEP: YES ☐ NO ☒	15. P/QA Manager Review: Bruce Davis
16. P/QA Manager (completed QEP): Bruce Davis	Date: 9/30/96

17. Distribution: ☐ Requesting Org. ☐ Participating Org. ☐ P/QA Project/Activity Representative ☐ Other

FS-F-4400 (05/08/96)

7936 ORIGINAL

QUALITY EVALUATION PLAN

QEP No. 96-1371 Rev. 4

1. Source ☐ Receiving X Const./Remediation ☐ Maint./Operations ☐ Waste ☐ Sampling ☐ Recycling ☐

2. Item/Title/Description: THORIUM OVERPACKING CONTAINERS A/K/A/ INVERTED BOXES

sCs Inc. Oak Ridge, Tn. P.O. # 98MB000632,

3. Project/Task: Thorium Overpacking Project

4. Spec./DWG: sCs Dwg. 88A-12-00

5. Prepared By: Bruce Davis Date: 6/4/96

6. Reviewed By: Mike Koff Date: 6/4/96

7. NDE Level III: (When Required) Date: N/A

8. Approved By: [illegible] Date: 6/4/96

9. Char. No.	10. Evaluation Characteristic (Code/Specification, Inspection/Test/Examination Techniques, Acceptance Criteria)	11. Status Stamp & Date	12. General Remarks
	NOTE: THESE CONTAINERS CONSIST OF THE PLATFORM BASE AND LID.		QUANTITY RECEIVED 16-EA. QUANTITY INSPECTED 16-EA. SERIAL NUMBERS 423194 423328 423196 423231 423205 423236 423347 423302 423356 423310 423365 423313 423368 423319 423223 423320
1.	Verify no visual signs of water leaking from container.	A B.P. 8-22-96	
2.	Verify the thickness of paint on the outside of the container's sides and lid is no less than 4 mils dry film thickness. (2 mils primer plus 2 mils white enamel paint.)	A B.P. 8-22-96	
3.	Verify no damage has occurred in transit, to include the removal of any paint by the "hold down" straps.	A B.P. 8-22-96	
4.	Verify each container has both a metal stamped plate and matching stenciled serial number on the outside of the container.	A B.P. 8-22-96	
5.	Verify serial numbers of containers shipped match serial numbers listed on FERMCO Supplier Quality Release Form.	A B.P. 8-22-96	REJECTED CONTAINER NUMBER 423368 HAS A SEAM WHICH HAS BEEN STICHED WELD THAT RUNS THE WHOLE LENGTH OF THE CONTAINER THIS SEAM SHOULD HAVE BEEN SEALED BUT WASN'T SEE ATTACHED COPY OF CONTRACT
6.	Verify Seller's Inspection Report(s) and/or Inspection/Test Data accompany shipment.	A B.P. 8-22-96	
7.	Verify FERMCO Supplier Quality Release Form accompanies shipment.	A B.P. 8-22-96	
8.	Verify Certificate of Conformance accompanies shipment stating the rust inhibitor is mercury free, lead free, and zinc chromate free.	A B.P. 8-22-96	
9.	Verify Certificate of Conformance accompanies shipment stating the paint is enamel, lead free, mercury free, and chromium free.	A B.P. 8-22-96	DR 96-0080 Close 9/15/96
10	SEE ATTACHED COPY OF CONTRACT "SPECIFIC REQUIREMENTS" 2-C HIGHLIGHTED	R B.P. 8-22-96	FERMCO QA 9/15/96

13. Quality Evaluator: [illegible]

14. Open QEP: YES ☐ NO X

15. P/QA Manager Review: Bruce Davis

16. P/QA Manager (completed QEP): Bruce Davis Date: 9/15/96

17. Distribution: ☐ Requesting Org. ☐ Participating Org. ☐ P/QA Project/Activity Representative ☐ Other

FS-F-4400 (05/06/96)

QUALITY EVALUATION PLAN

ORIGINAL

QEP No. 96-1234 Rev. ____

1. Source ☐ Receiving X Const./Remediation ☐ Maint./Operations ☐ Waste ☐ Sampling ☐ Recycling ☐

2. Item/Title/Description: STRONG-TIGHT CONTIANER (White Metal Box)

CGR COMPACTING INC., N. ADAMS, MA

3. Project/Task: P.O.# 95M8004830	4. Spec./DWG:
5. Prepared By: Don Kalau Date:	6. Reviewed By: Bruce K Davis Date: 5/14/96
7. NDE Level III: (When Required) N/A Date:	8. Approved By: (When Required) N/A Date:

9. Char. No.	10. Evaluation Characteristic (Code/Specification, Inspection/Test/Examination Techniques, Acceptance Criteria)	11. Status Stamp & Date	12. General Remarks
	Receipt Inspection of (white metal box) Container FULL-HEIGHT - 4' x 4' x 7' HALF-HEIGHT - 2' x 4' x 7'		Quantity Received 26-EA. Quantity Inspected 26-EA.
1.	VERIFY the closure tabs of the lid are in alignment with the tab openings on the box to allow the tab to be fully crimped during closure.	A BP 7-24-96	Full Height Containers Serial Numbers
2.	VERIFY no damage has occured in transit.	A BP 7-24-96	421641 421661 421642 421662
3.	VERIFY Seller's Inspection Report(s) and/or Inspection/Test Data has been provided with shipment.	A BP 7-24-96	421643 421663 421647 421664
4.	VERIFY serial numbers of containers shipped match serial numbers listed on either FERMCO Supplier Quality Release and/or Seller's provided documentation.	A BP 7-24-96	421648 421665 421650 421666 421653 421668
5.	VERIFY Certificate of Conformance(s) have been provided to cover the following: • primer/rust inhibitor • enamel paint • rated capacity • DOT Regulations	A BP 7-24-96	421655 421669 421656 421671 421657 421672 421658 421674 421659 421676 421660 421683

13. Quality Evaluator: Bill Pollins

14. Open QEP: YES ☐ NO ☒

15. P/QA Manager Review: Bruce K Davis

000055

16. P/QA Manager (completed QEP): Bruce K Davis Date: 8/5/96

17. Distribution: ☐ Requesting Org. ☐ Participating Org. ☐ P/QA Project/Activity Representative ☐ Other

E-7983

Fernald Environmental Restoration Management Corporation

1698

[1] Date: 9-11-96

SUPPLIER QUALITY RELEASE

(INSTRUCTIONS ON REVERSE SIDE)

[2] PROJECT NAME/NUMBER:	[3] P.O./SUBCONTRACT NUMBER:	[4] SUPPLIER ORDER NUMBER:
THORIUM OVERPACKING CONTAINER	96MB000532	N/A

[5] SUPPLIER:	[6] Q.RELEASE:	[7] SUBCONTRACT ADMINISTRATOR:
SCS, INC. OAK RIDGE, TN	☒ Partial Shipment ☐ Final Shipment	BETH STRAUB

[8] MATERIAL DESCRIPTION: THORIUM OVERPACKING CONTAINER
QUANTITY RELEASED: 10 423230, 423306, 423308, 423312, 423314, 423318, 423341, 423342, 423349, 423361

[9] Q. RELEASE CHECKLIST

A- Mill Test Reports	N/A	E- NDT Reports	RA	I- CARs Cleared	N/A
B- Check Analysis	N/A	F- Radiographic Film	N/A	J- "As Built" Drawings	N/A
C- Certification of Material Conformance	RA	G- Functional Test Reports	RA	K- Manual & Instructions	N/A
D- Weld Reports	N/A	H- SDRs Cleared	N/A		

[10] FINAL EXAMINATION OF PRODUCT

Envelope Dimensions	RA	Identification	RA	Packaging	RA
Cleanliness	RA	Marking	RA	Crating	N/A

[11] COMMENTS:
* FINAL ACCEPTANCE BY RECEIPT INSPECTION PERFORMED AT THE FERMCO SITE

[12] QFR RELEASE

STAMP: RA 9-11-96

Conditional (*) ☒
Unconditional ☐
Denial ☐

Reinhard Fiske — SIGNATURE
9-11-96 — DATE

(*) EXPLAIN CONDITIONAL QFR RELEASE IN "COMMENTS" SECTION

[13] Documentation Package:	Shipped Separately To:	With Shipment:	Not Required:
FERMCO	BETH STRAUB	X	

[14] Subcontract Administrator Notified of Shipment & Routing	BY:	DATE:	VIA:

[15] APPROVED FOR SHIPMENT

9-12-96 SUPPLIER SHIPPING DATE	Margie Hensley SUPPLIER Q. REP.	9-12-96 DATE	OTHER	DATE

000056

FS-F-2643 (PAGE 1 OF 2) (REV. 01/26/95)

sCs, Inc.
100 Meco Drive
Oak Ridge, Tennessee 37830

CERTIFICATE OF COMPLIANCE

Product:	Thorium Overpack Container
Customer:	Fermco
Customer's Facility:	Fermco, Cincinnati, Ohio
Customer Contact:	Beth Straub
Customer Purchase Order:	96MB000532
Steel	ASTM A569, ASTM A36
Welding	AWS D1.1 & D1.3
Primer:	Rust Inhibiting - Mercury free Lead free, & Zinc Chromate free
Paint	Blue Enamel, Federal Standard, 595A, 15090 - Mercury free, Lead free & Chromium free
Marking	Mfg: sCs, Inc., Oak Ridge, TN.
Gaskets:	5/8" Closed Cell Neoprene Foam - SCE 43
Model No.:	88A-12-00
Lot/Serial No.:	WO #50139 1/423183, 423200 WO #60003 3/423213, 423220, 423238 WO #60004 4/423240 WO #60036 7/423321, 423326, 423333, 423335

sCs, Inc. certifies that the above product has been inspected and/or tested by me or my designated inspector and that it meets or exceeds the quality control requirements identified in the above specification or sCs workmanship standards and Quality Control Manual.

Margie Hensley
Margie Hensley
Quality Assurance Manager

9/9/96

7936

Fernald Environmental Restoration Management Corporation

[1] Date: 8-21-96

SUPPLIER QUALITY RELEASE

(INSTRUCTIONS ON REVERSE SIDE)

[2] PROJECT NAME/NUMBER:	[3] P.O./SUBCONTRACT NUMBER:	[4] SUPPLIER ORDER NUMBER:
THORIUM OVERPACKING CONTAINER	96M8000532	N/A

[5] SUPPLIER:	[6] Q.RELEASE:	[7] SUBCONTRACT ADMINISTRATOR:
SCS, INC. Oak Ridge, TN.	☒ Partial Shipment ☐ Final Shipment	BETH STRAUB

[8] MATERIAL DESCRIPTION: THORIUM OVERPACKING CONTAINER

RELEASE NUMBER:

LOT NUMBER:

QUANTITY RELEASED: 16

423194 423196 423205 423347, 423356, 423365, 423368
423223, 423328, 423231, 423236, 423302, 423310, 423313, 423319, 423320

[9] Q. RELEASE CHECKLIST

A- Mill Test Reports	N/A	E- NDT Reports		I- CARs Cleared	N/A
B- Check Analysis	N/A	F- Radiographic Film	N/A	J- "As Built" Drawings	N/A
C- Certification of Material Conformance		G- Functional Test Reports		K- Manual & Instructions	N/A
D- Weld Reports	N/A	H- SDRs Cleared			

[10] FINAL EXAMINATION OF PRODUCT

Envelope Dimensions		Identification	8-21	Packaging	N/A
Cleanliness		Marking	8-21	Crating	N/A

[11] COMMENTS: * FINAL ACCEPTANCE BY RECEIPT INSPECTION PERFORMED AT THE FERMCO SITE

423356 CONTAINS EXTRA GASKET

[12] QFR RELEASE

STAMP: 8-21-96 FEMP QA 45

Conditional (*)	☒
Unconditional	☐
Denial	☐

Reinhard Finke — SIGNATURE — 8-21-96 DATE

(*) EXPLAIN CONDITIONAL QFR RELEASE IN "COMMENTS" SECTION

[13] Documentation Package:	Shipped Separately To:	With Shipment:	Not Required:
FERMCO	BETH STRAUB	X	

[14] Subcontract Administrator Notified of Shipment & Routing	BY:	DATE:	VIA:

[15] APPROVED FOR SHIPMENT

8-21-96	Margi Hensley	8/21/96		
SUPPLIER SHIPPING DATE	SUPPLIER Q. REP.	DATE	OTHER	DATE

FF-2043 (PAGE 1 OF 2) REV. 01/23/96

000058

sCs, Inc.
100 Meco Drive
Oak Ridge, Tennessee 37830

CERTIFICATE OF COMPLIANCE

Product:	Thorium Overpack Container
Customer:	Fermco
Customer's Facility:	Fermco, Cincinnati, Ohio
Customer Contact:	Beth Straub
Customer Purchase Order:	96MB000532
Steel	ASTM A569, ASTM A36
Welding	AWS D1.1 & D1.3
Primer:	Rust Inhibiting - Mercury free Lead free, & Zinc Chromate free
Paint	Blue Enamel, Federal Standard, 595A, 15090 - Mercury free, Lead free & Chromium free
Marking	Mfg: sCs, Inc., Oak Ridge, TN.
Gaskets:	5/8" Closed Cell Neoprene Foam - SCE 43
Model No.:	88A-12-00

Lot/Serial No.:	WO #60001	2/423194, 423196, 423205
	WO #60003	3/423223, 423231, 423236
	WO #60009	5/423302
	WO #60034	6/423310, 423313, 423319, 423320
	WO #60036	7/423328
	WO #60039	8/423347
	WO #60043	9/423356, 423365, 423368

sCs, Inc. certifies that the above product has been inspected and/or tested by me or my designated inspector and that it meets or exceeds the quality control requirements identified in the above specification or sCs workmanship standards and Quality Control Manual.

Margie Hensley

Margie Hensley
Quality Assurance Manager

8/19/96

Fernald Environmental Restoration Management Corporation

167 - 7986

[1] Date: 9-4-96

SUPPLIER QUALITY RELEASE

(INSTRUCTIONS ON REVERSE SIDE)

[2] PROJECT NAME/NUMBER:	[3] P.O./SUBCONTRACT NUMBER:	[4] SUPPLIER ORDER NUMBER:
THORIUM OVERPACKING CONTAINER	96MB000532	N/A

[5] SUPPLIER:	[6] Q.RELEASE:	[7] SUBCONTRACT ADMINISTRATOR:
SCS, INC. OAK RIDGE, TN	☒ Partial Shipment ☐ Final Shipment	BETH STRAUB

[8] MATERIAL DESCRIPTION: THORIUM OVERPACKING CONTAINER
RELEASE NUMBER: R6
QUANTITY RELEASED: 16
LOT NUMBER: 423219, 423234, 423264, 423296, 423307, 423309, 423316, 423317, 423327, 423329, 423330, 423331, 423332, 423336, 423367, 423422

[9] Q. RELEASE CHECKLIST

A- Mill Test Reports		N/A	E- NDT Reports	9-4-96	RA	I- CARs Cleared	N/A
B- Check Analysis		N/A	F- Radiographic Film		N/A	J- "As Built" Drawings	N/A
C- Certification of Material Conformance	9-4-96	RA	G- Functional Test Reports	9-4-96	RA	K- Manual & Instructions	N/A
D- Weld Reports		N/A	H- SDRs Cleared	9-4-96	RA		

[10] FINAL EXAMINATION OF PRODUCT

Envelope Dimensions	9-4-96	RA	Identification	9-4-96	RA	Packaging	N/A
Cleanliness	9-4-96	RA	Marking	9-4-96	RA	Crating	N/A

[11] COMMENTS:
* FINAL ACCEPTANCE BY RECEIPT INSPECTION PERFORMED AT THE FERMCO SITE

[12] QFR RELEASE

STAMP: RA 9-4-96

Conditional (*) ☒
Unconditional ☐
Denial ☐

Richard Strube — SIGNATURE — 9-4-96 DATE

(*) EXPLAIN CONDITIONAL QFR RELEASE IN "COMMENTS" SECTION

[13] Documentation Package:	Shipped Separately To:	With Shipment:	Not Required:
FERMCO	BETH STRAUB	X	

[14] Subcontract Administrator Notified of Shipment & Routing	BY:	DATE:	VIA:

[15] APPROVED FOR SHIPMENT

9-4-96	Margie Hensley	9-4-96		
SUPPLIER SHIPPING DATE	SUPPLIER Q. REP.	DATE	OTHER	DATE

FD-A-3643 (PAGE 1 OF 2) (REV. 01/23/95)

Fernald Environmental Restoration Management Corporation

1697

[1] Date: 9-4-96

SUPPLIER QUALITY RELEASE

(INSTRUCTIONS ON REVERSE SIDE)

[2] PROJECT NAME/NUMBER:	[3] P.O./SUBCONTRACT NUMBER:	[4] SUPPLIER ORDER NUMBER:
THORIUM OVERPACKING CONTAINER	96MB000532	N/A

[5] SUPPLIER:	[6] Q. RELEASE:	[7] SUBCONTRACT ADMINISTRATOR:
SCS, INC. Oak Ridge, TN.	☑ Partial Shipment ☐ Final Shipment	BETH STRAUB

[8] MATERIAL DESCRIPTION: THORIUM OVERPACKING CONTAINER

RELEASE NUMBER: R7

LOT NUMBER: 423183, 423200, 423220, 423213, 423238, 423240

QUANTITY RELEASED: 10

423321, 423326, 423333, 423335

[9] Q. RELEASE CHECKLIST

A- Mill Test Reports	N/A	B- NDT Reports 9-4-96	RA	D- CARs Cleared	N/A
B- Check Analysis	N/A	F- Radiographic Film	N/A	E- "As Built" Drawings	N/A
C- Certification of Material Conformance 9-4-96	RA	G- Functional Test Reports	N/A	H- Manual & Instructions	N/A
D- Weld Reports	N/A	H- SDRs Cleared	N/A		

[10] FINAL EXAMINATION OF PRODUCT

Envelope Dimensions 9-4-96	RA	Identification 9-4-96	RA	Packaging	N/A
Cleanliness 9-4-96	RA	Marking 9-4-96	RA	Crating	N/A

[11] COMMENTS: * FINAL ACCEPTANCE BY RECEIPT INSPECTION PERFORMED AT THE FERMCO SITE.

[12] QPR RELEASE

STAMP:		
RA 9-4-96 FEMP QA 45	Conditional (*) ☒ Unconditional ☐ Denial ☐	Reinhard Fiske 9-4-96 SIGNATURE DATE

(*) EXPLAIN CONDITIONAL QPR/RELEASE IN "COMMENTS" SECTION

[13] Documentation Package:	Shipped Separately To:	With Shipment:	Not Required:
FERMCO	BETH STRAUB	X	

[14] Subcontract Administrator Notified of Shipment & Routing	BY:	DATE:	VIA:

[15] APPROVED FOR SHIPMENT

SUPPLIER SHIPPING DATE	SUPPLIER Q. REP.	DATE	OTHER	DATE
	Margie Hensley	9-4-96		

sCs, Inc.
100 Meco Drive
Oak Ridge, Tennessee 37830

1697

CERTIFICATE OF COMPLIANCE

Product:	Thorium Overpack Container
Customer:	Fermco
Customer's Facility:	Fermco, Cincinnati, Ohio
Customer Contact:	Beth Straub
Customer Purchase Order:	96MB000532
Steel	ASTM A569, ASTM A36
Welding	AWS D1.1 & D1.3
Primer:	Rust Inhibiting - Mercury free Lead free, & Zinc Chromate free
Paint	Blue Enamel, Federal Standard, 595A, 15090 - Mercury free, Lead free & Chromium free
Marking	Mfg: sCs, Inc., Oak Ridge, TN.
Gaskets:	5/8" Closed Cell Neoprene Foam - SCE 43
Model No.:	88A-12-00
Lot/Serial No.:	WO #60003 3/423219, 423234
	WO #60004 4/423264
	WO #60009 5/423296
	WO #60034 6/423307 423309 423316 423317
	WO #60036 7/423327 423329 423330
	7/423331 423332 423336
	WO #60043 9/423367
	WO #60060 13/423422

sCs, Inc. certifies that the above product has been inspected and/or tested by me or my designated inspector and that it meets or exceeds the quality control requirements identified in the above specification or sCs workmanship standards and Quality Control Manual.

Margie Hensley

Margie Hensley
Quality Assurance Manager

9/4/96

Shipment 97-014

Fernald Environmental Restoration Management Corporation
SHIPPING ORDER FOR NUCLEAR MATERIAL

Date Prepared: 10/10/96

SHIP TO: BECHTEL NEVADA CO. INC.	ROUTING: Ranger Transportation, Inc.			SHIPPERS AUTHORIZATION NO.:	SHIPPING ORDER No.: 5608
STREET: U.S. DEPT. OF ENERGY, P.O. BOX 229	[X] PREPAID [ ] COLLECT	CAR OR TRAILER No.: 717351	SEAL No.: 00491	SHIPPED FROM PLANT:	ORIGINATOR'S No.: WML97014
CITY: MERCURY STATE: NV	ZIP CODE: 89023	BILL OF LADING No.: 7004	QUALITY CONTROL APPROVAL: D. G. Miller 10-17-96		DATE SHIPPED: 10-17-96
SPECIAL INSTRUCTIONS:		COUNTRY CONTROL NO.:	PROJECT No.:		TIME SHIPPED:

Type of Materi THOR.RES\DRM RES\MGF2\GRAPHITE — FEMP Production Order No. N003 — Originator's Signature [signature] 10/10/96

Station RIS: VAB — DOE 741 No. GVC-VAB-014 — Shipment Authorized By [signature] 10-15-96 NUCLEAR MATERIALS REPRESENTATIVE

NMC DATA			ORIGINATOR'S DATA						MATERIAL CONTROL DATA					
FROM MBA	COST CODE	741 No.	P.O. No.	LOT NUMBER	QUANTITY	WEIGHT (LBS) GROSS	TARE	NET	ANAL CODE	ELE. ANAL.	ELE. LBS.	ELE. GRAMS. OR KGS	ISO. ANAL.	U235 GRAMS OR KGS
560	697	014	0000	716 T090 0418	1	3,996	1,446	2,550		29.43	750	340349		
560	697	014	0000	716 T090 0418	1	3,910	1,446	2,464		29.43	725	328871		
560	697	014	0000	716 T090 0418	1	4,166	1,446	2,720		29.43	800	363039		
560	697	014	0000	716 T090 0418	1	4,430	1,446	2,984		29.43	878	398276		
560	697	014	0000	716 T090 0418	1	3,846	1,546	2,300		29.43	677	306982		
560	697	014	0000	716 T090 0418	1	3,886	1,546	2,340		29.43	689	312321		
560	697	014	0000	716 T090 0418	1	3,840	1,546	2,294		29.43	675	306181		
560	697	014	0000	716 T090 0418	1	3,908	1,546	2,362		29.43	695	315257		
360	G01	014	W042	100 P094 1205	1	6,256	1,557	4,699		2.31	109	49215	0.424	209
				TOTALS:	9	38,238	13,525	24,713			5,998	2,720,491		209

ETA: 7:00 A.M., MONDAY, OCTOBER 21, 1996

DISTRIBUTION OF COPIES			
1	NMA (Record Copy)	4	Environmental Restoration
2	TRAFFIC	5	Quality Certification
3	NMA (Cost)	6	Originator

I, Marjorie Cain certify that this shipment was made on the above date after complying with all regualtions.

Audited by _____ Date _____

000064

PACKAGE STORAGE AND DISPOSAL

Shipment No: WNL97014

Prepared by: Jerome A Grooms Date: 10/14/96

Approved by: R. M. Kirkham Date: 10/15/96

Package No: 420405 WS/ID: ONL0000000006 Operation Type: B Container Code: 107 Package Date: 06/27/96
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 10/10/96
Int. Vol(Cu M): 2.719E+00 Ext Vol(Cu M): 3.172E+00 Gross Wt(Kg): 2.838E+03 Net Wt(Kg): 2.131E+03 Tot Curie: 2.916E-02
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: .50 1 Meter: .50

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity
U233ci	N/A	U234ci	8.392E-03	U235ci	4.507E-04	U236ci	3.583E-04	U238ci	1.646E-02
TC99ci	1.314E-03	PU238ci	1.018E-06	PU239ci	1.018E-05	PU241ci	2.798E-04	NP237ci	3.879E-06
PB210ci	1.184E-04	SR90ci	6.571E-05	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	2.975E-04	TH230ci	5.039E-04	TH232ci	1.260E-04	RA226ci	2.899E-04	RA228ci	4.599E-04
AM241ci	2.034E-05								
TH228gm	N/A	TH230gm	N/A	TH232gm	N/A	Tot Thorium Grm	N/A		

Background info: Lot- W042 100 P 094 1205 GW- 6256.00 NW- 4699.00 U- 2.310 U235- .424 Tch99- 26703.0
Desc- CO-PACKAGED URANIUM RESIDUES Cont Desc- MAGNESIUM FLUORIDE / GRAPHITE

Package No: 423320 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/08/96
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/96
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.773E+03 Net Wt(Kg): 1.071E+03 Tot Curie: 1.187E-01
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 25.00 1 Meter: 7.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity
U233ci	1.821E-05	U234ci	2.582E-03	U235ci	1.436E-04	U236ci	N/A	U238ci	2.637E-03
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	3.740E-02	TH230ci	7.174E-03	TH232ci	3.439E-02	RA226ci	N/A	RA228ci	3.439E-02
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.3416	TH232gm	315,257	Tot Thorium Grm	315,257		

Background info: Lot- 0000 716 T 090 0418 GW- 3908.00 NW- 2362.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

Package No: 423356 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/07/96
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/9
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.774E+03 Net Wt(Kg): 1.118E+03 Tot Curie: 1.239E-0
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 25.00 1 Meter: 5.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity
U233ci	1.900E-05	U234ci	2.694E-03	U235ci	1.498E-04	U236ci	N/A	U238ci	2.751E-0
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	3.901E-02	TH230ci	7.484E-03	TH232ci	3.588E-02	RA226ci	N/A	RA228ci	3.588E-0
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.3564	TH232gm	328,871	Tot Thorium Grm	328,871		

Background info: Lot- 0000 716 T 090 0418 GW- 3910.00 NW- 2464.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

PACKAGE STORAGE AND DISPOSAL

Shipment No: WNL97014

Prepared by: [signature] Date: 10/14/96

Approved by: R. M. Kirkham Date: 10/15/96

Package No: 423297 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/08/96
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/96
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.742E+03 Net Wt(Kg): 1.041E+03 Tot Curie: 1.153E-01
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 25.00 1 Meter: 7.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity
U233ci	1.769E-05	U234ci	2.508E-03	U235ci	1.394E-04	U236ci	N/A	U238ci	2.561E-03
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	3.632E-02	TH230ci	6.967E-03	TH232ci	3.340E-02	RA226ci	N/A	RA228ci	3.340E-02
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.3318	TH232gm	306,181	Tot Thorium Grm	306,181		

Background info: Lot- 0000 716 T 090 0418 GW- 3840.00 NW- 2294.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

Package No: 423363 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/07/96
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/96
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 2.009E+03 Net Wt(Kg): 1.354E+03 Tot Curie: 1.500E-01
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 45.00 1 Meter: 8.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity
U233ci	2.301E-05	U234ci	3.262E-03	U235ci	1.814E-04	U236ci	N/A	U238ci	3.331E-03
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.724E-02	TH230ci	9.063E-03	TH232ci	4.345E-02	RA226ci	N/A	RA228ci	4.345E-02
AM241ci	N/A								
TH228gm	0.0001	TH230gm	0.4316	TH232gm	398,275	Tot Thorium Grm	398,276		

Background info: Lot- 0000 716 T 090 0418 GW- 4430.00 NW- 2984.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

Package No: 423354 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/10/96
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/96
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.813E+03 Net Wt(Kg): 1.157E+03 Tot Curie: 1.282E-01
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 35.00 1 Meter: 8.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity
U233ci	1.966E-05	U234ci	2.788E-03	U235ci	1.550E-04	U236ci	N/A	U238ci	2.847E-03
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.037E-02	TH230ci	7.745E-03	TH232ci	3.713E-02	RA226ci	N/A	RA228ci	3.713E-02
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.3688	TH232gm	340,349	Tot Thorium Grm	340,349		

Background info: Lot- 0000 716 T 090 0418 GW- 3996.00 NW- 2550.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

PACKAGE STORAGE AND DISPOSAL

Shipment No: WNL97014

Prepared by: Jerome A Green Date: 10/14/96

Approved by: R. M. Kirkham Date: 10/15/96

Package No: 423171 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/08/96
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/96
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.745E+03 Net Wt(Kg): 1.043E+03 Tot Curie: 1.156E-01
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 20.00 1 Meter: 6.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity
U233ci	1.774E-05	U234ci	2.514E-03	U235ci	1.398E-04	U236ci	N/A	U238ci	2.567E-03
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	3.641E-02	TH230ci	6.986E-03	TH232ci	3.349E-02	RA226ci	N/A	RA228ci	3.349E-02
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.3326	TH232gm	306,981	Tot Thorium Grm	306,982		

Background info: Lot- 0000 716 T 090 0418 GW- 3846.00 NW- 2300.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

Package No: 423236 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/08/96
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/96
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.890E+03 Net Wt(Kg): 1.234E+03 Tot Curie: 1.367E-01
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 45.00 1 Meter: 10.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity
U233ci	2.097E-05	U234ci	2.973E-03	U235ci	1.653E-04	U236ci	N/A	U238ci	3.036E-03
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	4.306E-02	TH230ci	8.261E-03	TH232ci	3.961E-02	RA226ci	N/A	RA228ci	3.961E-02
AM241ci	N/A								
TH228gm	0.0001	TH230gm	0.3934	TH232gm	363,039	Tot Thorium Grm	363,039		

Background info: Lot- 0000 716 T 090 0418 GW- 4166.00 NW- 2720.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

Package No: 423299 WS/ID: ONL0000000012 Operation Type: B Container Code: 131 Package Date: 10/08/96
NC: 2 Waste Code: DS WS Treatment Cd: Assay Date: 07/09/96
Int. Vol(Cu M): 2.747E+00 Ext Vol(Cu M): 3.416E+00 Gross Wt(Kg): 1.763E+03 Net Wt(Kg): 1.061E+03 Tot Curie: 1.176E-01
WS Vol(Cu M): WS WT(Kg): Disposal Cat: Radiation (Mr/h) - Surface: 22.00 1 Meter: 8.00

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity
U233ci	1.804E-05	U234ci	2.558E-03	U235ci	1.422E-04	U236ci	N/A	U238ci	2.612E-03
TC99ci	N/A	PU238ci	N/A	PU239ci	N/A	PU241ci	N/A	NP237ci	N/A
PB210ci	N/A	SR90ci	N/A	CS137ci	N/A	NI63ci	N/A	K40ci	N/A
TH228ci	3.705E-02	TH230ci	7.107E-03	TH232ci	3.407E-02	RA226ci	N/A	RA228ci	3.407E-02
AM241ci	N/A								
TH228gm	0.0000	TH230gm	0.3384	TH232gm	312,320	Tot Thorium Grm	312,321		

Background info: Lot- 0000 716 T 090 0418 GW- 3886.00 NW- 2340.00 U- 0.000 U235- 0.000 Tch99- 0.000
Desc- THORIUM RESIDUES Cont Desc- THORIUM WASTE

PACKAGE STORAGE AND DISPOSAL

Shipment No: WHL97014

Prepared by: [signature] Date: 10/14/96

Approved by: R. M. Kirkham Date: 10/15/96

Final Totals

Int. Vol(Cu M): 2.470E+01 Ext Vol(Cu M): 3.050E+01 Gross Wt(Kg): 1.734E+04 Net Wt(Kg): 1.121E+04 Tot Curie: 1.035E+00

Total Th Grams: 2,671,276

Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity	Nuclide	Quantity
U233	1.543E-04	U234	3.027E-02	U235	1.667E-03	U236	3.583E-04	U238	3.881E-02
TC99	1.314E-03	PU238	1.018E-06	PU239	1.018E-05	PU241	2.798E-04	NP237	3.879E-06
PB210	1.184E-04	SR90	6.571E-05	CS137	N/A	NI63	N/A	K40	N/A
TH228	3.172E-01	TH230	6.129E-02	TH232	2.916E-01	RA226	2.899E-04	RA228	2.919E-01
AM241	2.034E-05								

QUALITY L-LRW TRAILER EXAMINATION AT LOADING

7936

SHIPMENT NO WML97 014 LOADING LOCATION: Building 65 Dock

CARRIER: RANGER TRAILER NO.: 717 351

	Stamp	Date
1. Verify a Preliminary Visual Trailer Inspection was completed for empty trailer prior to having been unhooked from tractor.	FEMP QA 43	10/2/96
2. Verify a EBL radiological survey (FS-F-1596-1) is complete for trailer, and results meet 49 CFR 173.441 requirements.	FEMP QA 43	10/2/96

(For Vans Only) SEAL# 0000725

****

VANS ONLY

3a. Prior to loading, verify seal number is the same as that applied by the RC technician.	FEMP QA 30	10-16-96
3b. Verify each package has a signed and dated NV-211 label affixed and TID(s) are present.	FEMP QA 30	10-16-96
3c Verify each package is free of dirt/loose rock and has no significant deformations or holes.	FEMP QA 30	10-16-96
3d. Verify there is no free liquid emitting from packages.	FEMP QA 30	10-16-96
3e. Verify that packages have been properly tied-down as specified by procedure SOP 50-C-109.	FEMP QA 30	10-16-96
3f. Verify the trailer envelope is affixed to the last package inside the trailer. (DRIVER TO HAND CARRY ENVELOPE) RMK 10-16-96	N/A	
3g. Verify that the loaded trailer rear doors are secured with the DOT approved seal. Seal No. 00491 / 0002115 (RAD)	DM	10-17-96

FLATBEDS

4a. Verify there is no free liquid emitting from the package.	N/A	
4b. Verify each package has been cleaned of dirt/loose rock and has no significant deformations or holes.	N/A	
4c. Verify that the doors of each Sea/Land container are banded and secured with a tamper proof DOT approved seal.	N/A	

Package#1 Serial# _____ Seal# _____ _____ (Sea/Land or TL WMB)

Package#2 Serial# _____ Seal# _____ _____ (Sea/Land or TL WMB)

PLACE A SIGNED & DATED NV-211 ON SEA/LAND OR TL/WMB WHEN CRITERIA 4 A-C IS MET AND TAKE ONE (1) PHOTO OF LABEL TO VERIFY IT IS SIGNED AND DATED.

Signed: D. G. Miller (Quality Verification) Date: 10/2/96

ORIGINAL

FS-F-4416 (Rev. 05/10/94) LOADTRAI.04 *WRITE COMMENTS ON BACK OF FORM

000069

QUALITY L-LRW FINAL TRAILER/VEHICLE EXAMINATION

SHIPMENT NO WML97 014 TRAILER NO.: 717351

1. With the assistance of the off-site driver, verify all of the following are operational on the transport vehicle:

Headlights (low & high beams)	✓
Turn signals	✓
Brake lights	✓
Horn	✓
Windshield Wipers	✓
Trailer tires	✓
Tractor tires	✓

✓ = DM 10-17-96

****

VAN

2a. Verify the trailer envelope was affixed inside the trailer at loading or has been placed there during this examination. NA

2b. Verify the DOT approved seal is in place on the trailer doors. DM

2c. Verify there are four (4) placards and type is correct for material. (Radioactive or Drive Safely) DM

10-17-96

2d. Are extra Placards required? Yes No

FLATBED

3a. Verify the four (4) placards are securely affixed to each package. (one on all four sides) _____

3b. Verify each package has been blocked correctly in accordance with SOP-50-C-108. _____

3c. Verify each package has the correct number of chains & straps and is tied down according to SOP-50-C-111. _____

****

I certify the above items have been examined and are correct to the best of my knowledge. All photographs have been taken and added to the paperwork file.

Signed: D. G. Miller (Quality Verification) Date: 10-17-96 Time: 10:30 A.M.

FS-F-4414 (Rev. 12/05/95) FINALTRA.04

000070

CERTIFICATION STATEMENT

LOW-LEVEL WASTE SHIPMENT FROM FEMP TO NEVADA TEST SITE

Bill of Lading# 7004	Seal Number(s) 00491
Trailer# 717351	

I certify that the packages in Shipment No. WML97 014 as listed on the attached Package Storage & Disposal Data report do not contain hazardous waste as defined in Title 40 CFR 261 or OAC 3745-54 hazardous waste regulations:

(1) according to the results of tests performed in accordance with the requirements as specified in Subpart C of Title 40 CFR 261; and/or

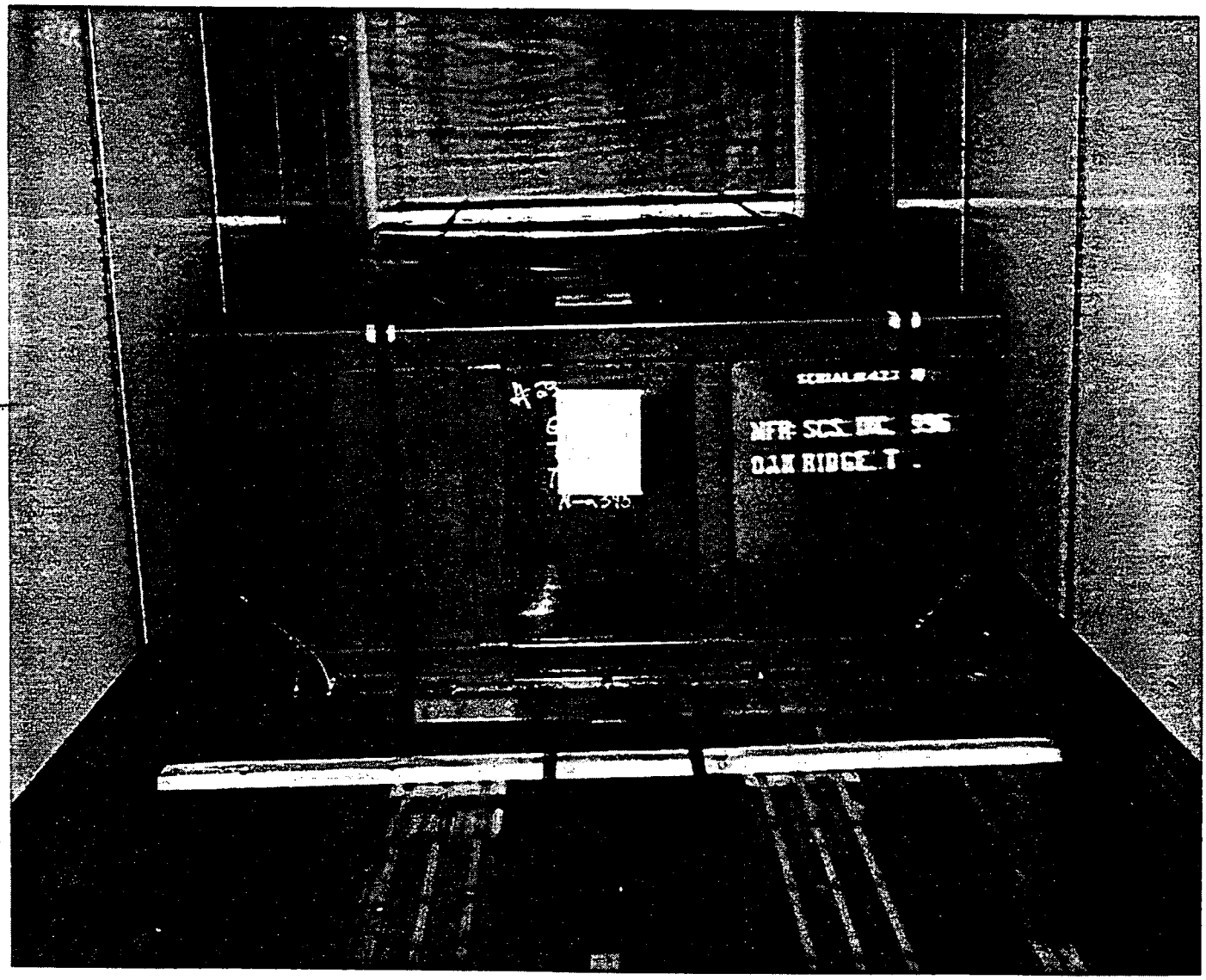
(2) according to the supporting documentation provided to me about the materials and processes that produced the waste.

To the best of my knowledge, I believe the information I have submitted is true, accurate, and complete.

D. G. Miller
FEMP Waste Certification Official

Date: 10 · 17 · 96

FS-F-4431 (Rev. 10/14/94) CERT-ST.07



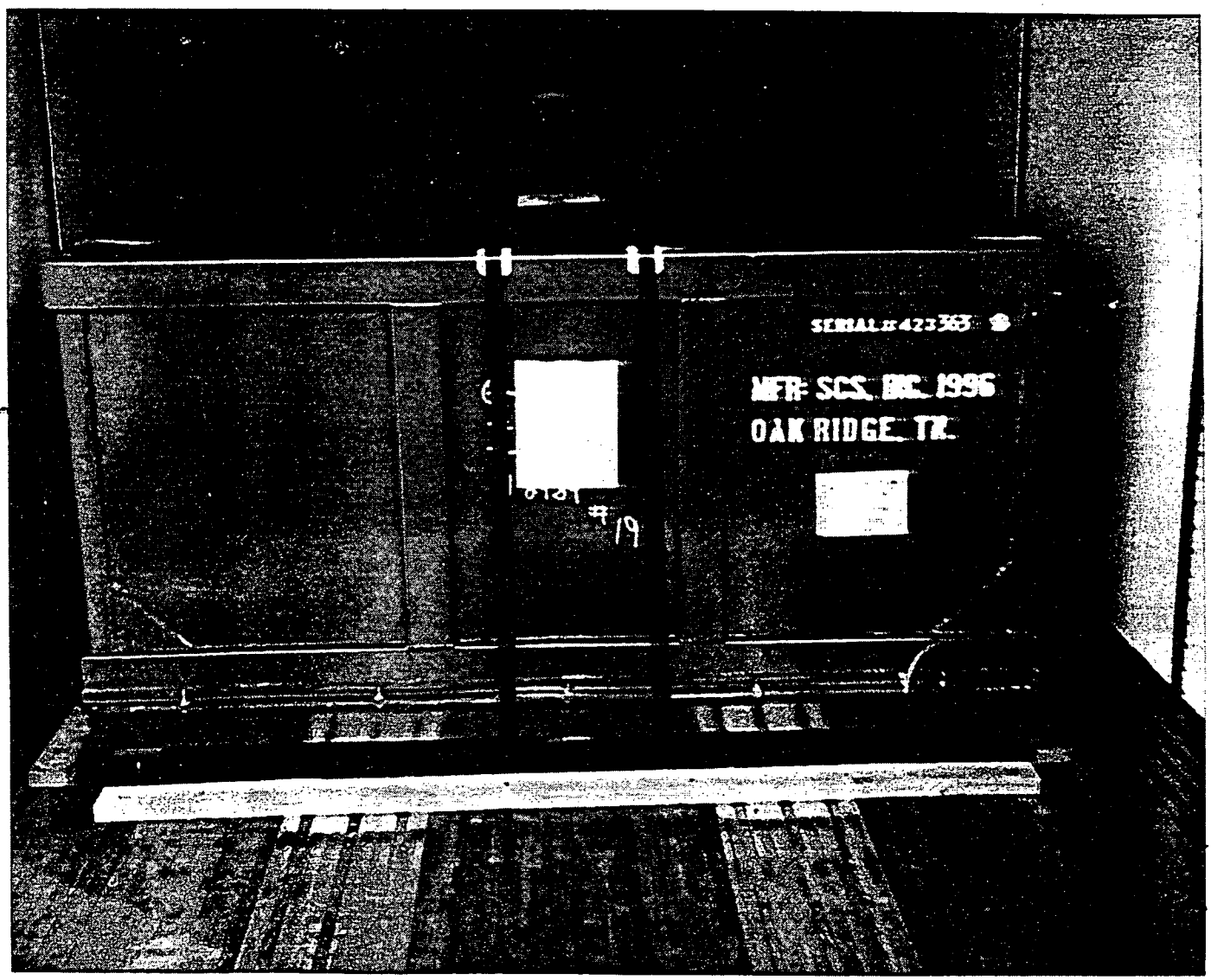
SHIPMENT # WML97-014

TRAILER # 71135-1

10-16-96 RMK

000072

7936



SHIPMENT # WML 97-014

TRAILER # 717351

10-16-96 RMK

000073

CIRCLE COPY

Radioactive Waste Management-Storage & Disposal

Bechtel Nevada Co., Inc

WML97014

	PACKAGE NO.	NET WT	TARE WT	GROSS WT	LSA	LQ	RQ	NR	SCO	
	420405	4699.00	1557.00	6256.00	X					Archived NON SCS
S0030	423171	2300.00	1546.00	3846.00	X					Receipt 95-2031
S0184	423236	2720.00	1446.00	4166.00	X			X		Source 96-1699 / Receipt 96-1460
	423297	2294.00	1546.00	3840.00	X			X		Source 96-1696 / Receipt 96-1371
	423299	2340.00	1546.00	3886.00	X			X		Source 96-1699 / Receipt 96-1460
	423320	2362.00	1546.00	3908.00	X			X		Source 96-1700 / Receipt 96-1554
S0840	423354	2550.00	1446.00	3996.00	X			X		Receipt 96-0606 / Source 96-1696
S0840	423356	2464.00	1446.00	3910.00	X			X		Source 96-1699 / Receipt 96-1460
S0840	423363	2984.00	1446.00	4430.00	X			X		Receipt 96-1371 / Source 96-1696
								X		Source 96-1699 / Receipt 96-1460

Source

Receipt

1696

1699

1700

~~1700~~

7930 ORIGINAL

QUALITY EVALUATION PLAN

QEP No. 96-1554 Rev. 4

1. Source ☐ Receiving X Const./Remediation ☐ Maint./Operations ☐ Waste ☐ Sampling ☐ Recycling ☐

2. Item/Title/Description: THORIUM OVERPACKING CONTAINERS A/K/A/ INVERTED BOXES

sCs Inc. Oak Ridge, Tn. P.O. # 96MB000532,

3. Project/Task: Thorium Overpacking Project	4. Spec./DWG: sCs Dwg. 88A-12-00
5. Prepared By: Bruce Davis Date: 6/4/96	6. Reviewed By: Miles Kopp Date: 6/4/96
7. NDE Level III: (When Required) Date: N/A	8. Approved By: [illegible] Date: 6/4/96

9. Char. No.	10. Evaluation Characteristic (Code/Specification, Inspection/Test/Examination Techniques, Acceptance Criteria)	11. Status Stamp & Date	12. General Remarks
	NOTE: THESE CONTAINERS CONSIST OF THE PLATFORM BASE AND LID.		QUANTITY RECEIVED 14-EA.
1.	Verify no visual signs of water leaking from container.	A BP 9-27-96	
2.	Verify the thickness of paint on the outside of the container's sides and lid is no less than 4 mils dry film thickness. (2 mils primer plus 2 mils white enamel paint.)	A BP 9-27-96	QUANTITY INSPECTED 14-EA.
3.	Verify no damage has occurred in transit, to include the removal of any paint by the "held down" straps.	A BP 9-27-96	SERIAL NUMBERS
4.	Verify each container has both a metal stamped plate and matching stenciled serial number on the outside of the container.	A BP 9-27-96	423170 423277 423172 423286 423189 423288 423193 423289 423197 423299 423229 423300 423274 423364
5.	Verify serial numbers of containers shipped match serial numbers listed on FERMCO Supplier Quality Release Form.	A BP 9-27-96	
6.	Verify Seller's Inspection Report(s) and/or Inspection/Test Data accompany shipment.	A BP 9-27-96	
7.	Verify FERMCO Supplier Quality Release Form accompanies shipment.	A BP 9-27-96	
8.	Verify Certificate of Conformance accompanies shipment stating the rust inhibitor is mercury free, lead free, and zinc chromate free.	A BP 9-27-96	
9.	Verify Certificate of Conformance accompanies shipment stating the paint is enamel, lead free, mercury free, and chromium free.	A BP 9-27-96	

13. Quality Evaluator: [illegible]

14. Open QEP: YES ☐ NO ☒ 15. P/QA Manager Review: Bruce Davis

16. P/QA Manager (completed QEP): Bruce Davis Date: 10/29/96

17. Distribution: ☐ Requesting Org. ☐ Participating Org. ☐ P/QA Project/Activity Representative ☐ Other

FS-F-4400 (05/08/96)

QUALITY EVALUATION PLAN

ORIGINAL

QEP No. 96-1371 Rev. 4

1. Source ☐ Receiving X Const./Remediation ☐ Maint./Operations ☐ Waste ☐ Sampling ☐ Recycling ☐

2. Item/Title/Description: THORIUM OVERPACKING CONTAINERS A/K/A/ INVERTED BOXES

sCs Inc. Oak Ridge, Tn. P.O. # 96MB000632,

3. Project/Task: Thorium Overpacking Project

4. Spec./DWG: sCs Dwg. 88A-12-00

5. Prepared By: Bruce Davis Date: 6/4/96 6/4/96

6. Reviewed By: Miles Kopp Date: 6/4/96

7. NDE Level III: (When Required) Date: N/A

8. Approved By: (Signature Required) Date: 6/4/96

9. Char. No.	10. Evaluation Characteristic (Code/Specification, Inspection/Test/Examination Techniques, Acceptance Criteria)	11. Status Stamp & Date	12. General Remarks
	NOTE: THESE CONTAINERS CONSIST OF THE PLATFORM BASE AND LID.		QUANTITY RECEIVED 16-EA.
1.	Verify no visual signs of water leaking from container.	A B.P. 8-22-96	QUANTITY INSPECTED 16-EA.
2.	Verify the thickness of paint on the outside of the container's sides and lid is no less than 4 mils dry film thickness. (2 mils primer plus 2 mils white enamel paint.)	A B.P. 8-22-96	SERIAL NUMBERS 423194 423328 423196 423231 423205 423236 423347 423302 423356 423310 423365 423313 423368 423319 423223 423320
3.	Verify no damage has occurred in transit, to include the removal of any paint by the "held down" straps.	A B.P. 8-22-96	
4.	Verify each container has both a metal stamped plate and matching stenciled serial number on the outside of the container.	A B.P. 8-22-96	
5.	Verify serial numbers of containers shipped match serial numbers listed on FERMCO Supplier Quality Release Form.	A B.P. 8-22-96	REJECTED
6.	Verify Seller's Inspection Report(s) and/or Inspection/Test Data accompany shipment.	A B.P. 8-22-96	CONTAINER NUMBER 423368 HAS A SEAM WHICH HAS BEEN STICHED WELD THAT RUNS THE WHOLE LENGTH OF THE CONTAINER THIS SEAM SHOULD HAVE BEEN SEALED BUT WASN'T SEE ATTACHED COPY OF CONTRACT
7.	Verify FERMCO Supplier Quality Release Form accompanies shipment.	A B.P. 8-22-96	
8.	Verify Certificate of Conformance accompanies shipment stating the rust inhibitor is mercury free, lead free, and zinc chromate free.	A B.P. 8-22-96	
9.	Verify Certificate of Conformance accompanies shipment stating the paint is enamel, lead free, mercury free, and chromium free.	A B.P. 8-22-96	DR 96-0080 Close 9/19/96
10	SEE ATTACHED COPY OF CONTRACT "SPECIFIC REQUIREMENTS" 2-C HIGHLIGHTED	R B.P. 8-22-96	9/19/96

13. Quality Evaluator: Bill Pelli

14. Open QEP: YES ☐ NO ☒

15. P/QA Manager Review: Bruce Davis

16. P/QA Manager (completed QEP): Bruce Davis Date: 9/19/96

17. Distribution: ☐ Requesting Org. ☐ Participating Org. ☐ P/QA Project/Activity Representative ☐ Other

FS-F-4400 (05/08/96)

QUALITY EVALUATION PLAN 7900

ORIGINAL

QEP No. 96-1460 Rev. 4

1. Source ☐ Receiving X Const./Remediation ☐ Maint./Operations ☐ Waste ☐ Sampling ☐ Recycling ☐

2. Item/Title/Description: THORIUM OVERPACKING CONTAINERS A/K/A/ INVERTED BOXES

sCs Inc. Oak Ridge, Tn. P.O. # 96MB000532,

3. Project/Task: Thorium Overpacking Project

4. Spec./DWG: sCs Dwg. 88A-12-00

5. Prepared By: Bruce Davis Date: 6/4/96 6/4/96

6. Reviewed By: Mike Kopp Date: 6/4/96

7. NDE Level III: (When Required) Date: N/A

8. Approved By: (When Required) Date: 6/4/96

9. Char. No.	10. Evaluation Characteristic (Code/Specification, Inspection/Test/Examination Techniques, Acceptance Criteria)	11. Status Stamp & Date	12. General Remarks
	NOTE: THESE CONTAINERS CONSIST OF THE PLATFORM BASE AND LID.		QUANTITY RECIEVED 14-EA QUANTITY INSPECTED 14-EA SERIAL NUMBERS 423171 423322 423248 423324 423256 423325 423271 423354 423275 423355 423291 423360 423297 423363
1.	Verify no visual signs of water leaking from container.	A BP 9-18-96	
2.	Verify the thickness of paint on the outside of the container's sides and lid is no less than 4 mils dry film thickness. (2 mils primer plus 2 mils white enamel paint.)	A BP 9-18-96	
3.	Verify no damage has occurred in transit, to include the removal of any paint by the "hold down" straps.	A BP 9-18-96	
4.	Verify each container has both a metal stamped plate and matching stenciled serial number on the outside of the container.	A BP 9-18-96	
5.	Verify serial numbers of containers shipped match serial numbers listed on FERMCO Supplier Quality Release Form.	A BP 9-18-96	
6.	Verify Seller's Inspection Report(s) and/or Inspection/Test Data accompany shipment.	A BP 9-18-96	
7.	Verify FERMCO Supplier Quality Release Form accompanies shipment.	A BP 9-18-96	
8.	Verify Certificate of Conformance accompanies shipment stating the rust inhibitor is mercury free, lead free, and zinc chromate free.	A BP 9-18-96	
9.	Verify Certificate of Conformance accompanies shipment stating the paint is enamel, lead free, mercury free, and chromium free.	A BP 9-18-96	

13. Quality Evaluator: BP

14. Open QEP: YES ☐ NO ☒

15. P/QA Manager Review: Bruce Davis

16. P/QA Manager (completed QEP): Bruce Davis Date: 9/30/96

17. Distribution: ☐ Requesting Org. ☐ Participating Org. ☐ P/QA Project/Activity Representative ☐ Other

FS-F-4400 (05/06/96)

Fernald Environmental Restoration Management Corporation

1700

[1] Date: 9-25-96

SUPPLIER QUALITY RELEASE

(INSTRUCTIONS ON REVERSE SIDE)

[2] PROJECT NAME/NUMBER:	[3] P.O./SUBCONTRACT NUMBER:	[4] SUPPLIER ORDER NUMBER:
THORIUM OVERPACK CONTAINER	96MB000532	N/A

[5] SUPPLIER:	[6] Q.RELEASE:	[7] SUBCONTRACT ADMINISTRATOR:
SCS INC., OAK RIDGE, TN	☑ Partial Shipment ☐ Final Shipment	BETH STRAUB

[8] MATERIAL DESCRIPTION:

THORIUM OVERPACKING CONTAINER

423193 QUANITY RELEASED: 13 423170, 423172, 423189

423197, 423274, 423277, 423286, 423288, 423289, 423299, 423300, 423364

[9] Q. RELEASE CHECKLIST

A- Mill Test Reports	N/A	E- NDT Reports	N/A	I- CARs Cleared	N/A
B- Check Analysis	N/A	F- Radiographic Film	N/A	J- "As Built" Drawings	N/A
C- Certification of Material Conformance		G- Functional Test Reports	N/A	K- Manual & Instructions	N/A
D- Weld Reports		H- SDRs Cleared	N/A		

[10] FINAL EXAMINATION OF PRODUCT

Envelope Dimensions		Identification		Packaging	N/A
Cleanliness		Marking		Crating	N/A

[11] COMMENTS:

*FINAL ACCEPTANCE BY RECEIPT INSPECTION PERFORMED AT THE FERMCO SITE

[12] QFR RELEASE

STAMP: RA 9/25/96

Conditional (*) ☑
Unconditional ☐
Denial ☐

Reinhard Fiske — SIGNATURE — 9-25-96 DATE

(*) EXPLAIN CONDITIONAL QFR RELEASE IN "COMMENTS" SECTION

[13] Documentation Package:	Shipped Separately To:	With Shipment:	Not Required:
FERMCO	BETH STRAUB	X	

[14] Subcontract Administrator Notified of Shipment & Routing	BY:	DATE:	VIA:
	R. FISKE	9-25-96	PHONE

[15] APPROVED FOR SHIPMENT

9/26/96 SUPPLIER SHIPPING DATE	Margie Hensley SUPPLIER Q. REP	9/26/96 DATE	OTHER	DATE

sCs, Inc.
100 Meco Drive
Oak Ridge, Tennessee 37830

CERTIFICATE OF COMPLIANCE

Product:	Thorium Overpack Container
Customer:	Fermco
Customer's Facility:	Fermco, Cincinnati, Ohio
Customer Contact:	Beth Straub
Customer Purchase Order:	96MB000532
Steel	ASTM A569, ASTM A36
Welding	AWS D1.1 & D1.3
Primer:	Rust Inhibiting - Mercury free Lead free, & Zinc Chromate free
Paint	Blue Enamel, Federal Standard, 595A, 15090 - Mercury free, Lead free & Chromium free
Marking	Mfg: sCs, Inc., Oak Ridge, TN.
Gaskets:	5/8" Closed Cell Neoprene Foam - SCE 43
Model No.:	88A-12-00
Lot/Serial No.:	WO #50139 Lot 1/423170, 423172 WO #60001 Lot 2/423189, 423197, 423193 WO #60009 Lot 5/423274, 423277, 423286 423288, 423289, 423299 423300 WO #60043 Lot 9/423364

sCs, Inc. certifies that the above product has been inspected and/or tested by me or my designated inspector and that it meets or exceeds the quality control requirements identified in the above specification or sCs workmanship standards and Quality Control Manual.

Margie Hensley

Margie Hensley
Quality Assurance Manager

9/26/96

1699

Fernald Environmental Restoration Management Corporation

[1] Date: 9-17-96

SUPPLIER QUALITY RELEASE

(INSTRUCTIONS ON REVERSE SIDE

[2] PROJECT NAME/NUMBER:	[3] P.O./SUBCONTRACT NUMBER:	[4] SUPPLIER ORDER NUMBER:
THORIUM OVERPACKING CONTAINER	96MB000532	N/A

[5] SUPPLIER:	[6] Q.RELEASE:	[7] SUBCONTRACT ADMINISTRATOR
SCS, INC. OAK RIDGE, TN	☒ Partial Shipment ☐ Final Shipment	BETH STRAUB

[8] MATERIAL DESCRIPTION: THORIUM OVERPACKING CONTAINER
QUANTITY RELEASED : 15
423171, 423229, 423248, 423256, 423271, 423275, 423291, 423297, 423354
423355, 423360, 423363, 423322, 423324, 423325

[9] Q. RELEASE CHECKLIST

A- Mill Test Reports	N/A	E- NDT Reports	N/A	I- CARs Cleared	N/A
B- Check Analysis	N/A	F- Radiographic Film	N/A	J- "As Built" Drawings	N/A
C- Certification of Material Conformance	FEMP QA 45	G- Functional Test Reports EXCEPT LOT 7	FEMP QA 45	K- Manual & Instructions	N/A
D- Weld Reports	N/A	H- SDRs Cleared	N/A		

[10] FINAL EXAMINATION OF PRODUCT

Envelope Dimensions	FEMP QA 45	Identification	FEMP QA 45	Packaging	N/A
Cleanliness	FEMP QA 45	Marking	FEMP QA 45	Crating	N/A

[11] COMMENTS:
* FINAL ACCEPTANCE BY RECEIPT INSPECTION PERFORMED AT THE FERMCO SITE

423354 CONTAINS EXTRA GASKET

[12] QFR RELEASE

STAMP: FEMP QA 45
9-17-96

Conditional (*) ☒
Unconditional ☐
Denial ☐

Richard Fiske — SIGNATURE — 9-17-96 DATE

(*) EXPLAIN CONDITIONAL QFR RELEASE IN "COMMENTS" SECTION

[13] Documentation Package:	Shipped Separately To:	With Shipment:	Not Required
FERMCO	BETH STRAUB	X	

[14] Subcontract Administrator Notified of Shipment & Routing	BY:	DATE:	VIA:

[15] APPROVED FOR SHIPMENT

9-17-96	Margie Hensley	9-17-96		
SUPPLIER SHIPPING DATE	SUPPLIER Q. REP.	DATE	OTHER	DATE

FS-F-2643 (PAGE 1 OF 2) (REV. 01/26/95)

sCs, Inc.
100 Meco Drive
Oak Ridge, Tennessee 37830

CERTIFICATE OF COMPLIANCE

Product:	Thorium Overpack Container
Customer:	Fermco
Customer's Facility:	Fermco, Cincinnati, Ohio
Customer Contact:	Beth Straub
Customer Purchase Order:	96MB000532
Steel	ASTM A569, ASTM A36
Welding	AWS D1.1 & D1.3
Primer:	Rust Inhibiting - Mercury free Lead free, & Zinc Chromate free
Paint	Blue Enamel, Federal Standard, 595A, 15090 - Mercury free, Lead free & Chromium free
Marking	Mfg: sCs, Inc., Oak Ridge, TN.
Gaskets:	5/8" Closed Cell Neoprene Foam - SCE 43
Model No.:	88A-12-00
Lot/Serial No.:	WO #50139 1/423171 WO #60003 3/423229 WO #60004 4/423248, 423256 WO #60009 5/423271, 423275, 423291, 5/423297 WO #60036 7/423322, 423324, 423325 WO #60043 9/423354, 423355, 423360 9/423363

sCs, Inc. certifies that the above product has been inspected and/or tested by me or my designated inspector and that it meets or exceeds the quality control requirements identified in the above specification or sCs workmanship standards and Quality Control Manual.

Margie Hensley

Margie Hensley
Quality Assurance Manager

9/17/96

1696

Fernald Environmental Restoration Management Corporation

[1] Date: 8-21-96

SUPPLIER QUALITY RELEASE

(INSTRUCTIONS ON REVERSE SIDE)

[2] PROJECT NAME/NUMBER:	[3] P.O./SUBCONTRACT NUMBER:	[4] SUPPLIER ORDER NUMBER:
THORIUM OVERPACKING CONTAINER	88M8000532	N/A

[5] SUPPLIER:	[6] Q.RELEASE:	[7] SUBCONTRACT ADMINISTRATOR:
SCS, INC. Oak Ridge, TN.	☒ Partial Shipment ☐ Final Shipment	BETH STRAUB

[8] MATERIAL DESCRIPTION: THORIUM OVERPACKING CONTAINER

RELEASE NUMBER:

LOT NUMBER: 16

QUANTITY RELEASED: 423194, 423196, 423205, 423347, 423356, 423365, 423368, 423223, 423228, 423231, 423236, 423302, 423310, 423313, 423319, 423320

[9] Q. RELEASE CHECKLIST

A- Mill Test Reports	N/A	B- NDT Reports		I- CARs Cleared	N/A
B- Check Analysis	N/A	F- Radiographic Film	N/A	J- "As Built" Drawings	N/A
C- Certification of Material Conformance		G- Functional Test Reports		K- Manual & Instructions	N/A
D- Weld Reports	N/A	H- SDRs Cleared			

[10] FINAL EXAMINATION OF PRODUCT

Envelope Dimensions		Identification	8-21	Packaging	N/A
Cleanliness		Marking	8-21	Crating	N/A

[11] COMMENTS: * FINAL ACCEPTANCE BY RECEIPT INSPECTION PERFORMED AT THE FERMCO SITE

423356 CONTAINS EXTRA GASKET

[12] QFR RELEASE

STAMP: 8-21-96 FEMP QA 45

Conditional (*) ☒
Unconditional ☐
Denial ☐

Reinhard Fiske — SIGNATURE — 8-21-96 DATE

(*) EXPLAIN CONDITIONAL QFR RELEASE IN "COMMENTS" SECTION

[13] Documentation Package:	Shipped Separately To:	With Shipment:	Not Required:
FERMCO	BETH STRAUB	X	

[14] Subcontract Administrator Notified of Shipment & Routing	BY:	DATE:	VIA:

[15] APPROVED FOR SHIPMENT

8-21-96	Margi Hensley	8/21/96		
SUPPLIER SHIPPING DATE	SUPPLIER Q. REP.	DATE	OTHER	DATE

sCs, Inc.
100 Meco Drive
Oak Ridge, Tennessee 37830

CERTIFICATE OF COMPLIANCE

Product:	Thorium Overpack Container
Customer:	Fermco
Customer's Facility:	Fermco, Cincinnati, Ohio
Customer Contact:	Beth Straub
Customer Purchase Order:	96MB000532
Steel	ASTM A569, ASTM A36
Welding	AWS D1.1 & D1.3
Primer:	Rust Inhibiting - Mercury free Lead free, & Zinc Chromate free
Paint	Blue Enamel, Federal Standard, 595A, 15090 - Mercury free, Lead free & Chromium free
Marking	Mfg: sCs, Inc., Oak Ridge, TN.
Gaskets:	5/8" Closed Cell Neoprene Foam - SCE 43
Model No.:	88A-12-00
Lot/Serial No.:	WO #60001 2/423194, 423196, 423205 WO #60003 3/423223, 423231, 423236 WO #60009 5/423302 WO #60034 6/423310, 423313, 423319, 423320 WO #60036 7/423328 WO #60039 8/423347 WO #60043 9/423356, 423365, 423368

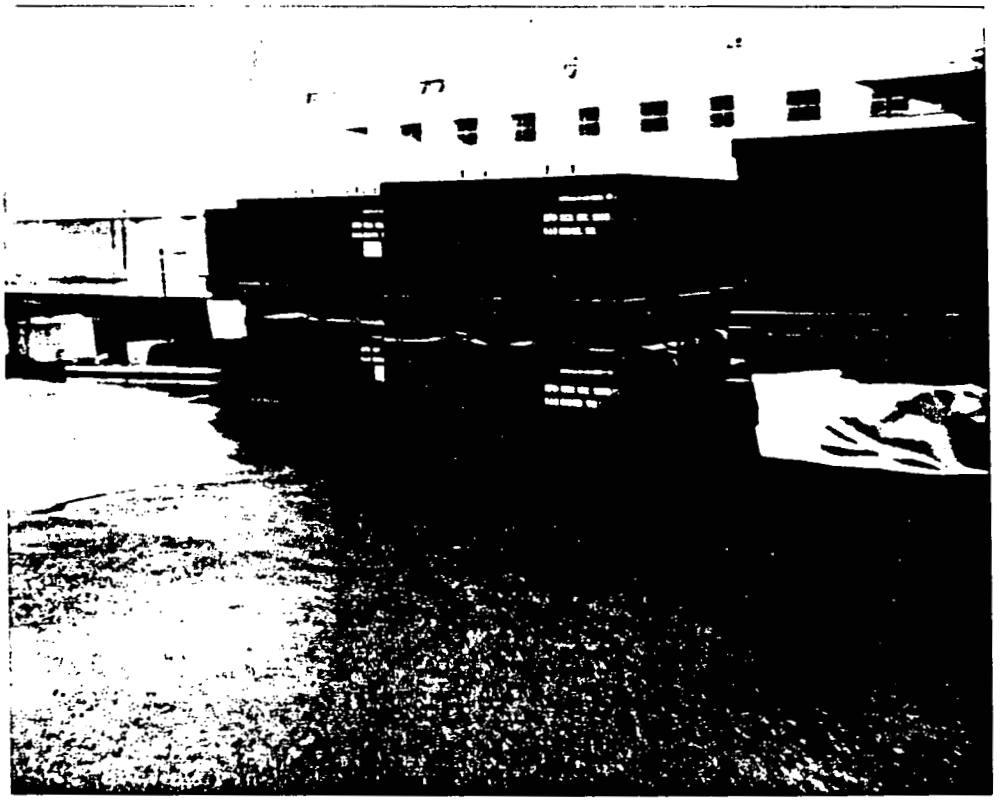
sCs, Inc. certifies that the above product has been inspected and/or tested by me or my designated inspector and that it meets or exceeds the quality control requirements identified in the above specification or sCs workmanship standards and Quality Control Manual.

Margie Hensley

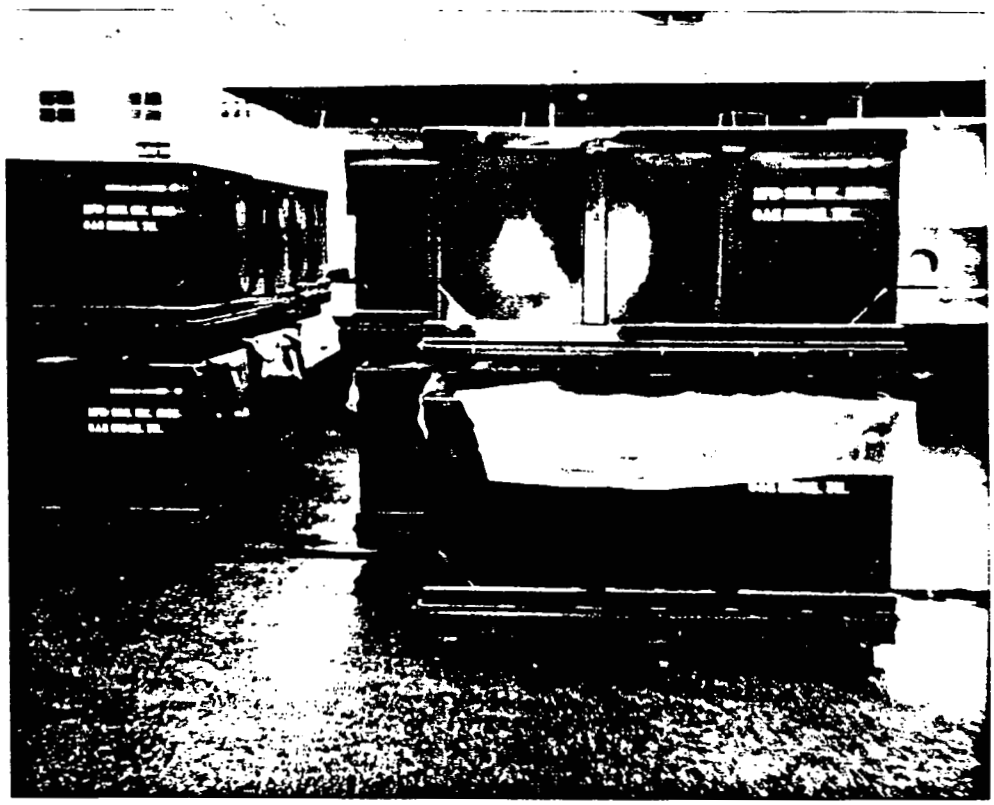
Margie Hensley
Quality Assurance Manager

8/19/96

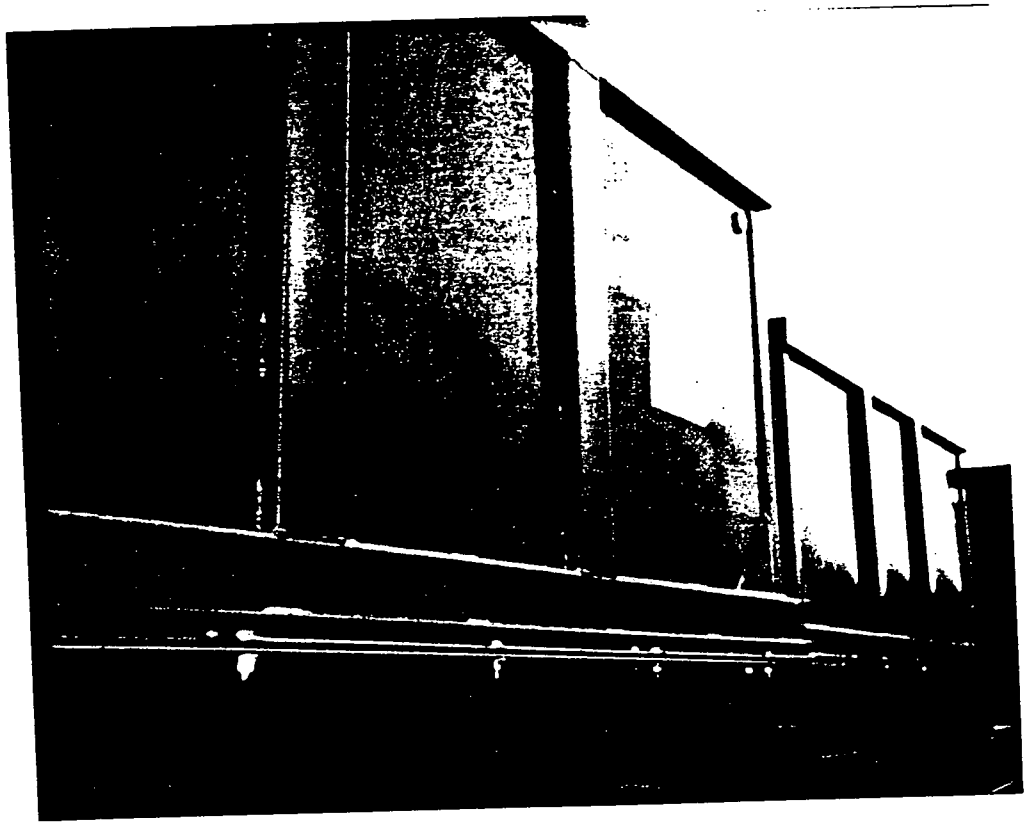
Thorium Overpack Storage Area



1. TOC Storage



2. TOC Storage



3. TOC Storage
Back

F-7936

4. TOC ARRIVING