CODE-				NOTIF	CATIO	ON OF	STOCKP	ILE INSPE	CTION				
1. NAME	E AND LO	OCATION OF	DEPOT (	OR FACI	LITY	2. NAME	E AND				3. SERIAL N		
	aven De					TYPE O			diological Rep	юrt		8	
		46774-964	4			COMMO	DITY	And Survey			4.REGION		
D	A.LAST	C 107 100		6.TYPE C			7:	Ora Dilaa	444 0 444 1				
A :	B. THIS	5/27/99		STORAG				i Ore Piles se 214, Se	111 & 111A				
T E	B. 1110	8/3/00		AREA	DEPOT		vvarenou	Se 214, Se					
7. NAME	AND TITL	E OF PERSON R	ESPONSI	BLE FOR M	MATERIAL			7A. TEL. NO. (	OR CODE		7B. EXTENSIO	ЭN	
Mr. Fre	ederic V	I. Brooks, D	epot Ma	nager a	t New H	laven D	epot	219-749-59	953				
				INSPE	CTION	DATA	(Check and	complete. Expla	in negative respo	inses.)	N/A	YES	NO
8. STORA	AGE	A. Storage Fa	cilities Ar	e of the T	voe Pres	cribed in	the Storage	Manual					······································
		B. Storage Fa		_									
9. MATER	RIAI	A. Material Is						Manual			<del></del> -		
0, 112 11 121									Migration and I	rosion		<b></b>	
10. RECC	apne	A. Depot Man							, ingration are	LICOIOII			
IU. NECC	JRUG	B. Depot Post				CO HOVE I	300311 03100	<u> </u>	Dated	·			
		B. Depti Fusi	III-US KIUR			_			Dated			<del>                                     </del>	
		0	_41 ! 34		t OSR N							<del>├</del> ──┤	
11. UNITS									and/or compute		<u> </u>	$\longmapsto$	
								with Quality As	ssurance and M	aterials			
		Inspection Ha					ments.					$\longrightarrow$	
13. CONT	TAINERS,	A. Material is	_					(Check only i					
	ES OR	B. All containe			nits Are N	/larked as	Prescribed	in the Storage					
OTH	HER UNIT	C. Condition of	of Contair	ers					(1) CLASS I	(2)	CLASS II	(3) CL	ASS III
		(Give exact r	number in	Class III	under re	marks)			%	6	%	<u> </u>	%
							ONTAINERS	S, PILES, OR	OTHER UNITS	;	N/A		
PRO-		(Pile, case,	WIDTH	LENGTH	t .	3		GHT OF UNIT	•	ER OF	i. TOTAL	L	BS
GRAM	ingo	t, bale, etc.)	C.	d.	e.	ETER	(1) GROSS	(2) NET	UNITS		WEIGHT		
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		•					-	-	of stockpiled ma	terials a	ind storage fac	cilities, "	and, if
defi	iciencies	are found, give	the appr	opriate gu	uide numb	pers and	complete del	tails in this blo	ck)				
SE	E ATT	<b>FACHMENT</b>	S										
16. REC	COMME	NDATIONS (N	ot to be o	onstrued	by storag	ge depot o	or facility as a	authorization to	o proceed with r	emedial	i measures be	yond the	e scope o
usu	ial author	ity)											
	SEE	ATTACHM	ENTS			••••					cen st.	plan	
	· ·										<u>con</u> 81,	1/80	
17.		[X	DNSC-N	/IQ		X	DNSC-MQ	NH		Х	DNSC-MQB	R	
DISTRIE	BUTION		DNSC-N			X	DNSC-MO				CONTRACT	ING OF	FICER
		🗆	DNSC-N	AH.		X	DNSC-ME				OTHER		
18. NA	ME OF I	NSPECTOR			[		SNATURE			18. D/	TE OF SIGN	ATURE	
		Till OAS		•	1	**	1 Jun	. V.	0.		8/3/00		

### Continuation DLAH Form 30 DLA/DNSC Depot, New Haven, Indiana Radiological Survey

Report No. 8
Date: 2 Aug 2000

#### 1.) Purpose:

This report is issued to document the required annual radiological survey at the New Haven Depot, Indiana. Reference: 10 CFR Part 20 subpart F. This facility is listed in Conditions (Item 10) on the Defense Logistics Agency, Defense National Stockpile, Materials License number STC-133, Docket or Reference No. 040-00341. Current Amendment No. 22, expires 28 Feb 2010.

#### 2. General:

Ms. Lois Huddlestun, DNSC, Storage Specialist, Radiation Protection Officer (RPO). Mr. Wm J. Till, DNSC, Quality Assurance Specialist, Radiological Safety Officer (RSO).

## 3. Instrumentation:

#### a.) Survey Instruments:

Instrument	Model/Type	Serial No.	Calibration Due
Fag 40 F6		5-0002	12/20/00
Eberline Geiger	E-520	3135	5/9/01
FEMA Reader	Model 6/CVD-750	A 004264	N/A
Portable Radiation Monitor	E-600/Type SHP-380	with 180 Probe	4/25/01

All instruments were checked and are in good working condition.

#### b.) Individual Monitoring Devices:

Monitoring Device	No. of Unites	
V-138 Dosimeter	15	
Thermoluminescent Dosimeter	18	
(Film Badges)		

The film badges documented above are on a quarterly rotational program from the UASIRDC, US Army TMDE Activity, Redstone Arsenal, AL. This program provides the submitter with a printout of exposures, as well as, transcribes this information into a permanent database for each individual with a badge submitted. Copies of the printouts are kept in the rolling file cabinet.

#### c.) Source Check: Cs 137

This is not a calibrated source check. Source chip has a serial no. of 951. All other source checks have been returned to DRMO.

#### 4. Disposition of Licensable Commodities:

Ores and concentrates containing uranium and thorium are either stored in Warehouse 214, in various locations in section 3 or outside bulk storage in location piles 111 and 111A. Material is stacked and piled in accordance with DNS regulations and containers meet Class No. 1 specifications of DNSC 8200.9, Part 9, 3-903a.

Attached are three maps that graphically depict both the dispositions of the ore piles and the containerized material stored in the warehouse.

The inventory for radioactive material is available for review and appears to be accurate. Also on file is a listing of the radioactive components by percentage and weight of a particular ore.

The attached pages document the location of the containerized material. Spreadsheets are sorted by warehouse/section/bay. References are made on the accompanying two maps which specifically depict the location of the material. The following list the disposition of the two ore piles included on the applicable licensed material in this report.

Pile Number	Width (ft)	Length (ft)	Height (ft)	Net lbs.
111	60	285	25	31,981,398
111A	45	100	20	2,783,706 comtaminated
			Total:	34,765,104

The attached map graphically depicts the configuration of these piles.

#### 5. Posting:

A barbed wire fence surrounds the two ore piles. The gate is padlocked as well. Appropriate signs are on all sides of the fence. The signs posted around the Ore Piles 111 and 111A on the fence read, "Caution Radiation Area".

The warehouse containing the licensed material is in good condition. All entrances into warehouse 214 are locked as well as secured with numbered seals. In compliance with ORPP par. 4.3, NRC form 3 "Notice to Employees" with information denoting the location of the NRC License is posted. Also posted is the Energy Reorganization Act of 1974, Section 206. One copy of each form is posted in the main office area of the administration building.

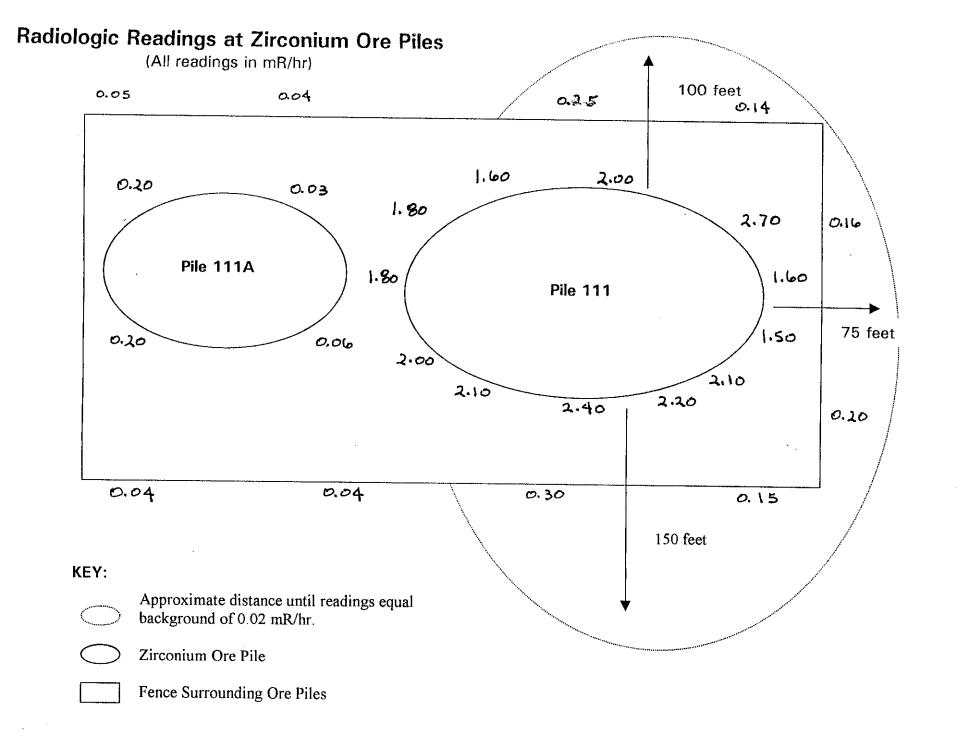
Each bay containing radioactive material (bays 9,13,14,15,16,17,18,27,28,37,38,44 and 77) is marked with a yellow band saying, "Caution Radiation Hazard". There are signs in these areas that read, "Caution Radioactive Material".

#### 6. Records and Reports

The Radiological Data Handbook (ORPP par. 16.2) is located in a rolling file cabinet. This rolling file is maintained by the Depot RPO and is normally located in the Storage Specialist Office. This book is well maintained and contains all the information necessary for compliance with DNSC-ORPP regulations.

- a.) Documentation for all radiological training received by depot personnel is included in the Radiological Data Handbook.
- b.) Individual exposure records are current and maintained in the rolling file cabinet. The quarterly exposure records are signed by the RPO. Each individual has signed the annual exposure records indicating that the information on the results was discussed and correct. Each individual on the program was given copies.
- c.) DD Form 1952's for all depot personnel are recorded in the RPO files. Blocks 11 through 20 have been left blank per DNSC directive.
- d.) In compliance with ORPP par. 4.3., NRC form 3 "Notice to Employees" and the location of the NRC License is posted. Also posted is the Energy Reorganization Act of 1974, Section 206. The mentioned forms are posted in the administration building.

- e.) An Occupant Emergency Plan has been established for New Haven Depot. Notification to The New Haven Fire Department and Response Team and dates of meeting here at the facility is on record in the "Radiological Data Handbook". The subject material/commodities for this report is listed under the title of "Hazardous Material Leak/Spill" in the Emergency Plan. A copy of the MSDS's and the commodity location is available in a knox box at the Security Guard Office.
- f.) On file in the "Radiological Data Handbook" are calibration certificates and prior radiological surveys. Also available in this file are DLAR 1000.28, DLAR 4145.23, 10 CFR 20 & 40, 29 CFR Part 1910 and 49 CFR Parts 171 through 189, U.S. NRC Regulatory Guide 8.13 & 8.29, ANSI 29.2 1972.
- g.) Records are on file at this depot that documents the annual physicals. The results of the physicals are not on file at this depot. Also on file are the respiratory fit testing records for all the personnel that have respirators.
- h.) The decontamination facility is located in warehouse 214, section 1. This facility is equipped with filtered air, showers, wall lockers, restroom facilities, washer and dryer. This area is also used to store protective equipment and protective clothing (tyvek suits, respirators, etc.)
- i.) There is a letter on file at New Haven Depot with all the names of the personnel receiving Radiation Training dated 8/5/99.
- 5. This survey was conducted in accordance with the Defense National Stockpile Center Occupational Radiation Protection Program guidelines. The instrumentation used was a FAG 40 F6 Dosimeter, referenced in 4.a. above. See attached "Monitoring Radiation Report" for specific survey results and attached Maps for a graphic depiction of the analytic data.
- 6. Conclusion:
- a.) Results of this survey indicate that licensed materials at the New Haven Depot appear to be stored in accordance with applicable regulations.
- b.) All warning signs, labels, markings, placards appear to be properly posted.
- c.) Background was established (excluding the restricted area around the two ore piles 111 &111A) to be 0.02 mR/hr. Exposure levels on the restricted area fence were recorded to be 0.04 to 0.25 mR/hr. Measurements made in direct contact with the ore piles yielded readings from 0.03 to 0.270 mR/hr. Exposure levels in the controlled areas of warehouse 214, section 3 yielded reading from 0.05 to 0.60 mR/hr.
- 7. Attachments:
  - 1. Radiological Readings at Zirconium Ore Pile
  - 2. Monitoring Radiation Report (for outside storage)
  - 3. Monitoring Radiation Report (for inside storage)
  - 4. Readings Taken In Contact With Material
  - 5. Readings Taken One Foot Away From Material
  - 6. Readings Taken At Warehouse Exit Doors
  - 7. Accountability of Tantalum in Storage (pages 1-4)



# MONITORING RADIATION REPORT

Moni	tors
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Bill Till

Date:

July 2000

( See para. 4 of attached report )

Report No.:

3

Time	Location	Object or Person Monitored	Instrument Used	Shield	Distance	Range	Reading	Dose Rate	T
	Pile 111	Zirconium Ore Pile	FAG Meter	N/A	contact		1.50-2.70 mR/hr	1.50-2.70 mR/hr	
11	Pile 111A	Zirconium Ore Pile	FAG Meter	N/A	contact		0.06-2.00 mR/hr	0.06-2.00 mR/hr	
11		Fence surrounding piles			contact		0.04-0.30 mR/hr	0.04-0.30 mR/hr	
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#### MONITORING RADIATION REPORT

8

(See para.4 of attached repo

N11,N12,S10,S11,S21,N-10,S-9

Temporary Storage for sampling

Monitors: Bill Till Date: Jul-00 Report No.: vvnse 214 Object or Person Monitored Instrument Osed Snield Distance Range Dose Rate mrvnr N/A Section 3 Inside Storage Radiation Meter N/A Contact 0.2 0.2 Columbium Tantalum Bay 77 FAG 1 foot 0.15 0.15 Section 3 Inside Storage Radiation Meter N/A Contact 0.35 0.35 Bay 44 Columbium Tantalum **FAG** 1 foot 0.25 0.25 Inside Storage Section 3 Radiation Meter N/A Contact 0.06 0.06 **Bav 38** Columbium Tantalum **FAG** 1 foot 0.05 0.05 Inside Storage Radiation Meter N/A Section 3 N/A Contact 0.06 0.06 Bay 37 Columbium Tantalum FAG 1 foot 0.05 0.05 Inside Storage N/A Section 3 Radiation Meter NA Contact 0.25 0.25 Bay 34 Columbium Tantalum FAG 1 foot 0.2 0.2 Section 3 Inside Storage Radiation Meter N/A Contact 0.8 0.8 Bay 28 Columbium Tantalum 0.7 **FAG** 1 foot 0.7 N/A Section 3 Inside Storage Radiation Meter N/A Contact 0.45 0.45 **Bay 27** Columbium Tantalum FAG 1 foot-0.35 0.35 Temporary Storage N/A Section 3 Radiation Meter N/A Contact 0.2 0.2 **Bay 22** Columbium Tantalum **FAG** 1 foot 0.15 0.15 Section 3 Temporary Storage Radiation Meter N/A Contact 0.3 0.3 Columbium Tantalum **Bay 21 FAG** 1 foot 0.2 0.2 Section 3 Inside Storage Radiation Meter N/A Contact 0.45 0.45 **Bay 18** Columbium Tantalum FAG 1 foot 0.4 0.4 N/A Section 3 Inside Storage Radiation Meter N/A Contact 0.25 0.25 **Bay 17** Columbium Tantalum FAG 1 foot 0.2 0.2 N/A Section 3 Inside Storage Radiation Meter N/A Contact 0.3 0.3 Bay 16 Columbium Tantalum FAG 1 foot 0.25 0.25 Section 3 Inside Storage Radiation Meter N/A Contact 0.45 0.45 Columbium Tantalum Bay 15 FAG 1 foot 0.4 0.4 N/A Section 3 Inside Storage Radiation Meter N/A 0.35 Contact 0.35 Columbium Tantalum Bay 14 **FAG** 1 foot 0.3 0.3 N/A Section 3 Inside Storage Radiation Meter N/A 0.35 0.35 Contact **Bay 13** Columbium Tantalum FAG 1 foot 0.3 0.3 N/A Section 3 Temporary Storage Radiation Meter N/A Contact 0.35 0.35Columbium Tantalum Bay 12 FAG 1 foot 0.3 0.3 Section 3 Radiation Meter N/A Contact 0.350.35 Columbium Tantalum Bay 11 **FAG** 1 foot 0.3 0.3 Section 3 N/A Inside Storage Radiation Meter N/A Contact 0.35 0.35 Bay 9 Columbium Tantalum **FAG** 1 foot 0.3 0.3 N/A Section 3 Radiation Meter Doors-N9 N/A Contact 0.04 0.04

FAG

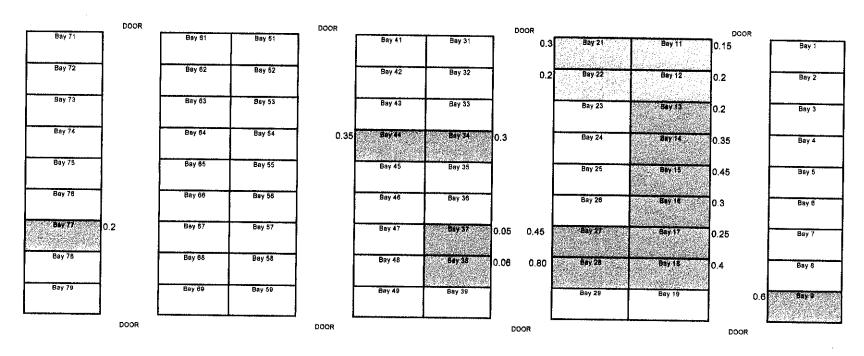
Contact

0.02

0.02

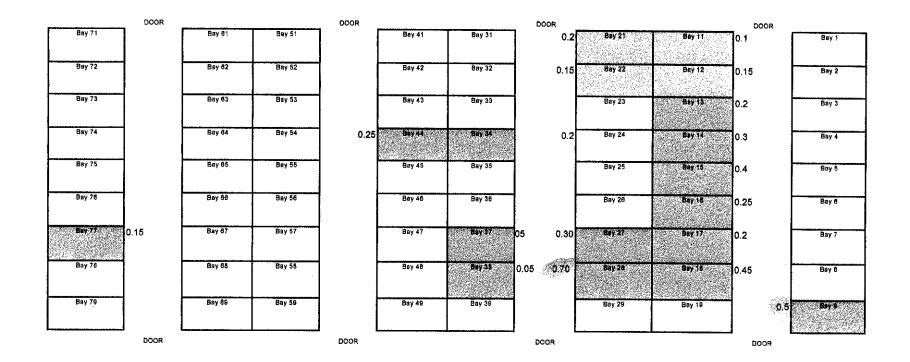
## READINGS TAKEN IN CONTACT WITH MATERIAL ( All readings in mR/hr ) WAREHOUSE 214, SECTION 3





## READINGS TAKEN ONE FOOT AWAY FROM MATERIAL ( All readings in mR/hr ) WAREHOUSE 214, SECTION 3





# READINGS TAKEN AT WAREHOUSE EXIT DOORS ( Readings in mR/hr ) WAREHOUSE 214, SECTION 3

# Temporary Storage Permanent Storage

0.02		0.02		0.02	0.03	
DOOR		DOOR		DOOR		
Bay 71	Bay 61 Bay 51	Bay 41	Веу 31	Bay 21	DOOR Bay 11	Bay 1
Bay 72	Bay 62 Bay 62	Bay 42	Bay 32	Bay 22	Bay 12	Bay 2
Bay 73	Bay 63 Bay 63	Bey 43	Bay 33	Bay 23	Bsy 13	Вау 3
Bay 74	Bay 64 Bay 54	Bey 44	BaydA	Bay 24	Eay 14	Bay 4
Bay 75	Bay 65 Bay 55	Bay 45	Bay 35	Bay 25	Bay 16.	Bay 5
9ay 76	Bay 66 Bay 56	Bay 46	Bay 36	Вау 28	Bay 16	Bay 6
Bay 77	Bay 67 Bey 57	Bay 47	BBy 37	Bey 27	Say 17	Bay 7
Bay 78	Bay 68 Bay 58	Bay 48	Bay 38	Bey 28	Sey 18	Bay 8
Bay 79	Bay 89 Bay 59	Bay 49	Вну 39	Bay 29	Bay 19	Bays
DOOR		000R		DOOR	DOOR	A 1997 OFFILE CONTRACTOR OF SERVICES
0.02		0.02		0.02	0.02	
					0.02	

CMAT	COMMODITY	TYPE	GRADE MI	F Lot # LOT #	QUANTITY UNIT	RR#	WHSE	SEC BAY ROW	NEW Mar	r		
155	Tantalite	Natural Min.		001 1	3 Drums	6614	214	8EC BAY ROW 3 44 2 ST 1-6	NET WY.	CONTRACT # GS-OOP-1099-1 (SCM)	Origin	Packaging
155	Tantalite Ore Concentrates	Natural Min.		001 1	13 Druma	7970	214	3 44 2 ST 1-6	1.767 50	GS-OOP-1899-1 (SCM)	American	25-gallon drums
155	Tartialite	Natural Min.		001 1	13 Drums	8084	214	3 44 2 ST 1-8		GS-OOP-3902-1F (SCM) 1F	unknown	25-gallon drume
155	Tantalite	Natural Min.		001 1	4 Drums	B065	214	3 44 2, ST 1-6		GS-OOP-3972 (SCM) 1F	Sweden Sweden	25-gallon drume
155	Columbium Tentalum Source Material	Tantalum Natural Minerals		001	10 Drums	18964-A		3 15	3 000 00	Transfer Special Project FJO-935	unknown	25-gallon drums
155	Tantelite Ore	Natural Min.		002 2	9 Drums	6701	214	3 44 2, ST 1-8	2.266.50	GS-OOP-949-1F (SCM)	Nigeria	15-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals		012 12	9 Drums	19104	214	3 16		Transfer Special Project FJO-935	Liquido Brazil	15-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals		013 13	16 Drums	19105	214	3 16	7,685.00	Transfer Special Project FJO-935	Liquido Brazil	20-gallon drums
155 155	Columbium Tantalum Source Material	Tantalum Natural Minerals		015 (5	7 Drums	19106	214	3 16		Transfer Special Project FJO-935	Liquido Brazi	20-gallon drums
155	Columbium Tentalum Source Material	Tantalum Natural Minerals		020 20	13 Drums	19107	214	3 16	6,535.00	Transfer Special Project FJO-935	Liquido Brazil	20-gallon drums 20-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals		021 21	5 Orums	19108	214	3 16		Transfer Special Project FJO-935	Liguido Brazil	
	Columbium Tantalum Source Material	Tantalum Naturei Minerals		022 22	5 Drums	19109	214	3 16		Transfer Special Project FJQ-935	Liquido Brazil	20-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals		023 23	5 Drums	19110	214	3 9		Transfer Special Project FJO-936	Liquido Brazil	20-gallon drunss
155	Columbium Tantalum Source Meterial	Tantalum Natural Minerals		024 24	5 Drums	19111	214	3 9		Transfer Special Project FJQ-935	Brazil	20-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals		025 25	5 Drums	19112	214	3 9	2.202.00	Transfer Special Project FJO-935	Brazil	20-gation drums
155	Columbium Tantalum Source Material	Tanialum Natural Minerals		026 26	5 Drums	19113	214	3 18	2.184.00	Transfer Special Project FJO-935	Brazil	20-gailon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals		030 30	34 Drums	19114	214	3 10		Transfer Special Project FJO-935	Brazil	20-gallon drums
155	Tantalite Concentrates	Natural Min.		059 59	8 Drums	8476	214	3 44 1, ST 1-6		GS-OOP-10224(SCM)-1F	Hukuawa	20-gallon drums
155	Tantalite Concentrates	Natural Min.		060 60	8 Orums	8476	214	3 44 1. ST 1-6	2,125.00	GS-OOP-10224(SCM)-1F	unknown	15-gallon drums
155	Tentalite	Naturel Min.		105	8 Drums	6591	214	3 44 2, ST 1-6	2.192.00	GS-OOP-2923-1 (SCM)	Brazil	15-gallon drume
155	Tantalite	Natural Min.		106 108	16 Orums	8691	214	3 44 1,5T 1-8	4.285.00	GS-OOP-2923-1 (SCM)	Brazil	15-gallon drums
155	Columbium Tantalum Source Material Tantalite	Tantalum Natural Minerals		107 107	10 Drums	19115-A	214	3 18		Transfer Special Project FJO-935	Belgian Congo	15-gallon drums
155	The state of the s	Natural Min.		108	24 Drums	6910	214	3 44 1, ST 1-6	6 397 50	GS-008-2024-2E (SCH)	Brazii	15-gallon drums
	Columbium Tantalum Source Material	Tantalum Natural Minerals		111 111	10 Dhums	19362	214	3 18 4, St 1-5	6,590.00	Relocation Project DMO-00001	unknown	35,45,& 55-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerale		111 111	10 Drums	19362	214	3 18 4, St 1-5	6,803.00	Relocation Project DMO-00001	unknown	35,45,& 55-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minérals		111 111	10 Drums	19362	214	3 18 4 St 1-5	6,449.00	Relocation Project DMO-00001	unknown	35,45,& 55-gallon drums
155 155	Columbium Tentalum Source Material	Tantalum Natural Minerals		111 111	4 Drums	19362	214	3 18 4, St 1-5	2,284.00	Relocation Project DMO-00001	unknown	35,45,8 55-gallon drums
155	Columbium Tantalum Source Material Columbium Tantalum Source Material	Tantalum Natural Minerals		111 111	10 Orums	19364	214	3 18 4, St 1-5	6,566.00	Relocation Project DMO-00001	unknown	35,45,& 55-gallon drums
		Tantalum Natural Minerals		111 111	16 Drums	19362	214	3 18 4 St 1-5	10.635.00	Relocation Project DMO-00001	unknown	35,45,8 55-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals		111 111	35 Drums	19364	214	3 16 4 St 1-5		Relocation Project DMO-00001	unknown	35,45,& 55-gallon drums
155	Columbium Tantalum Source Material Columbium Tantalum Source Material	Tantalum Natural Minerals		111 111	3 Drums	19362	214	3 18 4 St 1-5		Relocation Project DMO-00001	unknown	50-gallon drums
155	Tantalite	Tantalum Natural Minerals		111 111-Sweepin			214	3 18 4, St 1-5	864.00	commence of the control of the contr	unknown	55-gallon drums
155	Tantaite	Natural Min.		118 118	31 Drums	6910	214	3 44 1 ST 1-6		GS-OOP-2923-2F (SCM)	Brazil	15-gallon drums
155	Tantalta	Natural Min.		207 207	7 Drums	7681	214	3 44 1 57 1-8	1,098.60	G5-OOP-3927-1-Final	Belgian Congo	15-gallon drume
155	Columbium-Tentalum Ore	Natural Min.		53 d 1059	22 Drume	10998	214	3 44 2.ST1-8	8,594.00	GS-OOP-10045(SCM)-1-Final	unknown	15-gallon drums
165	Columbium Tantalum Ore	Tantalum Source Material Tantalum Source Material		105 1105	43 Bags	122940	214	3 14	3,098,00	GS-OOP-(D) 18002	Great Britain	20-gallon drums
155	Columbium Tantalum Ore	Tantalum Source Material		138 1139 140 1140	16 Bags	12427D	214	3 14	2,214,50	GS-OOP-10717-SCM	South Rhodesia	20-gallon drums
156	Columbium Tantalum Ore	Tantalum Source Material			153 Bags	12344 (D)		3 14	9,379.00	GS-OOP-(0)-18002	Australia	20-gallon drums
155	Columbium-Tantalum Ore	Tantalum Source Material			40 Bags	12421D	214	3 14	4.407.00	GS-OOP-(D) 18002	Brazil	20-gation drums
155	Columbium Tantalum Ore	Columbium Tantalum		1147	113 Bags	12287D	214	3 14	9,915.00	GS-COP (D) 16002	Brazil	20-gailon drums
155	Tentaire	Netural Min.		85 1166 272 2272	11 Drums	17163	214	3 14		GS-COP-10717(SCM)	England	20-gallon drupps
155	Tantaite	Natural Min.			8 Drums	6726	214	3 44 2, ST 1-8		GS-OOP-3148-1F	Malays	15-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals		129 2329 101 001080001	3 Drums	7224	214	3 44 2.ST  -6		GS-OOP-3508-1F (SCM)	Australia	15-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals			10 Drums	19364	214	3 18 1, ST 3		Relocation Project DMO-00001	unknown	55 Gal Drums
155	Columbium Tentalum Source Material	Fantalum Natural Minerals		001080002 005 001080005	13 Drums	19364	214	3   18   2 ST 5	8,765.00	Relocation Project DMO-00001	unknown	30 Gal Drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals		013 11060013		19364	214	3 10 2, ST 1,2	11,014,00	Rejocation Project DMO-00001	unknown	30 Gal Drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerale		11080014		19363	214	3 18 2 ST 2,3	5,384.00	Relocation Project DMO-00001	unknoy/n	30 Gal Drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerale		001182000	10 Drums 1 7 Drums	19363	214	V 10 12 3	5,300,00	Relocation Project DMO-00001	unknown	30 Gal Drums
155	Columbium Tentalum Source Material	Tantalum Natural Minerals		002167153		19372	214	3 77 4	4,378.50	Relocation Project DMO-80061	unknown	15-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals		002198000		19371	214	3 34 4, ST 1-3		Relocation Project DMO-00001	unknown	50-gallon wooden kegs
155	Columbium Tantalum Source Material	Tantalum Natural Minerals		74 0782382574		19370	214	3 18 1,ST2	1,770.50	Relocation Project DMO-00001	unknown	15-gellon drums
155	Columbium Tantalum Squrce Material	Tantalum Natural Minerals		178 0782362676		19369	214	3 18 1, ST 2	2,322.00	Relocation Project DMO-00001	unknown	15-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals		0E 0010700E		19366	214	3 18 1.ST2	1,893.00	Relocation Project DMO-00001	unknown	15-gailon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals		IOD 001107000E	5 Drums 2 Drums	19362	214	3 18 1.ST1		Relocation Project DMO-00001	unknown	55-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Mineralo		iOF 001107000f		19362 19362	214	3 34 4 ST 1-3	1,032.00	Relocation Project OMO-00001	unknown	55-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerale		09 001107000			214	3 18 I ST 4	3,761.00	Relocation Project DMO-60001	unknown	55-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals		69 1107(589)	3 13 Drums	19362 19362	214	3 18 1, ST 4.5	8,674.00	Relocation Project DMO-00001	unknown	65-gallon drume
156	Tantalite	Natural Min.		3A 1063A	B Drums	10098	214	3 1 10 1 1, 10;		Relocation Project DMO-00001	unknown	50-gallon drums
155	Ternalite	Natural Min.		3B 1053B	B Drums	10998	214	3 44 2, ST 1-6 3 44 2, ST 1-6		GS-OOP-10045(SCM)-1-Final	unknown	15-gallon drugs
155	Columbium Tantalum Source Material	Tantalum Matural Minerals		QA 1116000A	9 Drums	19367	214	3 18 2.51 4	2,128.00 E	GS-OOP-10045(SOM)-1-Final	unknown	15-gallon drums
155	Columbium Tantalum Ore	Tantaium Source Material		8A 1148A	40 Bags	124210	214	3 18 2,574	4,146,60	Relocation Project DMO-00001	unknown	50-gallon drums
155	Columbium Tantalum Ore	Tantalum Source Material		8B 1146B	40 Bags	124210	214			GS-OOP-(D) 18002	Brazi	20-gallon drums
155	Columbium Tantalum Ore	Tantalum Source Material		8C 1146C	40 Bags	124210	214	3 14	4,404.00	GS-OOP-(D) 16002 GS-OOP-(D) 16002	Brazil	20-gallon drums
155	Columbium Tentalum Ore	Tantalum Source Material		8D 1146D	40 Bags	124210	214	3 14		GS-OOP-(0) 18002 GS-OOP-(0) 18002	Brazil	20-gallon drums
155	Columbium Tantalum Ore	Tantalum Source Material		6E 1146E	50 Bags	124210	214	3 14		GS-OOP-(D) 18002 GS-OOP-(D) 18002	Brazil Brazil	20-gallon drums
155	Columbium Tantalum Ore	Tantalum Source Material		6F 1146F	50 Bags	124210	214	3 14	5.485.00	GS-COP-(D) 18002 GS-COP-(D) 18002	and the same of th	20-gallon drums
	Columbium Tantalum Ore	Tantalum Source Material	4	6G 1146G	60 Bags	12421D	214	3 14	8 819 nn	GS-OOP-(D) 18002	Brazil Brazil	20-gallon drums
155	Columbium Tantalum Ore Concentrates	Tantalite		9A 199-A	12 Drums	7289	214	3 44 2, ST 1-6		GS-OOP-3774(SCM)-1-F		20-gation drums
155	Tantalte	Natural Min.		9B 199-B	29 Drums	7289	214	3 44 2, ST 1-8		35-00P-3774(SCM)-1-F	Belgian Congo Belgian Congo	15-gallon drums
155	Temalite	Natural Min.		9C 199-C	22 Drunis	7269	214	3 44 2, ST 1-6		35-00P-3774(SCM)-1-F	Belgian Congo	15-gallon drume
155	Tamalte	Natural Min.		9D 199-D	11 Drums	7289	214	3 44 2, ST 1-6	2 881 00	GS-OOP-3774(SCM)-1-F		15-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals		+2 1A82	3 Drums	18985-A	214	3 15	804.00	Transfer Special Project FJO-935	Belgian Congo	15-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals		13 B3/113	38 Drums	19122	214		21 282 00	Transfer Special Project FJO-935	unknown unknown	15 & B-gallon drums
155	Taritalite	Natural Min.		2A A-DMS-123	31 Drums	8480	214	3 44 2, ST 1-6		GS-OOP-2427-1(F) SCM		15 & 8-gallon drums
	Tantaille Concentrates	Natural Min.	C	AS AS	4 Drums	8476	214	3 44 2 ST 1-8		38-OOP-10224(SCM)-1F	Belgian Brazil	15-gallon drums
155	Taritaite	Natural Min.		2B B-DMS-B1	14 Drume	6480	214	3 44 2, ST 1-6	3 885 00	38-00P-10224(3CM)-1F 38-00P-2427-1(F) SCM		15-gallon drums
							4.7.7	V 1 44 15, VI 1-01	V.000.00 [1	-0-00F-24Z/"I(F) OUM	Belgian	15-gallon drums

CMAT	COMMODITY	TYPE	GRADE : MIF Lot #	LOT#	QUANTITY UNIT	00.4 1444						Printed: 8/2/00
155	Tantolite	Natural Min.	52C	C-DMS-C-1	21 Drums	RR# WHS			NET WT.	CONTRACT #	Origin	Packaging
155 155	Tantaite	Natural Min.	01F	DMS-137	50 Drume	6480 214 5881 214		2, ST 1-6	5.670.00	GS-OOP-2427-1(F) 5CM	Belgian	15-gallon drume
155	Tantalite	Natural Min.	138	DMS-138	52 Drums	5903 214		1, ST 1-6	13,729,50	GS-OOP-1319-1F SCM	unknown	15-gallon drums
155	Tamalite Concentrates Columbium Tantalum Ore	Natural Min.	03B	DM\$-203-8	8 Diums	7290 214		1, ST 1-8 2, ST 1-8		GS-OOP-1526-1F SCM	Beigian	15-gellon drums
155	Columbium Tantalum Ore	Tantalite	206	DMS-206	30 Drums	7628 214		1, ST 1-6	2,434,00	GS-OOP-3793(SCM)-1-F	Unknown	15-gallon drums
155		Tantalite	210	DMS-216	13 Drume	7707 214		1, ST 1-6	9,250,50	GS-OOP-3922(SCM)-1-F	Belgian Congo	15-gallen drume
155	Columbium Tantalum Source Material Columbium Tantalum Source Material	Tantalum Natural Minerals	808	GEO-809	98 Drume	10983 214		1,3,1-0		GS-OOP-3963(SCM)1-F	Belgian Congo, Africa	15-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals	22C	GEO-822C	13 Drums	19065 214				Transfer Special Project FJO-935	Belgian Congo	6-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals	831	GEO-831	15 Drums	19063 214			3 007 00	Transfer Special Project FJO-935 Transfer Special Project FJO-935	Belgian Congo	B-gallon drums
155	Tantaite	Tantalum Netural Minerals	B32	GEO-832	16 Orums	19084 214			3 000 00	Transfer Special Project FJO-935	Belgian Congo	8-gallen drums
155	Tantalite	Tantalum Nat. Min.	104	MGK-104	22 Boxes	11149 214		1 a	1 991 00	GS-OOP-10047(SCM)-1F	Beigian Congo	8-gallon drums
155	Tantalle	Tantalum Nat. Min.	108	MGK-108	14 Drums	11149 214		4	3,660.00	GS-OOP-10047(SCM)-1F	unknown	40-gallon fiber drums
155	Tantalite	Tantalum Nat. Min.	110	MGK-110	8 Drums	11149 214	3 37	4		GS-OOP-10047(SCM)-1F	unknown	0-gallon wooden kegs
165	Columbium Tantalum Source Material	Tantalum Nat. Min.	112	MGK-112	15 Buxes	11149 214		4	2 162.00	GS-OOP-10047(SCM)-1F	unknown	ਰ-gallon wooden kegs
155	Columbium Tantalum Source Material	Tantalum Natural Minerals	100	MRC-100	11 Drums	18988 214			3.300.00	Transfer Special Project FJO-935	Unknown Rhodesia	6-gallon wooden kegs
155	Columbium Tantalum Source Malerial	Tantalum Natural Minerals Tantalum Natural Minerals	113	MRC-113	23 Drums	19068 214	3 16		6.842.00	Transfer Special Project FJO-935	Brazil	9-gallon drums
155	Columbium Tentalum Source Material	Tantalum Natural Minerals	117	MRG-117	8 Drums	19000 214		-	2,150.00	Transfer Special Project FJO-935	Brazil	15-gallon drums
155	Columbium Tentajum Source Meterial		126	MRC-126	11 Drums	19015 214	3 15		2,629.00	Transfer Special Project FJO-935	Belgian Congo	15-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals Tantalum Natural Minerals	129	MRG-129	22 Drums	19016 214			6,424.00	Transfer Special Project FJO-835	Brazil	9-gallon drums
155	Columbium Tentalum Source Material	Tantalum Natural Minerals	139	MR0-138	10 Drums	19017 214	3 18	1	2,853.00	Transfer Special Project FJO 935	Llauldo Brazii	9 & 9-gellon drums
155	Columbium Tentalum Source Material	Tantalum Netural Minerals	139	MRC-139	6 Drums	18989 214		T	1,595.00	Transfer Special Project FJO-935	Liquido Brazil	9-gallon drums
156	Columbium Tantalum Source Material	Tantalum Natural Minerals	144	MRC-144	5 Drums	19001 214			952.00	Transfer Special Project FJO-935	Nigeria	9-gallon drums
155	Columbium Tantalum Source Material	Tantajum Natural Minerals	150	MRC-150	5 Druma	18990 214			1,282.00	Transfer Special Project FJO-935	Australia	8-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals	161	MRC-161	6 Drums	19069 214		1	1,270.00	Transfer Special Project FJO-935	Belgian Congo	9-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals	153 152	MRC-153	1 Drum	19002 214		1	300.00	Transfer Special Project FJO-935	Sydney, Australia	8 gallon drums
155	Columbium Tentalum Source Material	Tantalum Natural Minerals	184	MRC-182	10 Drums	19003 214			2,026.00	Transfer Special Project FJO-935	Rhodesia	8-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals		MRC-164	2 Drums	19004 214			466,00	Transfer Special Project FJO-935	Niceria	6-gallon drums
155	Columbium Tentalum Source Material	Tantalum Natural Minerals	100	MRC-166 MRC-173	15 Drums	19005 214			3,053.00	Transfer Special Project FJO-935	Belgian Congo	8-gallon drums 8-gallon drums
155	Columbium Tantalum Source Material	Tantajum Naturai Minerals	174	MRC-174	11 Drume	19018 214			2,200.00	Transfer Special Project FJO-935	Liquido Brazil	8-gallon drums
165	Columbium Tantalum Source Material	Tantalum Natural Minerals	175	MRG-175	11 Drums	19019 214			2,168.00	Transfer Special Project FJO-935	Liquido Brazil	8-galion drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals	178	MRC-178	8 Drums	19020 214			2,266.00	Transfer Special Project F.IO.935	Liquido Brazil	9-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals	177	MRC-177	11 Drums	19021 214		<u> </u>	2,158.00	Transfer Special Project FJO-935	Liquido Brazil	B gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals	178	MRC-178	11 Drums	19022 214	3 15		2,100.00	Transfer Special Project FJO-936	Liquido Brazil	8-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals	179	MRC-179	B Drums	19023 214		L	2,188.00	Transfer Special Project FJO-935	Liquido Brazil	8-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals	180	MRC-180	11 Drums	19070 214			2,185,00	Transfer Special Project FJO-935	unknown	15-gallen drume
	Columbium Tantalum Source Material	Tantalum Natural Minerals	183	MRC-183	8 Drums	19024 214 19071 214	3 15	L	2,198.00	Transfer Special Project FJO-935	unknown	B-gallon drums
159	Columbium Tantalum Source Material	Tantaium Naturel Minerals	186	MRC-186	12 Drume	19071 214 19072 214	3 16		2,208.00	Transfer Special Project FJO-935	unknown	15-gallon drums
	Columbium Tantalum Source Material	Tantalum Natural Minerals	187	MRC-167	11 Drums	19072 214	3 15 3 9		2,443.00	Transfer Special Project FJO-935	Liquido Brazil	6-gallon drums
155	Columbium Tentalum Source Material	Tantalum Natural Minerals	189	MRC-189	11 Drums	19073 214		ļ	2,201.00	Transfer Special Project FJO-935	Liquido Brazil	8-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals	190	MRC-190	6 Drume	18991 214			2,260.00	Transfer Special Project FJO-935	Liquido Brazil	8-gallon drums
155	Columbium Tentalum Source Material	Tantalum Natural Minerals	193	MRC-193	10 Drums	19006 214	3 15		2,197.00	Transfer Special Project FJO-935	Liquido Brazil	9-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals	195	MRC-195	8 Drums	19007 214			2,078,00	Transfer Special Project FJO-935	Brazil	8-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals	198	MRC-196	9 Drums	19008 214	3 15 3 16		2,190,00	Transfer Special Project FJO-935	Brazil	9-gallon drums
155	Columbium Tantalum Source Material	Tantalum Natural Minerals	199	MRC-199	7 Drums	19074 214	3 15	·	2 100 00	Transfer Special Project FJO-935	Brazil	9-gailon drums
	Columbium Tantalum Source Material	Tantalum Natural Minerale	208	MRC-206	8 Drums	19075 214	3 15	<del> </del>	2 200 00	Transfer Special Project FJO-935 Transfer Special Project FJO-935	Brazii	9 gallon drums
	olumbium Tantalum Source Material	Tantalum Natural Minerals	213	MRC-213	13 Drums	19078 214	3 15		3 215 00	Transfer Special Project FJO-935	Brazil	9-gallon drums
155	Columbium Tantalum Source Material Columbium Tantalum Source Material	Tantalum Natural Minerals	216	MRC-218	22 Orums	19077 214	3 15		4.426.00	Fransfer Special Project FJO-935	Salt Lake City	9-gailen drums
	Columbium Tantalum Source Material	Tantalum Natural Minerals	217	MRC-217	22 Drums	19026 214	3 15		4 375 00	Transfer Special Project FJO-935	Brazil	8-gallen drums
		Tantalum Natural Minerals	218	MRC-218	22 Drums	19078 214	3 15		4 380 00	Fransfer Special Project FJO-935	Liquido Brazil	8-gallon drums
	Columbium Tantalum Source Material	Tantalum Natural Minerals	219	MRC-218	21 Drums	19079 214	3 15		4 311 00	Transfer Special Project FJO-935	Brazil	8-gallon drums
155	olumbium Tantalum Source Material Solumbium Tantalum Source Material	Tantaium Natural Minerale	222	MRC-222	22 Drums	19027 214	3 , 15			Fransfer Special Project FJO-935	Brazil	8-gallon drums
	Columbium Tantalum Source Material	Tantalum Netural Minerals	223	MRC-223	22 Drums	19028 214	3 15		4 397 00	Transfer Special Project FJO-935	Brazil	6-gallon drums
	Columbium Tantalum Source Material	Tantalum Natural Minerals	224	MRC-224	15 Drums	19090 214	3 1 15		4 304 00	ranafer Special Project FJO-935	Brazil	8-gallon drums
	Columbium Tantalum Source Material	Tantalum Natural Minerals	228	MRC-226	9 Drums	18029 214	3 18		4.500 nn	ranafer Special Project FJO-935	Brazil Brazil	9-gallon drums
	Columbium Tantalum Source Material	Tantalum Natural Minerals	227	MRC-227	15 Drums	19081 214	3 16		4.358.on	ransfer Special Project FJO-935	Brazil	20-gallon drums
	Columbium Tantalum Source Material	Tantalum Natural Minérals	228	MRC-228	10 Drums	19030 214	3 16		4,676.00	ranefer Special Project FJO-938	Brazil	15-gallon drums
	Soumblum Tantalum Source Material	Tantalum Natural Minerals Tantalum Natural Minerals	229	MRG-229	11 Orunis	19031 214	3 9	···-		ranefer Special Project FJO-935	Belgian Congo	20 & 8-gallon drums
	olumblum Tantalum Source Material		238	MRC 238	0 Drums	19032-A 214	3 15		2,177.00	ransfer Spacial Project FJO-935	Brazii	9-gallon drums
	Columbium Fantalum Source Material	Tantalum Naturai Minerals Tantalum Naturai Minerals	239	MRC-239	8 Drums	19033 214	3   15		2,192.00 1	ransfer Special Project FUO-935	Liquido Brazil	9-gallon drums
	Columbium Tantalum Source Material	Tantalum Natural Minerals Tantalum Natural Minerals	243	MRC-243	15 Dtums	19082-A 214	3   16			ransfer Special Project FJO-835	Brazil	9-gallon drums
	olumbium Tantalum Source Material	Tantalum Natural Minerals Tantalum Natural Minerals	244	MRO-244	21 Drums	19034 214	3 15	100 to	4,247.00 1	rensfer Special Project FJO-935	unknown	15-gailon drums
	columbium Tantalum Source Material	Tantalum Natural Minerals Tantalum Natural Minerals	245	MRC-245	15 Drums	19035 214	3 15		4,504.00	ransfer Special Project FJO-935	Brazil	8-gallon drums
155	olumbium Tantalum Source Material	Tantalum Natural Minerals	246	MRC-246	12 Drums	19036 214	3 16		3,524.00 7	ranefer Special Project FJO-935	Liquido Brazil	9-gallon drums 9-gallon drums
155	olumbium Tantalum Source Material	Tantalum Natural Minerals	247	MRC-247	4 Drums	18992 214	3 15		843.00 17	ransfer Special Project F.IO.935	Nigeria	9-gallon drums
155	dumbium Tantalum Source Material	Tantalum Natural Minerals	251	MRC-251	12 Drums	18993 214	3 16		2,470.00 1	ransfer Special Project FJO-935	Australia	8-gallon drums
155 (	olumbium Tantsium Source Material	Tantalum Natural Minerals	258	MRC-254	7 Drums	19037 214	3 15		1,940,00   T	ransfer Special Project FJO-935	Rhodesia	9-gallon drums
155 0	olumbium Tantalum Source Material	Tantalum Natural Minerals	250	MRC-258	9 Drums	19038-A 214	3 16		2,194.00 T	ransfer Special Project FJO-935	Brazil	9 & 8-gallon drums
156 0	olumbium Tantalum Source Material	Tantalum Natural Minerals	260	MRC-259 MRC-260	11 Drums	19039 214	3 15		2,191.00 T	ransfer Special Project FJO-935	Brazil	B-gallon drums
155 0	olumbium Tantalum Source Material	Tantalum Natural Minerals	260	MRC-261	8 Drums	19040 214	3 15		2,190.00 T	ransfer Special Project FJO-935	Brazil	9-gallon drums
155 0	olumbium Tanteium Source Material	Tantalum Natural Minerals	263	MRC-263	9 Drums	19041 214	3 15		2.182.00 T	ransfer Special Project FJO-935	Brazil	9-gallon drume
	olumblum Tantalum Source Material	Tantalum Natural Minerals	284	MRC-284	15 Drums	19042 214	3 15		4,404.00 T	ransfer Special Project FJO-935	Brazi	9-gallon drums
155	olumblum Tantalum Source Material	Tantalum Natural Minerals	285	MRC-265	9 Drums	19043 214	3 9		4.435.00   7	ransfer Special Project FJO-935	Brazil	20-gellon drums
155 (	olumbium Tantalum Source Material	Tantalum Natural Minerals	288	MRC-286	22 Drums	19093 214	3 15		4,386.00 T	ransfer Special Project FJO-935	Brazil	B-gailon drums
155	olumbium Tantalum Source Material	Tantalum Natural Minerals	267	MRC-287	22 Drums	19044 214	3 15		4,393.00 T	ransfer Special Project FJO-935	Brazil	8-gallon drums
155 C	olumbium Tantalum Source Material	Tantalum Natural Minerals	266	MRC-266	15 Drums 15 Drums	19045 214 19046 214	3 15 3 15		4.395.00 T	ransfer Special Project FJO-935	Brazil	9-gallon drums
143 17										ransfer Special Project FJQ-935	Brazil	

COMMODITY	TYPE	GRADE MIF Lot #	LOT#	QUANTITY URI	RR#	WHAT	- 742		1 22				Printed: 8/2/
Columbium Tantalum Source Material	Tantalum Natural Minerals	289	MRC-269	22 Orums	19047	WHSE 214	SEC.	BAY	ROW	NET WT.	CONTRACT #	Origin	Packagi
Columbium Tantalum Source Material Columbium Tantalum Source Material	Tantalum Natural Minerals	270	MRC-270	18 Drums	19048	214		15	·	4,412.00		Brazil	8-gallon drums
Columbium Tantaium Source Material	Tantalum Natural Minerals	271	MRC-271	22 Drums	19084		3	15	<del></del>	4,791.00		Liguido Brazil	9-gallon drums
	Tantalum Natural Minerals	272	MRC-272	7 Drums	19049	214	3	15		4,387.00		Brazil	8-gailon drums
Columbium Tantalum Source Material	Tanfalum Natural Minerals	273	MRC-273	2 Drume		214	3	9		1,320,00		Nigeria	8-gallon drums
Columbium Tantalum Source Material	Tantalum Natural Minerals	274	MRC-274	2 Drums	19085-A	214	3	15		595.00		Nigeria	6-gallon drums
Columbium Tantalum Source Material	Tantalum Natural Minerals	275	MRC-275	3 Drums	19009	214	3	15	<u> </u>	522.00		Uganda	
Columbium Tantalum Source Material	Tantalum Natural Minerals	276	MRC-278	10 Drums	19086	214	3	15		559.00		Lipende	9-gallon drums
Columbium Tantalum Source Material	Tantajum Natural Minerals	277	MRC-277	3 Drums	19087	214	3	15		2,920.00	Transfer Special Project FJO-935	Brazil	8-gallon drume
Columbium Tantalum Source Material	Tantajum Naturai Minerale	278	MRC-278	22 Drums	18994	214	3	18		979.00	Transfer Special Project FJO-935	Niceria	61-gallon drums
Columbium Tantalum Source Material	Tantalum Natural Minerals	279	MRC-279	15 Drums	19050	214	3	15		6,487.00	Transfer Special Project FJQ-935	Brazi	15-gallon drunte
Columbium Tantalum Source Material	Tantalum Natural Minerals	282	MRC-282	3 Drums	19088	214	3	16	L	4,388.00	Transfer Special Project FJO-935	Brazil	θ-gallon drums
Columbium Tantalum Source Material	Tantalum Natural Minerals	283	MRC-283		19010	214	3	15		739.00	Transfer Special Project FJO-935	Nigeria	15-gallon drums
Columbium Tantalum Source Material	Tantalum Natural Minerals	284	MRC-284	4 Drums	19051	214	3	16	1	1,041.00	Transfer Special Project FJO-935	Nigeria	9-gallon drums
Columbium Tantsium Source Material	Tantaium Natural Minerals	285	MRC-285	7 Drums	18995	214	3	15		1,935.00	Transfer Special Project F.IO-935	Nigeria	9-gallon drums
Columbium Tantalum Source Material	Tantalum Natural Minerals	290	MRC-280	3 Drums	19089	214	3	18		738.00	Transfer Special Project FJO-935	Nigeria	9-gallon drums
Columbium Tantalum Source Material	Tantalum Natural Minerals	291	MRC-281	5 Drums	19090	214	3	15	1	1,066.00	Transfer Special Project FJO-935	Belgian Congo	9-galion drums
Coltembium Tantalum Source Material	Tantalum Natural Minerals	295	MRC-295	18 Drums	19011	214	3	15		3 54 1.00	Transfer Special Project FJO-935	Beiglan Congo	8-gallon drume
Columbium Tentalum Source Material	Tantalum Natural Minerals	286	MRC-296	12 Drums	19052	214	3	15		2,400.00	Transfer Special Project FJO-935	Belgian Congo	8-gallon drums
Columbium Tantalum Source Material	Tantalum Natural Minerals	297	MRC-297	7 Drums	19053	214	3 [	15		1,369,00	Transfer Special Project FJO-835	Belgian Congo	8-gallon drums
Columbium Tantalum Source Material	Tantalum Natural Minerals	299		7 Drums	19054	214	3	9		1 385 00	Transfer Special Project FJO-935		8-gallon drums
Columbium Tantaium Source Material	Tantalum Natural Minerale	300	MRC-299 MRC-300	1 Drum	19091	214	3	9		277.00	Transfer Special Project FJO-935	Belgian Congo Australia	8-gallan drums
olumbium Tantalum Source Material	Tantalum Natural Minerals	301		2 Drums	19012	214	3	15		311.00	Transfer Special Project FJO-935	Australia	8-gallon drums
olumbium Tantalum Source Material	Tantalum Natural Minerals	303	MRC-301	1 Drum	19013	214	3	g		265,00	Transfer Special Project FJO-935		8-gallon drums
olumbium Tantalum Source Material	Tantalum Natural Minerals		MRC-303	33 Drums	19092	214	3	15		8 647.00	Transfer Special Project FJO-935	Rhodesia	8-gallon drums
olumbium Tantalum Source Material	Tantalite Ore	305	MRC-305	2 Drums	19093	214	3	15			Transfer Special Project FJO-935	unknown	8-gallon drums
olumbium Tantalum Source Material	Tantalum Natural Minerals	308	MRC-306	3 Drums	18975	214	3	16		612.00	Transfer Special Project FJO-935	unknown	8-gallon drums
olumbium Tantalum Source Material	Tantalum Natural Minerals	308	MRC-308	5 Drums	19094	214	3	15			Transfer Special Project FJO-935	Nigeria	8-gallon drunss
olumbium Tentalum Source Material	Tantalum Natural Minerals	309	MRC-309	10 Drums	19095	214	3	15			Transfer Special Project F.IO-935	Ugande	8-gallon drums
olumbium Tantalum Source Material	; Tantalum Natural Minerals	311	MRC-311	3 Drums	19096	214	3	16	·	840 nn	Transfer Special Project FJO-935	Dixon NM	9-gallon drums
olumbium Tantalum Spurce Material	Tantalum Natural Minerals	312	MRC-312	1 Drum	19097	214	3 1	15		241.00	Transfer Special Project FJO-935	Belgian Congo	9-gallon drums
olumbium Tantalum Source Material		313	MRC-313	1 Drum	19098	214	3	9		235.00	Transfer Special Project F1O-935	Australia	8-gallon drums
olumbium Tantalum Source Material	Tantalum Natural Minerals	314	MRC-314	2 Drums	18978	214	3	15	······································	40a.00	Transfer Special Project FJO-935 Transfer Special Project FJO-935	Australia	8-gallon drums
olumbium Tantalum Source Material	Tantalum Natural Minerals	315	MRC-315	11 Orums	18977	214	3	15		1 000.00	Transfer Special Project FJO-935	Australia	8-gailon drums
olumbium Tantalum Source Material	Tantalum Natural Minerals	317	MRC-317	7 Drums	18978	214	3	15		1,456.00	Transfer Special Project FJO-935	Australia	8-gallon drums
Dumblum Tantalum Source Material	Tantalum Natural Minerals	318	MRC-318	11 Drums	19099	214	3	15			Transfer Special Project FJO-935	Australia	8-galion drums
olumblum Tantalum Source Material	Tantalum Natural Minerals	320	MRC-320	2 Drums	18979	214	3 :	15		408.00	Transfer Special Project FJO-935	Australia	9-gallon drums
olumbium Tentalum Source Material	Tantalum Natural Minerals	321	MRC-321	15 Drums	18980	214	3 +	15			Transfer Special Project FJO-935	unknown	9-gallon drums
olumbium Tantalum Source Materia	Tantalum Natural Minerals	322	MRC-322	5 Drums	16961	214	3	15			Transfer Special Project FJO-935	Nigeria	9-gallon drums
olumbium Tantalum Source Material	Tantalum Natural Minerals	323	MRC-323	3 Drums	19100	214	3	16	····	1,329.00	Transfer Special Project F.IO-935	Nigeria	9-gallon drums
olumbium Tantalum Source Material	Tantalum Netural Minerals	325	MRC-325	9 Drums	19055	214	3	9		1 740 00	Transfer Special Project FJO-935	Nigeria	13-gallon drums
olumbium Tentalum Source Material	Tantalum Natural Minerals	320	MRC-328	3 Drums	18996	214	3	15		1,740.00	Transfer Special Project FJO-935	Australia	8-gallon drums
olumbium Tantalum Source Material	Tantalum Natural Minerals	333	MRC-333	1 Drum	18982	214	3	15		723.00	Transfer Special Project FJO-936	Australia	9-gallon drums
obumbium Tantalum Source Material	Tantalum Natural Minerals	343	MRC-943	43 Drums	19056	214	3	15		160.00	Transfer Special Project FJO-935	Uganda	8-gallon drums
olumbium Tentalum Source Malerial	Tantalum Natural Minerals	348	MRC-348	2 Drums	19057	214	3 +	15		8,863.00	Transfer Special Project FJO-935	Belgian Congo	B-galton drums
Olumbium Tantalum Source Material	Tantalum Natural Minerals	390	MRC-350	4 Drums	19058	214	3	15		314.00	Transfer Special Project FJO-935	unknown	8-gailon drums
olumbium Tantalum Source Material	Tantaium Natural Minerals	352	MRO-352	9 Drums	19059	214	3	15		1 024 00	Transfer Special Project FJO-935	Uganda	6-galion drurns
olumblum Tantalum Source Material	Tantaium Natural Minerals	353	MRC-363	6 Drums	19060	214	3	15		1,024.00	Transfer Special Project FJO-935	unknown	8-gailon drums
Dumbium Tantalum Source Material	Tentalum Netural Minerals	354	MRC-354	8 Drums	19061	214	3	9		1,235.00	Transfer Special Project FJO-935	unknown	8-gallon drums
Dumbium Tantalum Source Material	Tantalum Natural Minerals	366	MRC-356	67 Drums	19062	214	3			1,055.00	Transfer Special Project FJO-935	Belgian Congo	8-gallon drums
plumblim Tantalum Source Material	Tantalum Netural Minerals	356	MRG-366	2 Drums	19101		3	16		13,308.00	Transfer Special Project FJO-935	Belgian Congo	9-gallon drums
Authorities Testalism Source Material	Tantalum Natural Minerals	359	MRC-359	12 Drums	19997	214	3	15		347.00	Transfer Special Project FJO-935	Belgian Congo	8-gallon drums
dumblum Tantalum Source Material	Tantalum Natural Minerals	077	MRC-77	6 Drums	18998	The state of the last of the l	3	15		2,303.00	ranofer Special Project FJO-935	Nigeria	8-galion drums
olumbium Tantalum Source Material	Tantalum Natural Minerals	081	MRC-B1	2 Drums	18986	214	3 +	15		1,174.00	Fransfer Special Project FJO-935	Nigeria	8-gallon drums
llumbkım Tantalum Source Malerial	Tantalum Natural Minerals	086	MRC-66	22 Drume	19086		3	15		452.00	Transfer Special Project FJO-935	Uganda	8-gailon drums
lumbium Tantalum Source Material	Tantalum Natural Minerals	087	MRQ-87	26 Drums	18987-A	214		15		4,352.00	Fransfer Special Project FJO-935	Brazil	8-gallon drums
lumblum Tantalum Source Material	Tantalum Natural Minerals	091	MRC-91	95 Dhums	19014		<u> </u>	18		7,700.00	Fransfer Special Project FJO-935	Rhodesia	15 & 20-gallon dr
lumbium Tantalum Source Material	Tantalum Natural Minerals	092	MRC-92	8 Drums		214	3	15		29,340.00	ransfer Special Project FJO-935	Liquido Brazil	9-gallon drums
umbium Tantalum Source Material	Tantalum Natural Minerals	094	MRC-94	22 Otums	18999	214	3 1	15		1,604.00	ransfer Special Project FJO-936	unknown	8-gallon drums
lumbium Tantalum Source Material	Tantaium Natural Minerals	179	ONSP-4E179	7 Drums	19067	214	3	15		4,324.00 1	ransfer Special Project FJO-935	Brazil	8-gallen drums
umbium Tantalum Source Material	Tantalum Natural Minerals	180	ONSP-4E180		19361		3	77	4	2,847,00   8	Relocation Project DMO-00001	unknown	15-gallon drums
lumblum Tantalum Source Malerial	Tartalum Natural Minerals	181	ONSP-4E181	4 Drums	19365		3	18	1, ST 2	1,988.00 F	Relocation Project DMO-00001	Linknown	
italite Ore	Natural Min.	IOE	RIDE	8 Dhims	19366		3	77	4	2,110.00 F	telocation Project DMO-00001	unknown	15-gallon drums
talite	Tantalum Nat. Min.	01F	RPS	47 Drums	10269		3	44 1		10,798.00 6	95-OOP-10032(SCM)-1F	Brazii	15-gailon drums
umbium Tantalum Source Material	Tantalum Naturai Minerals	A-9	VA-9	1 Drum	5916			37	4	1,486,60 (	S-OOP-1087-1F (SCM)	Australia	15-gallon drums B-gallon wooden k
	TOTAL		*#**	1 Drum	19103-A		3	9		167.75 1	ransfer Special Project FJO-935	unknown (10 bags of samples)	15-galion drums
The same of the sa				3,248 Units	minus sweep					14,457,25	ba	The service of services.	· yairon drums
				3,248 Units	With Sweeping	50			8,	15,321.25 L	bs		
Italum Oxide	Chemically Precipitated Tantalum Oxide	-20	1-20 New York	1									
talum Pertoxide	Chemically Precipitated Tantalum Oxide	-20 ↑	P-902	20 Kegs	7017				1,2,3	2,000.00 G	S-OOP-3418-1F(SCM)	German	Q gullan
talum Oxide	Chemically Precipitated Tantalum Oxide	902	P-902	50 Kegs	7402				1.2,3		IS-OOP-3592(SCM)-1	German	6-gullon wooden k
italum Pentoxide	Chemically Precipitated Tantalum Oxide	992		50 Kegs	7491			37	1,2,3	5,014.00   0	S-OOP-3592(SCM)2F	German	B-gallen wooden k
ntalum Pentoxide	Chemically Precipitated Tantalum Oxide		S-892	50 Kegs	7864		3	37		5,007.00 G	S-OOP-3883-2 (SCM)	German	8-gallon wooden k
talum Pentoxide	Chemically Precipitated Tantalum Oxide	992	5-992	50 Kegs	7936		3		1,2,3	5,004.00 6	S-OOP-3883(SCM) 3F		8-gallon wooden k
italuni Pentoxide	Chemically Precipitated Tantalum Oxide		-1048 New York	50 Kegs	8017	214	3		1,2,3		S-OOP-7081 (SCM) 1	German	8-galion wooden k
italum Pentoxide	Chemically Precipitated Tantalum Oxide	050	S-1048	100 Kegs	8048					9,198 nn G	S-OOP-7061 (SCM) 2F	German	8-gallon wooden ke
talum Pentoxide	Chemically Precipitated Tantalum Oxide	101 OR /50	S-1138	50 Kegs	8137				1,2,3		the same of the sa	German	8-gallon wooden ke
	Chemically Precipitated Tantalum Oxide Chemically Precipitated Tantalum Oxide	101 OR /50	S-1138	50 Kegs	8258							unknown unknown	6-gallon wooden ke
talum Oxide		138	S-1138										8-gallon wooden ke

CMÁT	COMMODITY	TYPE	GRADE	AMEL-4										Printed: 8/2/00
	Tantalum Oxide	Chemically Precipitated Tantalum Oxide	GRAUE	MIF Lot #	LOT#	TINU TITHAUD	RR#				ROW NET WT.		Origin	D
155	Tantalum Oxide	Chemically Precipitated Tantalum Oxide		401	5-1138/F	100 Kegs	9092	214	3		1,2,3 10,005.0	0 GS-OOP-7248-(SCM)-4F	German	Packaging 8-gallon wooden kegs
155	Tantalum Oxide	Chemically Precipitated Tantalum Oxide	i	351	\$-11386	60 Kegs	9871	214	3		1,2,3 ( 6,020.0	0 GS-OOP-7248(SCM)-7F	German	
155	Tantalum Oxide	Chemically Precipitated Tantalum Oxide		350		50 Kegs	9609	214	3		1,2,3 5.031.5	0 GS-COP-7248(SCM)-8	German	8-gallon wooden kegs
		TOTAL		- 300	5-1138	100 Kegs	10573	214	3			00 GS-OOP-7248(SCM)-5	German	8-gallon wooden kegs
						830 Kegs					82,330,5		German	8-gallon wooden kegs
155	Tantalum Pentoxide	Natural Concentrates		001	Commence Control						1	***************************************	Commence of the second	
155	Tantalum Pentoxide	Natural Concentrates		002		84 Drums	19411		3	27	42,000.0	00 DLA300-90-C-0031	unkgown	
155	Tentatum Pentoxide	Natural Concentrates			2 2 m	84 Drums	19412		3	27		0 DLA300-90-C-0031	unknown	35-gallon drums
155	Taritalum Pentoxide	Natural Concentrates		003		84 Drume	19410		3	27		0 DLA300-80-C-0031	unknown	36-gallon drums
155	Tantalum Pentoxide	Natural Concentrates		004	cawara 🏰 i	36 Drume	19419		3	27		0 DLA300-90-C-0031	unknown	35-gallon drums
155	Tantalum Pentoxide	Natural Concentrates		004 .	X	48 Drums	19419		3	20		0 DLA300-90-C-0031		35-gallon drums
155	Tantalum Pentoxide	Natural Concentrates		005		84 Orums	19420		3	28	42.000.0	0 DLA300-80-C-0031	unknown	35-gallon drums
155	Tantalum Pentoxide	Natural Concentrates		006	8	84 Drums	19426	214	3	28	42,000 (	0 DLA300-90-C-0031	unknown	35-gallon drums
	The second secon	TOTAL		007	. 7	59 Dhume	19429	214	3	28		0 DLA30G-90-G-0031	unknown	35-gallon drums
	The formation of the control of the	IUIAL				563 Drums				***************************************	281,500.0		unknown	35-gallon drums
155	Columbium-Tantelum Concentrates	Charles Comments				L								
155	Cottembium-Tantalum Concentrates	Chemically Processed Chemically Processed		189	MGK-189	24 Drume	17200	214	3	13	13.287 #	0 GS-OOP-10718(SCM)		
~	South Didn't artifully Double 10 1000			190	MGK-199	1 Cont Swee	op   17200	214		13	B4.C	0 GS-OOP-10716(SCM)	unknown	65-gallon drums
	The state of the s	TOTAL		1		25 Drums					13,361,5	0   ha	unknown	65-gallon drums
155	Columbium Tantalum Source Materials				and the state of t						100019	A Phia		
155	Columbium Tantalum Source Materials	Columbium Natural Minerals	11A	357	MRC-357	15 Drums	18946	214	3	16	3,082.0	D Transfer Special Project FJO-935		
155	Columbium Tantalum Source Materials Columbium Tantalum Source Materials	Columbiam Natural Minerals	11A	833	GEO-833	108 Drums	18947	214		17	21,228,0	D Transfer Special Project FJO-935 Transfer Special Project FJO-935	Carrie Committee processing of the carrier of the c	8-gallon drums
155	Columbium Tantalum Source Materials Columbium Tantalum Source Materials	Columbium Natural Minerals	11A	834	GEO-834	111 Drums	18948	214		17		Triansier apecial Project FJO-935		8-gallon drums
155	Columbium Tantalum Source Materials Columbium Tantalum Source Materials	Columbium Natural Minerals	11A	937	GEO-837	111 Drums	18940	214		17	20,037.0	7 Transfer Special Project FJO-935		8-gallon drums
155		Columbium Netural Minerals	11A	838	GEO-838	111 Orums	18950	214	3	17	22,U31.50	Transfer Special Project FJO-935	TOTAL PROPERTY OF THE REAL PROPERTY OF THE PARTY OF THE P	8-gallon drums
155	Columbium Tantalum Source Materials	Columbium Natural Minerals	11A	839	GEO-839	111 Drume	19951	214		17	22,127.5	Transfer Special Project FJO-935		6-gallon drums
	Columbium Tantalum Source Materials	Columbium Natural Minerals	11A	840	GEO-840	111 Drums	18952	214		17	22,056.56	Transfer Special Project FJO-935	Belgiad Congo	8-gallon drums
	Columbium Tantalum Source Materials	Columbium Natural Minerals	11A	843	GEO-843	110 Drums	18953	214	-,	17	22,056.00	Transfer Special Project FJO-935		8-gallon drums
	Columbium Tantalum Source Materials	Columbium Natural Minerals	2A	817	GEO-817	109 Drume	18954	214		17	21,828.0	Transfer Special Project FJO-935		8-gallon drums
155	Columbium Tantalum Source Materials	Columbium Natural Minerals	2A	918	GEO-818	108 Drume	19955	214		16	21,785.29		Beigian Congo	8-gallon drums
	Columbium Tantalum Source Materials	Columbium Natural Minerals	2A	821	GEO-821	107 Drums	19958	214			21,466.00		Belgian Congo	8-gallon drums
	Columbium Tantalum Source Materials	Columbium Natural Minerals	2A	638	GEO-836	108 Drums	18957	214		17	21,111.50		Belgian Congo	8-gallon drums
	Columbium Tantalum Source Materials	Columbium Natural Minerals	11A	280	MRC-280	3 Drums	18956			17	21,617.00		Belgian Congo	8-gallon drums
	Columbium Tantalum Source Materials	Columbium Natural Minerals	114	292	MRC-292	6 Drums		214		17	649.67	Transfer Special Project FJO-935	De Staffany Canada	9-gallon drums
	Columbium Tantalum Source Materials	Columbium Natural Minerals	2A	340	MRC-340	44 Drums	19959	214		16	1,665.00	Transfer Special Project FJO-935	Belgian Congo	0-gailon drums
	Columbium Tantalum Source Materials	Columbium Natural Minerals	11A	351	MRC-361	14 Drums	18960	214		17	13,222.00	Transfer Special Project FJO-935	Belgian Congo	9 & 15 gallon drums
	Columbium Tantalum Source Materials	Columbium Natural Minerals	11A	816	GEO-816	14 Urums	18961	214		16	2,729.00	Transfer Special Project FJO-935	unknown	8-gallon drums
155	Columbium Tentalum Source Materials	Columbium Natural Minerals	2A	202	MRC-262	110 Drums	18962	214		17	22,432,50	Transfer Special Project FJO-935	Belgian Congo	8 & 20 gallon drums
155	Columbium Tantalum Source Materials	Columbium Natural Minerals	2A	281	MRC-261	21 Drums	16963	214	3	16	4,446.00	Transfer Special Project FJO-935	Brazii	
155	Columbium Tantalum Source Materials	Columbium Natural Minerals	2A	280		28 Drums	18964	214	3	9	5,676.gr	Transfer Special Project FJQ-935	Brazil	8 & 9 gation drums 8-gation drums
155	Columbium Tantalum Source Materials	Columbium Natural Minerals	2A	287	MRC-266	7 Drums	18965	214	3	18	1,909.00	Transfer Special Project PJO-935	India	a-gallon drums
155	Columbium Tantalum Source Materials	Columbium Natural Minerals	2A -	283	MRC-287 MRC-293	3 Drums	18966	214		17	900.00	Fransfer Special Project FJO-935	India	15-gallon drums
155 (	Columbium Tantalum Source Materials	Columbium Natural Minerals	2A	294		20 Drume	18967	214	3	18	3,986.00		Belgian Congo	6-gallon drums
155	Columbium Tantalum Source Materials	Columbium Natural Minerals	2A	324	MRC-294	40 Orums	10960	214		16	8,022.00	Transfer Special Project FJO-935	Belgian Congo	8-gellon drums
155	Columbium Tantalum Source Materials	Columbium Natural Minerals	2A	338	MRC-324 MRC-338	3 Druma	18969	214		16	683.00	Transfer Special Project FJO-935	Sydney, Australia	8-gallon drums
	Columbium Taritalum Source Materials	Columbium Natural Minerals	2A 1	339	MRC-338	4 Drums	18970	214		17	1,221.00	Transfer Special Project FJO-935	Belgian Congo	15-gallon drums 9-gallon drums
	Columbium Tantalum Source Materials	Columbium Natural Minerale	2A	342	MRC-342	24 Drums	18971	214		16	7,220.00		Belgian Congo	15 & 9-gallon drums
155 0	Columbium Tantalum Source Materials	Columbium Natural Minerals	2A	358	MRC-342 MRC-358	4 Drume	18972	214		17	1,081,00	Transfer Special Project FJO-935	Nigeria	15-gallon drums
155 (	olumbium Tantalum Source Materials	Columbium Natural Minerals	2A	819		83 Drums	18973	214	3	16	24,863.00	Transfer Special Project FJO 935	Minerga	9-gallon drums
	Columbium Tantalum Source Material	Tantalum Natural Minerals		ONG	GEO-819	107 Drums	18974	214		18	21,298.50	Transfer Special Project FJO-935	Belgian Congo	
	Columbium Tentalum Source Material	Tantalum Natural Minerals			3 NONG	3 Drums	19357	214		34 4, 57	1,187,50	Relocation Project DMO-00001	unknown	6-gallon drums 15-gallon drums
	olumbium Tantalum Source Material	Tantalum Natural Minerals		911	ONSP-30811	275 Drume	19358	214		77 2	2 54,886,00	Relocation Project DMO-00001	unknovn	
	Columbium Tantalum Source Material	Tantalum Natural Minerals		178	ONSP-4E178	23 i Druma	19359	214		77 3	9,223,00	Relocation Project DMO-00001	lunknown	30-gallon drums
- 1		TOTAL		182	ONSP 4E182	48 Drums	19360	214	3	77 3	3 19,321,00	Relocation Project DMO-00001	unknown	30-gallon drums
~~~	er er i magni grand ger melt er i "tret gege standand primmer in de tret eggeneret ander elemente te hempersonele i	IVIAL				2,088 Drums					448,704.25		MIRADOVIII	30-gallon drums
155	The second secon	AMP INFORMATION												
	The state of the s	UNCOMITTED QUANTITIES				8,754 Drume	inch	udes sweepl	nge		1,841,207.50	Lbs	Company of the second s	
	The state of the s	OUCOUNT LED COMMITTES									820.66			
							1	1		1				
157 C	olumbium Carbide Powder			!TEM#		A Thomas a result of the second of the secon	1							
	olumbium Carbide Powder			20	9	3 Boxes	18299	213	4 V	ault	630 00	GS-OOP-22928(SCM)-2	Albany, OR	
157 C	olumbium Carbide Powder			21	10	3 Boxes	18300			ault	630.00	GS-OOP-22928(SCM)-2		Wooden Boxes
	olumbium Carbide Powder			18	1	4 Вокая	18315			ault		GS-OOP-22931(SCM)-13	Albany, OR	Wooden Boxes
157	Authority Agines Lawas.			19	2	4 Boxes	18316			ault	720.00	G5-COP-22931(SCM)-13	Latrobe, PA	VVooden Baxes
	The state of the s	AMP INFORMATION	I			14 Boxes	T	7			2,700.00	( he	Latrobe, PA	Wooden Boxes
		UNCOMMITTED QUANTITIES					1	+			1,35			
522 T	antalum Carbide Powder			ITEM#			-	†*****			1,10	2 7		the second of th
ena It	the first of the contract of the commence of t		<u> </u>		2	3 Boxes	18306	213	4 1/	ault	000.00	GS 000 5000 (00)		
022	antalum Carbide Powder				2	3 Boves		213	4 Va	2017	1 750 00	GS-OOP-22931(SCM)-4 GS-OOP-22928(SCM)-2	Latrobe, PA	Wooden Boxes
259		and a control of the second se					1	1			1,330.00	-35-30F-22920(SUM)-2	Albany, OR	Wooden Boxes
527		AMP INFORMATION	1		***************************************	6 Boxes	†	P QUANTIT	v-+-		A 004	1 1		
		UNCOMMITTED QUANTITIES						COMMITTE			2,250,00			
							+	September 1 Br			1,13	81		
							+							
								+						
				ITEM#			<del></del>	+		+				
	antalum Oxide	Charles A Control of the Control of				82 Drums	1947QA	+	3 3					
		Standard Grade R												
	antalum Oxide	Standard Grade R Standard Grade R		2	2	82 Drums	19472A			18	25,010.00	DLA-300-91-C-0017 DLA-300-91-C-0017	unknown	35-gallon drums

NEW HAVEN DEPOT TANTALUM

		Printed: 8/2/00
CMAT         COMMODITY         TYPE           525         Tantalum Oxide         Standard Grade R           525         Tantalum Oxide         Standard Grade R	3 19473 214 3 19 25 050 00 01 6 200 01 6 200 01 6 200 01 6 200 01 6 200 01 6 200 01 6 200 01 6 200 01 6 200 01	Origin Packaging
TOTAL	4 4 82 Druns 19474 214 3 38 25.010.00 DLA-300-91-C-0017 Lunknown	35-gallon drums 35-gallon drums
575 AMP INFORMATION UNCOMMITTED QUANTITIES	TUO, NAM, LUI LDS	7
		Address of the control of the contro

# pecullan, michael

From:

pecullan, michael

Sent: To: Wednesday, February 07, 2001 7:37 AM

Till, William

Subject:

RE: Radiological Survey #8, New Haven

Bill,

Thanks for the info below; just one point, if the signs you are referring to are the one's stating "Caution Radioactive Materials" then you cannot eliminate them. If you need any added info regarding the signs please let me know.

----Original Message----

From:

Till, William

Sent:

Wednesday, February 07, 2001 7:26 AM

To:

pecullan, michael

Subject:

RE: Radiological Survey #8, New Haven

----Original Message----

From:

pecullan, michael

Sent:

Tuesday, January 30, 2001 10:36 AM

To: Till, William

Cc:

reilly, kevin; porton, peter

Subject: Radiological Survey #8, New Haven

Bill,

I've had occasion to re-read the survey. There are some items which are unclear to me. Would you please advise of the following:

Par. 6.b.

What was the date of the last individual review of annual exposure records? [Till, William]

4/28/2000

Par. 6.i.

What was the date of the last annual radiation training for stockpile employees? [Till, William]

8/28 thru 9/5/2000

Readings taken @ 1 foot

Is the material in Bay 28 (0.70 mR/hr) in a restricted area?

Please respond NLT 2/8/01. [Till, William] Yes... Warehouse doors are locked and sealed. Film badges are worn by personnel when there activity in the warehouse section. During the upcoming sampling operation, a combined effort between Operations and QA to put Tantalum back in storage can eliminate the need for caution signs to be in the isle ways. I am open to any comments or instructions. bill till

Mike P.

CÓDE.	3			NOTIFI	CATION	NOF S	TOCKPI	LE INSPE	CTION				
1. NAME A	AND LOC	ATION OF DEPO	T OR FA	ACILITY		2. NAME		<u> </u>			3. SERIAL NO.		
DLA/DNS						TYPE OF		Annual Ra	diological Re	eport	7		
		t, IN 46774-96				COMMO	DITY				4.REGION		
- I	A.LAST	OS May OS		6.TYPE OF STORAGE									
<u> </u>	B. THIS	06-May-98		SPECIFIC			Zirconiun	n Ore Piles	111 and 11	1 <b>A</b>			
T E	D. 11110	27-May-99		AREA	DEFO			se 214,Sec					
	UD TITLE O	F PERSON RESPO			Δ1			7A. TEL. NO.			7B. EXTENSION	,	
		ROOKS, DEP							749-5953		1		
FREDER	CIC VV. D	INSPECTION		TOLIN		(Charleen	d complete		ve responses.)		N/A	YES	NO
				of the Trees		<u>, , , , , , , , , , , , , , , , , , , </u>			ve responses.		1071	<del>  `==</del>	
8. STORAG	SE.	A. Storage Facili					Storage Ivia	ııuaı					
·		B. Storage Facili										<del>                                     </del>	
9. MATERIA	<b>AL</b>	A. Material Is St							ionation and C	ion		1 1	
	<del></del>	B. Material is Fro						mmingling, N	ligration and El	rosion.		-	
10. RECOR	RDS	A. Depot Manag				nave been	Posted.	·		· · ·	<u>.</u>	-	
		B. Depot Posting	s indicat	e Last RR	No.				Dated			++	
_					OSR No.				Dated			<b>├</b> ──	
11. UNITS		Quantity indicate										<b> </b>	
12. SECUR	CITY AND	Security and Fire	e Protecti	on are bei	ng provide	ed in acco	rdance with	Quality Ass	urance and Ma	terials		1	
FIRE PROT	TECTION	Inspection Hand	book and	Storage I	Manual Re	quiremen	its.					<u> </u>	
13. CONTA	NNERS,	A. Material is St	ored in Pr	roper Conf	ainers			(Check only	if applicable)			ļ	
PILES (	OR	B. All containers	, Piles ar	nd/or Units	Are Mark	ed as Pre	escribed in	the Storage N	fanual.				
OTHER	R UNITS	C. Condition of	Container	S					(1) CLASS I	(2)	CLASS II	(3) CL/	ASS III
		(Give exact nu	nber in C	lass III un	der remar	ks)			%		%		%
							S. PILES.	OR OTHER	UNITS		N/A		
PRO-	TYP	(Pile, case,		LENGTH		DIAM-	g. V	/EIGHT OF	TOTAL NUM		i. TOTAL	LE	38
GRAM	ingo	ot, bale, etc.)	c.	d.	е.	ETER	UNIT	(1)	UNIT	S	WEIGHT		
	ŀ												
	1												
	<del> </del>												
	<u> </u>												
15. REM/	ARKS (Re	view all other app	ropriate o	uestions o	contained	in "quide	for the insp	ection of stoc	kpiled material	s and stora	ge facilities, " an	d, if	
deficie	encies are	found, give the a	pprpriate	guide nun	nbers and	complete	details in t	his block)					
44		, <b>.</b>		•		-							
SEE	ATTACH	HMENTS											
OLL	ATTACI	INICIATIO											
				·						dial magazi	roe howard the c	cone of	
		ATIONS (Not to b	e constr	ued by sto	rage depo	t or tacilit	y as autnor	zation to prod	seed with feme	uidi ilitasu	res beyond the s	cope of	
usual	authority)												
SEE	ATTAC	HMENTS											
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											non Alitan	į	
											: CO DE199		
17.			DNSC-N			$\succeq$	DNSC-M			$\bowtie$	DNSC-MQNH		
DISTRIB	UTION		DNSC-1	MONH			DNSC-M			Ш	DNSC-MH		
			DNSC-N	MH		<u>[</u>	CONTRA	CTOR			OTHER		
18. NAM	E OF INS	PECTOR	(Type o	r print)		18A. SIG	NATURE		i i	18. DATE	OF SIGNATURE	Ē.	
\/\/illian	n J. Till,	OAS				I V	Jun 1.	1 ill			27-May-99	3	
DLAH FO				-		<del>-</del>	(")	This form	is a computer	generated v	ersion of DLAH		Dec 88

### Continuation DLAH Form 30 DLA/DNSC Depot, New Haven, Indiana Radiological Survey

Report No. 7 Date: 27 May 1999

#### 1.) Purpose:

This report is issued to document the required annual radiological survey at the New Haven Depot, Indiana. Reference: 10 CFR Part 20 subpart F. This facility is listed in Conditions (Item 10) on the Defense Logistics Agency, Defense National Stockpile, Materials License number STC-133, Docket or Reference No. 040-00341. Current Amendment No. 20, expires 31 Oct 99.

#### 2. General:

Ms. Lois Huddlestun, DNSC, Storage Specialist, Radiation Protection Officer (RPO). Mr. Wm J. Till, DNSC, Quality Assurance Specialist, Radiological Safety Officer (RSO).

#### Instrumentation:

#### a.) Survey Instruments:

Instrument Model/Type		Serial No.	Calibration Due
Fag 40 F6		5-0002	-11/13/98 11 1/3/99 W
Emberline Geiger	E-520	3135	4/13/99
Reader Victoreen	357/6V-138 Dosimeter	39403/50793	N/A

All instruments were checked and are in good working condition.

#### b.) Individual Monitoring Devices:

Monitoring Device	No. of Unites	
V-138 Dosimeter	15	
Thermoluminescent Dosimeter	18	
(Film Badges)		

The film badges documented above are on a quarterly rotational program from the UASIRDC, US Army TMDE Activity, Redstone Arsenal, AL. This program provides the submitter with a printout of exposures, as well as, transcribes this information into a permanent database for each individual with a badge submitted. Copies of the printouts are keep in the rolling file cabinet.

#### c.) Source Check: Cs 137

This is not a calibrated source check. Source chip has a serial no. of 951. All other source checks have been returned to DRMO.

#### 4. Disposition of Licensable Commodities:

Ores and concentrates containing uranium and thorium are either stored in Warehouse 214, in various locations in section 3 or outside bulk storage in location piles 111 and 111A. Material is stacked and piled in accordance with DNS regulations and containers meet Class No. 1 specifications of DNSC 8200.9, Part 9, 3-903a.

Attached are three maps that graphically depict both the dispositions of the ore piles and the containerized material stored in the warehouse.

The inventory for radioactive material is available for review and appears to be accurate. Also on file is a listing of the radioactive components by percentage and weight of a particular ore.

The attached pages document the location of the containerized material. Spreadsheets are sorted by warehouse/section/bay. References are made on the accompanying two maps which specifically depict the location of the material. The following list the disposition of the two ore piles included on the applicable licensed material in this report.

Pile Number	Width (ft)	Longth (60)		
111		Length (ft)	Height (ft)	Net lbs.
111A	60	285	25	31,981,398
IIIA	45	100	20	2,783,706 comtaminated
			Total:	34,765,104

The attached map graphically depicts the configuration of these piles.

#### 5. Posting:

A barbed wire fence surrounds the two ore piles. The gate is padlocked as well. Appropriate signs are on all sides of the fence. The warehouse containing the licensed material is in good condition. All entrances into warehouse 214 are locked as well as secured with numbered seals. In compliance with ORPP par. 4.3. NRC form 3 "Notice to Employees" with information denoting the location of the NRC License is posted. Also posted is the Energy Reorganization Act of 1974, Section 206. One copy of each form is posted in the main office area of the administration building.

## 6. Records and Reports

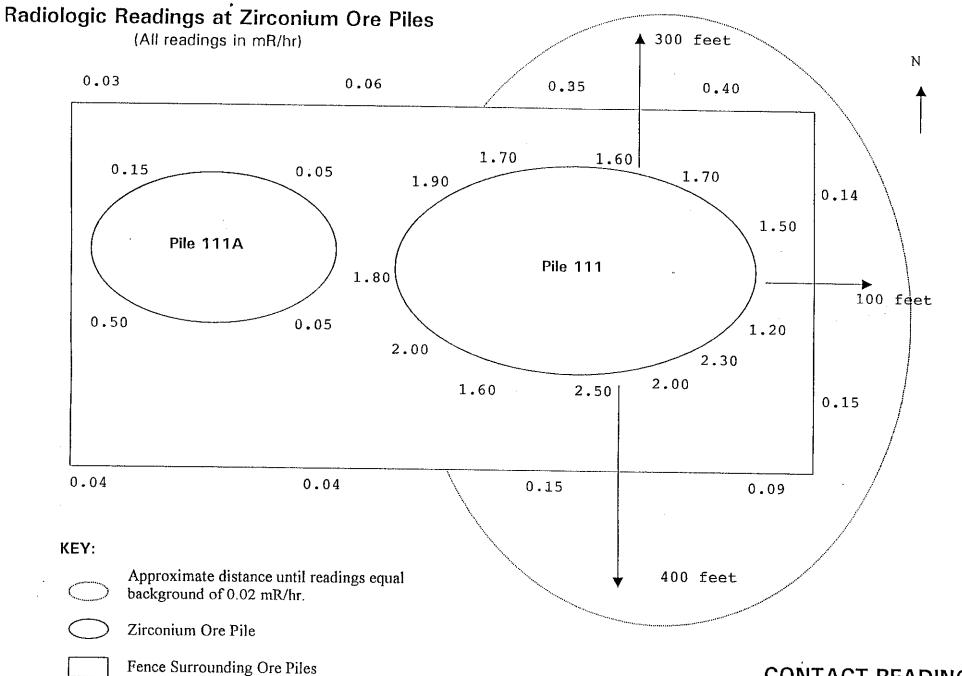
The Radiological Data Handbook (ORPP par. 16.2) is located in a rolling file cabinet. This rolling file is maintained by the Depot RPO and is normally located in the Storage Specialist Office. This book is well maintained and contains all the information necessary for compliance with DNSC-ORPP regulations.

- Documentation for all radiological training received by depot personnel is included in the Radiological Data Handbook.
- b.) Individual exposure records are current and maintained in the rolling file cabinet. The quarterly exposure records are signed by the RPO. Each individual signed the annual exposure records that the information on the results was discussed and correct. Each individual on the program was given copies.
- c.) DD Form 1952's for all depot personnel are recorded in the RPO files. Blocks 11 through 20 have been left blank per DNSC directive.
- d.) In compliance with ORPP par. 4.3. NRC form 3 "Notice to Employees" and the location of the NRC License is posted. Also posted is the Energy Reorganization Act of 1974, Section 206. These forms are posted in the administration building.
- e.) An Occupant Emergency Plan has been established for New Haven Depot. Notification to The New Haven Fire Department and Response Team and dates of meeting here at the facility is on record in the "Radiological Data Handbook". The subject material/commodities for this report is listed under the title of "Hazardous Material Leak/Spill" in the Emergency Plan. A copy of the MSDS's and the commodity location is available in a locks box at the Security Guard Office.
- f.) On file in the "Radiological Data Handbook" are calibration certificates and prior radiological surveys. Also available at this depot are DLAR 1000.28, DLAR 4145.23, 10 CFR 20 & 40, 29 CFR Part 1910 and 49 CFR Parts 171 through 189.

- g.) Records are on file at this depot that documents that the annual physicals have been completed. The results of the physicals are not on file at this depot. Also on file are the respiratory fit testing records for all the personnel that have respirators.
- h.) The decontamination facility is located in warehouse 214, section 1. This facility is equipped with filtered air, showers, wall lockers, restroom facilities, washer and dryer. This area is also used to store protective equipment and protective clothing (tyvek suits, respirators, etc.)
- 5. This survey was conducted in accordance with the Defense National Stockpile Center Occupational Radiation Protection Program guidelines. The instrumentation used was a FAG 40 F6 Dosimeter, referenced in 4.a. above. See attached "Monitoring Radiation Report" for specific survey results and attached Maps for a graphic depiction of the analytic data.
- Conclusion:
- a.) Results of this survey indicate that licensed materials at the New Haven Depot appear to be stored in accordance with applicable regulations.
- b.) All warning signs, labels, markings, placards appear to be properly posted.
- c.) Background was established (excluding the restricted area around the two ore piles 111 &111A) to be 0.02 mR/hr. Exposure levels on the restricted area fence were recorded to be > 0.02 mr./hr. Measurements made in direct contact with the ore piles yielded readings from 0.03 to 3.00 mR/hr. Exposure levels in the controlled areas of warehouse 214, section 3 yielded readings from 0.05 to 0.65 mR/hr.

#### 7. Attachments:

- 1. Radiological Readings at Zirconium Ore Pile
- 2. Monitoring Radiation Report (for outside storage)
- 3. Monitoring Radiation Report (for inside storage)
- 4. Readings Taken In Contact With Material
- 5. Readings Taken One Foot Away From Material
- 6. Readings Taken At Warehouse Exit Doors
- 7. Accountability Of Tantalum In Storage (pages 1-4)



**CONTACT READINGS** 

# MONITORING RADIATION REPORT

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141	VII	$\cdot \cdot \cdot$	ıv

Bill Till

Date:

27 May 99

( See para. 4 of attached report )

Report No.:

7

Time	Location	Object or Person Monitored	Instrument Used	Shield	Distance	Range	Reading	Dose Rate	T
N/A	Pile 111	Zirconium Ore Pile	FAG Meter	N/A	contact		1.70-3.00 mR/hr	1.70-3.00 mR/hr	
11	Pile 111A	Zirconium Ore Pile	FAG Meter	N/A	contact		0.03-2.20 mR/hr	0.03-2.20 mR/hr	
0		Fence surrounding piles			contact		0.02-0.28 mR/hr		
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## MONITORING RADIATION REPORT

Monitors: Bill Till

( See para. 4 of attached report )

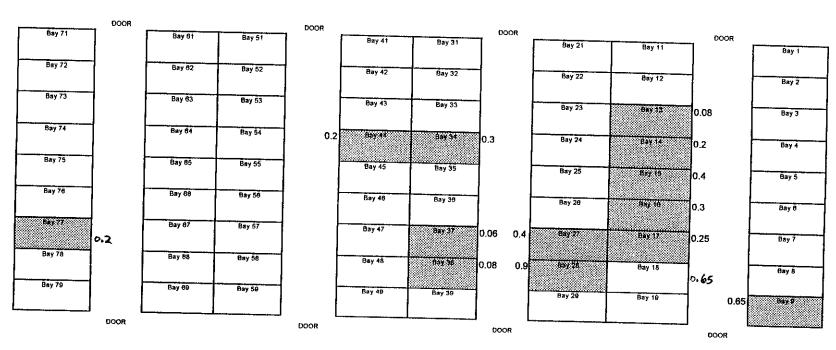
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Report No.: 7

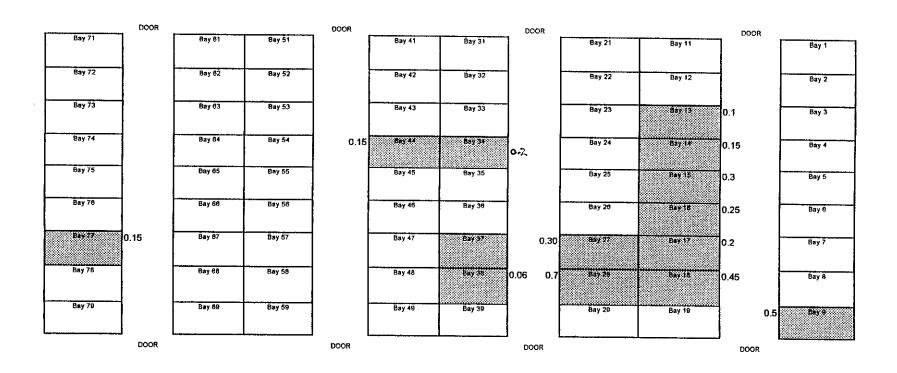
Date: 27-May-99

							>IIIIVIII	***************************************
Time	Whse 214	Object or Person Monitored	Instrument Use	Shield	Distance	Range	Reading	Dose Rate
N/A	Section 3	Inside Storage	Radiation Meter	N/A	Contact		0.2	0.2
	Bay 77	Columbium Tantalum	FAG		1 foot		0.15	0.15
N/A	Section 3	Inside Storage	Radiation Meter	N/A	Contact	- <del>-</del>	0.2	0.2
	Bay 44	Columbium Tantalum	FAG		1 foot		0.15	0.15
N/A	Section 3	Inside Storage	Radiation Meter	N/A	Contact		0.3	0.3
	Bay 34	Columbium Tantalum	FAG		1 foot		0.2	0.2
N/A	Section 3	Inside Storage	Radiation Meter	N/A	Contact		0.06	0.06
	Bay 37	Columbium Tantalum	FAG		1 foot		0.05	0.05
N/A	Section 3	Inside Storage	Radiation Meter	N/A	Contact		0.08	0.08
1 47, 1	Bay 38	Columbium Tantalum	FAG		1 foot		0.06	0.06
N/A	Section 3	Inside Storage	Radiation Meter	N/A	Contact		0.4	0.4
1407.	Bay 27	Columbium Tantalum	FAG		1 foot		0.3	0.3
N/A	Section 3	Inside Storage	Radiation Meter	N/A	Contact		0.9	0.9
	Bay 28	Columbium Tantalum	FAG		1 foot		0.7	0.7
N/A	Section 3	Inside Storage	Radiation Meter	N/A	Contact		0.08	0.08
	Bay 13	Columbium Tantalum	FAG		1 foot		0.1	0.1
N/A	Section 3	Inside Storage	Radiation Meter	N/A	Contact		0.2	0.2
	Bay 14	Columbium Tantalum	FAG		1 foot		0.15	0.15
N/A	Section 3	Inside Storage	Radiation Meter	N/A	Contact	:	0.4	0.4
	Bay 15	Columbium Tantalum	FAG		1 foot		0.3	0.3
N/A	Section 3	Inside Storage	Radiation Meter	N/A	Contact		0.3	0.3
1	Bay 16	Columbium Tantalum	FAG		1 foot		0.25	0.25
N/A	Section 3	Inside Storage	Radiation Meter	N/A	Contact		0.25	0.25
	Bay 17	Columbium Tantalum	FAG		1 foot		0.2	0.2
N/A	Section 3	Inside Storage	Radiation Meter	N/A	Contact		0.65	0.65
	Bay 18	Columbium Tantalum	FAG		1 foot		0.45	0.45
N/A	Section 3	Inside Storage	Radiation Meter	N/A	Contact		0.65	0.65
	Bay 9	Columbium Tantalum	FAG		1 foot		0.5	0.5
N/A	Section 3	Doors-N 9,N10,S 9	Radiation Meter	N/A	Contact		0.04	0.04
		Doors-N11,N12,S10,S11,S	FAG		Contact		0.02	0.02

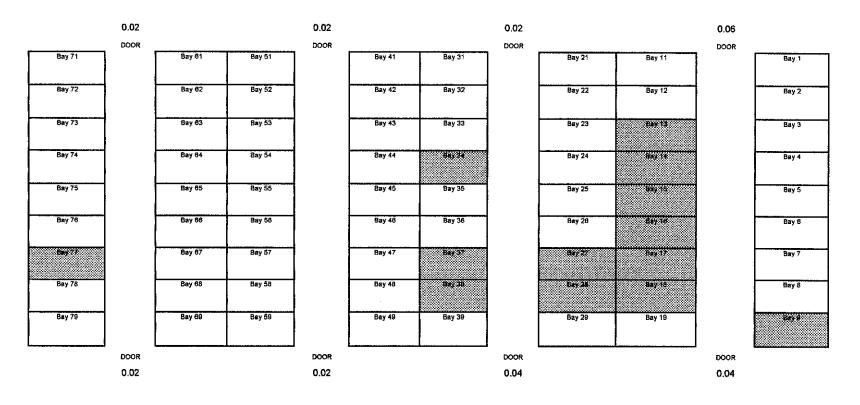
# READINGS TAKEN IN CONTACT WITH MATERIAL (All readings in mR/hr) WAREHOUSE 214, SECTION 3



# READINGS TAKEN ONE FOOT AWAY FROM MATERIAL (All readings in mR/hr) WAREHOUSE 214, SECTION 3



# READINGS TAKEN AT WAREHOUSE EXIT DOORS (Readings in mR/hr) WAREHOUSE 214, SECTION 3



TAM	1														Printed: 5/11/99	)
155	COMMODITY Tantalite	TYPE	ORIGIN	GRADE	MIF Lot#	DRUM LOT	LOT#	INU YTENAUD	RR#	WHSE	070					
155	Tentalite Ore Concentrates	Natural Min,			001		1	3 Drums	6614	214	SEC	BAY ROY		CONTRACT #		
155	Tanialite	Natural Min. Natural Min.			001		1	13 Drums	7970	214		44 2, ST		GS-OOP-1099-1 (SCM)		
155	Tantaite	Nettral Min.	Swedish Swedish		001		1	13 Drums	8064	214	3	44 2.ST		GS-OOP-3902-1F (SCM) GS-OOP-3972 (SCM) 1F		
155	Columbium Tentalum Source Material	Terrisium Neiural Minerals	3460311	·	001		!	4 Drums	8065	214	3	44 2, ST		GS-OOP-3972 (SCM) 1F		
155	Tantalite Ore	Natural Min.	Nigerlan		001		,	10 Drums	18984-A	214	3	15	3,000	Transfer Special Project FJO-935	<del></del>	
155	Columbium Tanialum Source Meterial	Tantalum Natural Minerals	Brazillan		012		12	9 Drums	6701	214	3	44 2, ST	-6 2,25	GS-OOP-949-1F (SCM)	<del> </del>	
155	Columbium Tentalum Source Materiel Columbium Tentalum Source Materiel	Famelum Natural Minerals	Brezilları		013		13	16 Drums	19104 19105	214	3	16	4,379	Transfer Special Project F3O-935		
155	Columbium Tantalum Source Material	Tentatum Natural Minerals Tentelum Natural Minerals	Brezillen		015		15	7 Drums	19106	214	3	16 16	7,665	Transfer Special Project FJO-935		
155	Columbium Tentelum Source Material	Tenistan Natural Minerals	Brazilan Brazilan		020		20	13 Drums	19107	214	3	16	5,280	Transfer Special Project FJO-935 Transfer Special Project FJO-935		
155	Columbium Tentelum Source Meterial	Tentalum Natural Minarals	Brazillan	·	021 022		21	5 Drums	19108	214	3	16	2,176	Transfer Special Project FJO-935		
155	Columbium Tantalum Source Material	Tenlatum Natural Minarals	Brazillan		022		22 23	5 Drums	19109	214	3	16	2,153	Transfer Special Project FJO-935		
155	Columbium Tarrisium Source Material	Taniaium Nalurai Minerais	Brazillen		024	<del></del>	23 24	5 Drums	19110	214	3	9		Transfer Special Project FJQ-935	<del></del>	
155	Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazillan		025		25	5 Drums 5 Drums	19111	214	3	9	2,200			"
155 155	Columbium Tantalum Source Material Columbium Tantalum Source Material	Tantalum Naturel Minerals	Brazilian		026	-	26	5 Drums	19113	214	3	16	2,202			
155	Territaille Concentrates	Tantalum Natural Minerals	Brezilen		030		30	34 Drums	19114	214	3	16	2,184	Transfer Special Project FJO-935 Transfer Special Project FJO-935		
155	Tantelle Concentrales	Natural Min. Natural Min.			059		59	8 Orums	8476	214		44 1, ST 1	-6 2 157	GS-OOP-10224(SCM)-1F		J
155	Tentelite	Natural Min.	Brazillan		060		60	8 Drums	8476	214		44 1, ST 1		GS-00P-10224(SCM)-1F	·	
155	Tentalite	Netural Min.	Brazilian		105		105	8 Drums	6591	214	3	44 2, ST 1	-6 2,192	GS-OOP-2923-1 (SCM)		
155	Cotumbium Tenletum Source Melariel	Tentatum Natural Minerals	Belgian		107		106 107	15 Drums	6591	214		44 1, ST 1	-6 4,265	GS-OOP-2923-1 (SCM)		<del></del>
155	Tarialto	Natural Min.	Brazillan		108		108	10 Drums 24 Drums	19115-A 6910	214		16	3,831			
155	Columbium Tardalum Source Material Columbium Tardalum Source Material	Tardelum Nelural Minerals			111		111	10 Drums	19362	214		44 1, ST 1 18 4, St 1		GS-OOP-2923-2F (SCM)		
155	Columbium Farratum Source Material Columbium Farratum Source Material	Tantalum Natural Minerals			111		111	10 Drums	19362	214		18 4, St 1		Relocation Project DMO-00001 Relocation Project DMO-00001		
155	Columbium Tentalum Source Malerial	Tentalum Naturat Minerals Tentalum Naturat Minerals			111		111	10 Drums	19362	214		18 4,511		Relocation Project DMO-00001		<del> </del>
155	Columbium Tentalum Source Material	Terintum Natural Minerals		·	111		111	4 Drums	19362	214	3	18 4, 51 1		Relocation Project DMO-00001	<del></del>	<del> </del>
155	Columbium Tentalum Source Malerial	Tentatum Natural Minerals	····	<del></del>	111		111 111	10 Orums	19364	214	3	18 4. SI 1	6,566	Relocation Project DMO-00001	<del></del>	
155	Columbium Terdalum Source Material	Tantalum Natural Minerals			111		111 111	16 Drums 35 Drums	19362	214	3	18 4, St 1	5 10,635	Relocation Profect DMO-00001		
155 155	Columbium Tantalum Source Material	Tantelum Natural Minerals			111	1107	111	3 Drums	19364 19362	214		18 4, St 1 18 4, St 1	5 22,988	Relocation Project DMO-00001		1
155	Columbium Tardalum Source Material Tardalle	Tantelum Neturel Minerals			111		111-Sweepings	2 Sweeping		214		18 4, St 1- 18 4, St 1-		Relocation Project DMO-00001	50 Gel Drums	1107 (569
155	Terrisite	Neteral Min. Neteral Min.	9razilen -		118		118	31 Drums	6910	214		14 1, ST 1		GS-OOP-2923-2F (SCM)		
155	Terrisitte	Natural Min.	Belglan	<del></del>	297 053		207	7 Orums	7681	214		4 1,ST1		GS-OOP-3927-1-Final	·	
155	Columbium-Tentalum Ore	Tantelum Source Material	Orttish		105		1053 1105	22 Drums	10998	214		44 2, ST 1		GS-OOP-10045(SCM)-1-Final		
155	Columbium Tentalum Oce	Tantalum Source Majorie!	S. Rhodestan		138		1139	43 Bags 16 Bags	122940	214		14	3,098			
155	Columbium Tentalum Ore Columbium Tentalum Ore	Tantalum Source Material	Australian		140		1140	153 Bags	12427D 12344 (D)	214		14	2.215			
155	Columbium-Tentalum Ore	Tentahm Source Material	Brazilien		146		1146	40 Bags	12421D	214		14	9,379			
155	Columbium Tardalum Ore	Tanfalum Source Material Columbium Tantelum	Brazilian		147		1147	113 Bags	12287D	214		14	9,915	GS-OOP (D) 18002		
155	Tarkalka	Natural Mia.	English Maleyan		165		1165	11 Drunts	17163	214		14		GS-OOP-10717(SCM)	<del></del>	<del> </del>
	Tentaite	Netural Min.	Austrellen		272 329		2272	8 Drums	6728	214		4 2, ST 1	6 2,026	GS-OOP-3148-1F		
	Columbium Tentalum Source Material	Tentalum Naturat Minerals			001	1106-1	2329 001060001	3 Drums 10 Drums	7224	214		4 2, ST 1		GS-OOP-3508-1F (SCM)		1
	Columbium Tentalum Source Meterial	Tentakon Natural Minerals			092	1106-2	001060002	13 Orums	19364	214		0 1, ST 3	6,640	Relocation Project OMO-00001	55 Gai Drums	<u> </u>
	Columbium Tenlatum Source Material Columbium Tenlatum Source Material	Tenlatum Naturel Minerals			005	1106-5	001060905	18 Drums	19364	214		B 2, ST 6	2 41.014	Relocation Project DMO-00001 Relocation Project DMO-00001	30 Gal Drums	
155	Columbium Terrialum Source Meterial	Tamatum Natural Minerals Tentalum Natural Minerals			013	913	11080013	10 Drums	19363	214		8 2,ST2	3 5,364	Relocation Project DMO-00001	30 Gal Drums	<b>├</b>
	Columbium Tentelum Source Material	Tentalum Natural Minerals			014 001	014	11080014	10 Drums	19363	214	3	8 2, ST 3		Relocation Project DMO-00001	30 Gal Drums	<del> </del>
	Columbium Tentalum Source Meterial	Tantalum Natural Minerals			533	1162	0011620001 0021671533	7 Drums	19372	214		7 4	4,379	Relocation Project DMO-00001	15 Gel Drums	1
	Columbium Tenlakum Source Malerial	Tenisken Natural Minerals			001	2198	0021980001	3 Drums 4 Drums	19371	214		4 4, ST 1-	3 1,762	Relocation Project DMO-00001	Kegs	2
	Columbium Tentatum Source Meterial Columbium Tentatum Source Meterial	Tardalum Natural Minerals			574	2574	0782362574	5 Drunis	19369			8 1,ST 2 8 1,ST 2		Relocation Project DMO-00001	15 Gal Drums	2198-1
	Columbium Terdelum Source Material	Tentalum Natural Minerals			678	2678	0782362678	4 Drums	19368	214		8 1, ST 2 8 1, ST 2		Refocation Project DMO-00001	15 Gal Drums	2
	Columbium Tarsaium Source Material	Tantalum Natural Minerals Tantalum Natural Minerals			OOE	1107E	0010700E	5 Drums	19362	214		0 1,ST 1		Relocation Project DMO-00001 Relocation Project DMO-00001	16 Gal Drums 55 Gal Drums	1107000
155	Columbium Terselum Source Material	Tantalum Natural Minerals			00D 00F	11035	0011070000	2 Drums	19362	214	3 ;	4 4, ST 1-	3 1,032	Relocation Project DMO-00001	55 Gal Drums	110700E 11071
155	Columbium Tardalum Source Material	Tartalum Natural Minerals			00G	1107F 1107G	001107000F 001107000G	B Drums	19362			8 1.ST4	3,781	Relocation Project DMO-00001	55 Gel Drums	11031
	Columbium Terrialum Source Material	Tantelum Natural Minerals			569	11013	1107(569)	13 Drums	19362 19362			B 1, ST 4.	B,674	Relocation Project DMO-00001	55 Gal Drums	
	entelle Centelle	Netural Min.			53A		1053A	8 Drums	10996	214		8 1, ST 1 4 2, ST 1		Relocation Project DMO-00001		
	Cotambium Tantatum Source Majerial	Natural Min.			539		1053B	8 Drums	10998			4 2, ST 1- 4 2, ST 1-		GS-OOP-10045(SCM)-1-Finel GS-OOP-10045(SCM)-1-Finel		L
	Columbium Taniatum Ore	Tenfatum Netwal Minerats Tenfatum Source Material	Brezilien		AGO	1116	1116000A	9 Drums	19367	214		6 2, ST 4		Relocation Project DMO-00001	50 Gel Drums	<del>  ,</del>
155	Columbium Tentalum Ore	Tentalum Source Material	Brazillen		46A 46B		1146A	40 Bags	124210		3 '	4	4,326	GS-OOP-(D) 18002	SS S= Diumis	<u>-</u>
	Columbium Tantalum Ore	Tenfalum Source Material	Brezilan		46C		1146B 1146C	40 Bags 40 Bags	12421D			4	4,404	GS-OOP-(D) 18002		
	Columbium Tarstalum Ore	Tantalum Source Material	Brazillan		46D		1146D	40 Bags	12421D 12421D			4	4,395	GS-OOP-(D) 18002		
	Columbium Taniahm Ore	Tantalum Source Material	Brazilan		46E		1146E	50 Bags	12421D			4		GS-OOP-(D) 18002 GS-OOP-(D) 18002		
	Columbium Tantalum Ore	Tantalum Source Melariel	Brazilen		46F		1146F	50 Begs	12421D			-		GS-OOP-(0) 18002	<del> </del>	<b> </b>
	Columbium Tentalum Ore Concentrates	Fantalum Source Malerial Tantalke	Braxillan		46G		1146G	60 Bags	12421D			4		GS-OOP-(D) 18002	<del></del>	
155	antalte	Natural Min.	Belgian Belgian		99A 99B	-	199-A	12 Drums	7269	214	3 4	4 2,511-	3,325	GS-DOP-3774(SCM)-1-F	·	<del> </del>
	erialis	Naturat Min.	Belgian		99C		199-B 199-C	29 Drums 22 Drums	7289			4 2, ST 1-		9S-00P-3774(SCM)-1-F		
	arriallia	Natural Min,	Belgian		990		199-D	11 Drums	7289 7289			4 2, ST 1-		GS-00P-3774(SCM)-1-F		
	Columbium Tentelum Source Meterial	Tantalum Natural Minerals			A+2		1A&2	3 Drums	18985-A			4 2, ST 1-4		GS-OOP-3774(SCM)-1-F		
	diumbium Teniatum Source Meterial antalite	Tentatum Natural Minerals			113		63/113	38 Drums	19122	214				Transfer Special Project FJO-935 Transfer Special Project FJO-935		
	arrialite Concentrates	Natural Mio.	Belgian		52A		A-DMS-123	31 Drums	6480			2, ST 1-0	8 553	GS-OOP-2427-1(F) SCM		<u> </u>
	entalle	Natural Min.	Brazillen		OAS		AS	4 Drums	8476	214		2, ST 1-1		GS-OOP-10224(SCM)-1F	<del></del>	
55 1	anta)če	Natural Min.	Beigian Beigian		528 52C		B-DMS-81	14 Drums	6480		3 4	2, ST 1-1	3,685	GS-OOP-2427-1(F) SCM		
55 1	ante/ite	Natural Min,	Delgial)		01F		C-DMS-C-1 DMS-137	21 Drums	6480			2, ST 1-0	5,670	GS-OOP-2427-1(F) SCM		
	ardalle	Natural Min.	Beiglen		138		DMS-138	50 Drums 52 Drums	5981 5903			1, ST 1-6		GS-DOP-1319-1F SCM		
	artelle Concentrates	Natural Min.			03B		DMS-203-B	9 Drums	7290			1, ST 1-6		GS-OOP-1526-1F SCM		
	olumblum Tantaium Ore	Tardalile	Belgian		206		DMS-206	30 Drums	7628			1, ST 1-6		GS-00P-3793(SCM)-1-F GS-00P-3922(SCM)-1-F		
<del></del>	, antelum Ole	Tentelte	Belgian		216		DMS-216	13 Drums	7707	<del> </del>		1, ST 1-6		GS-OOP-3963(SCM)1-F		
	•		-									1,0,10	3,023			

т сомморту	TYPE	ORIGIN GRADE	MIF Lot #   DRUM LOT	1074	AUADOWY I INTE	65 4 Liv	uen Cero T	DAY DAW	1 11		
				LOT#	QUANTITY UNIT		HSE BEC	BAY ROW	NET WT.	CONTRACT #	
5 Cotumbium Tantelum Source Meterial	Tentalum Natural Minerals	Belglan	809	GEO-809	98 Drums		214 3	16		Transfer Special Project FJO-935	
3 Columbium Tantalum Source Malerial	Tamajum Natural Minerals	Belgian	22C	GEO-822C	13 Drums		214 3	15	2,443	Transfer Special Project FJO-935	
5 Columbium Tantalum Source Material	Tanisium Natural Minerals	Beiglan	831	GEO-831	15 Drums	19063 2	214 3	15	3,007	Transfer Special Project FJO-935	
5 Columbium Terrialium Source Material	Tanielum Naturei Minerals	Belgian	832	GEO-832	16 Drums	19064	214 3	15	3,090	Transfer Special Project FJO-935	
5 Tankelite	Tentetum Net, Min.		104 MGK-104	MGK-104	22 Soxes	11149 2	214 3	37 4	1,991	GS-OOP-10047(SCM)-1F	
5 Tantelite	Tamelum Nat. Min.		108 MGK-108	MGK-108	14 Drums	11149 2	214 3	37 4	3,660	GS-OOP-10047(SCM)-1F	
5 Tantalite	Tantalum Nai, Min.		110 MGK-110	MGK-110	8 Drums	11149	214 3	37 4		GS-OOP-10047(SCM)-1F	
5 Yantaille	Tantalum Nat. Min.		112 MGK-112	MGK-112	15 Boxes	11149 3	214 3	37 4		GS-OOP-10047(SCM)-1F	
5 Columbium Tentalum Source Material	Tantetum Natural Minerals	Rhodesleri	100	MRC-108	11 Drums	18986	214 3	15		Transfer Special Project FJO-935	
5 Columbium Tantalum Source Maierial	Tarrialum Natural Minerals	Brazilian	113	MRC-113	23 Drums		214 3	16		Trensfer Special Project FJO-935	
5 Columbium Tardalum Source Malerial	Tantalum Natural Minerals	9razillen .	117	MRC-117	8 Drams		214 3	15		Transfer Special Project FJO-935	
5 Columbium Tardalum Source Material	Tentelum Natural Minerals	Belgian	126	MRC-126	11 Drums		214 3	15		Trensfer Special Project FJO-935	
6 Columbium Terrialum Source Material	Terrialum Netural Minerals	Brezillen	129	MRC-129	22 Drums		214 3	15	6,424	Transfer Special Project FJO-935	<del></del>
5 Columbium Tantalum Source Material	Tantalum Natural Minerals	Brezillen	138	MRC-138	10 Drums		214 3	16	2,853	Transfer Special Project FJO-935	
5 Columbium Tantalum Source Material	Terrisium Natural Minerals	Brazillen	139	MRC-139	6 Drums		214 3	15			
			144						1,595	Transfer Special Project FJO-935	
5 Columbium Tamletum Source Material	Tentalum Netural Minerals	Nigerian		MRC-144	5 Drums		214 3	15		Transfer Special Project FJO-935	
5 Columbium Tanielum Source Material	Tantelum Natural Minerals	Australian	150	MRC-150	5 Drums		214 3	15	1,282	Transfer Special Project FJO-935	
5 Columbium Tantalum Source Material	Tantelum Naturel Minerals	Belgian	151	MRC-151	6 Drums		214 3	15		Transfer Special Project FJO-935	
5 Columbium Tentalum Source Material	Tantakon Natural Minerala	Australian	153	MRC-153	1 Drum		214 3	15		Transfer Special Project FJO-935	
5 Columbium Terrielum Source Material	Tarxalum Natural Minerals	Rhodesian	162	MRC-162	10 Drums	19003	214 3	15	2,026	Transfer Special Project FJO-935	
5 Columbium Tentalum Source Material	Fanteken Natural Minerals	Niberian	164	MRC-154	2 Orums	19004	214 3	15	486	Transfer Special Project FJO-935	
5 Columbium Tantalum Source Malerial	Tantalum Natural Minerala	Belgian	166	MRC-166	15 Orums	19005	214 3	15	3,053	Transfer Special Project FJO-935	
5 Columbium Ferdalum Source Meterial	Tantalum Natural Minerals	Brazillen	173	MRC-173	11 Drums	19010 :	214 3	15	2,200	Transfer Special Project FJO-935	
5 Columbium Tantalum Source Malerial	Tantalum Natural Minerals	Brazillan	174	MRC-174	11 Drums		214 3	15		Transfer Special Project FJO-935	
5 Cotambium Tarstalum Source Meterial	Tentalum Natural Minerals	Brazillan	175	MRC-175	8 Drums		214 3	15		Transfer Special Project FJO-935	
5 Columbium Tanialum Source Material	Tenlalum Natural Minerals	Brazillen	176	MRC-176	11 Drums		214 3	15		Transfer Special Project FJO-935	<del></del>
5 Columbium Tantelum Source Material	Tanialum Natural Minerals	Brazillan	177	MRC-177	11 Drums		214 3	15		Trensfer Special Project FJO-935	<del> </del>
			178							Transfer Special Project FJO-935	
5 Columbium Tantalum Source Material	Tentalum Natural Minerals	Brezillen:		MRC 178	51 Drums			15			
5 Columbium Tantefum Source Material	Tentalum Natural Minerals		179	MRC-179	8 Drums		214 3	18		Transfer Special Project FJO-935	
5 Columbium Tarifalum Source Meterial	Temisium Natural Minerals	<del> </del>	180	MRC-180	11 Drums		214 3	15		Transfer Special Project FJO-935	
5 Columbian Tentatum Source Material	Tentalum Natural Minerals	4	183	MRC-183	8 Drives		214 3	16		Transfer Special Project FJO-935	
5 Columbium Tantalum Source Material	Tanishm Natural Minerals	Brezillan	186	MRC-186	12 Drums		214 3	15	2,443	Transfer Special Project FJO-935	
5 Columbium Tentalum Source Material	Tanielum Natural Minerals	Brazillan	187	MRC-187	11 Drums	19025	214 3	9	2,201	Transfer Special Project FJO-935	
i5 Columbium Terrielum Source Material	Fantakım Natural Minerals	Brazillan	189	MRC-189	11 Ditems	19073	214 3	15	2,280	Transfer Special Project FJO-935	
i5 Columbium Terrialum Source Material	Tentatum Natural Minerals	Brazillan	190	MRC-190	8 Drums	18991	214 3	15	2,197	Transfer Special Project FJO-935	
5 Columbium Terrisium Source Material	Tentalum Natural Minerals	Brazilan	193	MRC-193	10 Drums	19006	214 3	15		Transfer Special Project FJO-935	
5 Columbium Tentatum Source Material	Tarrietum Neiural Minerals	Breztian	195	MRC-195	8 Drums	19007	214 3	15		Transfer Special Project FJO-935	
i5 Columbium Tentelum Source Majerial	Tenteium Natural Minerals	Brazilları	196	MRC-196	8 Drums		214 3	16		Transfer Special Project FJO-935	
i5 Columbium Tentelum Source Material	Tardelum Natural Minerals	Brazilian	199	MRC-199	7 Drums		214 3	15		Transfer Special Project FJO-935	
55 Calimbium Tentelum Source Material	Tantetum Natural Minerals	Brezifien	206	MRC-206	8 Drums		214 3	15		Transfer Special Project FJO-935	
i5 Columbium Tantalum Source Material	Tarrialum Natural Minerals	Salt Lake City	213	MRC-213	13 Drums		214 3	15		Transfer Special Project FJO-935	
55 Cotumbium Tentalum Source Malerial	Tantalum Natural Minerals	Brazillen	216	MRC-216	22 Drums		214 3	15		Transfer Special Project FJQ-935	
5 Columbium Tantelum Source Material	Tartelum Natural Minerals	Brazilian	217	MRC-217	22 Drums		214 3	15		Transfer Special Project FJO-935	
			218	MRC-218	22 Drums		214 3	15		Transfer Special Project FJO-935	
15 Columbium Tardalum Source Material 15 Columbium Tardalum Source Material	Tantalum Natural Minerals	Brazillen Brazillen	219	MRC-219	22 Drums		214 3	15		Transfer Special Project FJO-935	
	Tentatum Natural Minerals		222	MRC-222	22 Drums		214 3	15			
55 Columbium Tantalum Source Material	Tenfalum Natural Minerals	Brazilien								Transfer Special Project FJO-935	
55 Columbiam Tantalum Source Material	Tantalum Netural Minerals	- Brazillan	223	MRC-223	22 Drums		214 3	15		Transfer Special Project FJO-935	
35 Columbium Terrieken Source Material	Temelum Natural Minerals	Orazillan	224	MRC-224	15 Drums		214 3	15		Transfer Special Project FJO-935	
55 Columbium Terrisium Source Material	Tanialum Natural Minerals	Brazillen	226	MRC-226	9 Drums		214 3	16		Transfer Special Project FJO-935	
55 Columbium Tentelum Source Material	Tamistum Netural Minerals	Brazillan	227	MRC-227	15 Drums		214 3	16		Transfer Special Project FJO-935	
55 Columbium Tentelium Source Material	Fantekan Natural Minerals	Brazilian	228	MRC-228	10 Drums		214 3	16		Transfer Special Project FJO-935	
55 Columbium Tanteium Source Material	Tantalum Natural Minerals	Reigian	229	MRC-229	11 Drums	19031	214 3	9	2,218	Transfer Special Project FJO-935	
55 Columbium Tentalum Source Material	Tantalum Natural Minerals	Brazilien	238	MRC-238	8 Drums	19032-A	214 3	15	2,177	Transfer Special Project FJO-935	
55 Columbium Tentalum Source Material	Tantalum Natural Minerals	Brezillen	239	MRC-239	6 Drums	19033	214 3	15	2,192	Transfer Special Project FJO-935	
55 Columbium Terrialum Source Melerial	Tamaium Natural Minerals	Brazillen	243	MRC-243	15 Drums		214 3	16		Transfer Special Project FJO-935	
55 Columbium Tantalum Source Material	Terrisium Natural Minerals	1	244	MRC-244	21 Опила	19034	214 3	16		Transfer Special Project FJO-935	
55 Columbium Tentalum Source Material	Tantelum Neiural Minerals	Brezillan	245	MRC-245	15 Drums		214 3	15		Transfer Special Project FJO-935	
55 Columbium Tantalum Source Material	Tantelum Natural Minerals	Brezillen	246	MRC-246	12 Drums		214 3	16		Transfer Special Project FJO-935	
55 Columbium Tentelum Source Material	Tardelum Naturel Minerals	Nigerten	247	MRC-247	4 Orums		214 3	15	843		<del></del>
55 Columbian Tentalum Source Material	Terrialum Natural Minerals	Australian	251	MRC-251	12 Drums		214 3	15		Transfer Special Project FJO-935	
		Rhodesian	254	MRC-254	7 Drums		214 3	15		Transfer Special Project FJO-935	
	Terdelum Natural Minerals						214 3	16		Transfer Special Project FJO-935	
55 Columbium Tarkalum Source Material	Tantalum Natural Minerals	(Brazilları	256	MRC-266	9 Drums						
55 Columbium Terrisium Source Material	Tantalum Natural Minerals	Brazilien	259	MRC-259	11 Drums		214 3	15		Transfer Special Project FJO-935	
55 Columbium Tentalum Source Material	Tentetum Natural Minerals	Brezillan	260	MRC-260	8 Drums		214 3	15		Transfer Special Project FJO-935 Transfer Special Project FJO-935	
55 Columbium Tentelum Source Material	Tantetum Naturel Minarals	Brezillen	261	MRC-261	8 Drums		214 3	15			
55 Columbium Tarifalum Source Malerial	Tardalum Natural Minerals	Breziten	263	MRC-263	15 Drums		214 3	15		Transfer Special Project FJO-935	
55 Columbium Tarstalum Source Malasial	Tardalum Natural Minerals	Brezilien	284	MRC-264	9 Drums		214 3	9		Transfer Special Project FJO-935	
55 Columbium Tantelum Source Meterial	Tantelum Naturel Minerals		265	MRC-265	22 Drums		214 3	15		Transfer Special Project FJO-935	
55 Columbium Tarristum Source Material	Tantelum Natural Minerals	Brazilan	266	MRC-266	22 Drums		214 3	15		Transfer Special Project FJO-935	
55 Columbium Tantalum Source Malerial	Tentalum Natural Minerals	Brazilien	267	MRC-267	15 Drums		214 3	15		Transfer Special Project FJO-935	
55 Columbium Tantalum Source Meterial	Tentalum Natural Minerals	Brezilien	268	MRC-268	15 Drums		214 3	15		Transfer Special Project FJO-935	
55 Columbium Tantalum Source Material	Tentalum Natural Minerals	Brazillen	269	MRC-269	22 Drums		214 3	15		Transfer Special Project FJO-935	
55 Columbium Tarsalum Source Meterial	Tantalum Natural Minerals	Brazillan	270	MRC-270	16 Drums	19048	214 3	15		Transfer Special Project FJO-935	
55 Cokinblum Tentalum Source Material	Tentalum Natural Minerals	Brazillen	271	MRC-271	22 Drums		214 3	15		Transfer Special Project FJO-935	
55 Columbium Terrialum Source Material	Tenfelum Natural Minerals	Nigerian	272	MRC-272	7 Drums		214 3	9		Transfer Special Project FJO-935	
	Tentsium Netural Minerals		273	MRC-273	2 Drums		214 3	15		Transfer Special Project FJO-935	
	Tarristum Natural Minerals	Nigerian Ugendan	274	MRC-274	2 Drums		214 3	15		Transfer Special Project FJO-935	
55 Columbium Tardalum Source Material		Ugandan	275	MRC-275	3 Drums		214 3	15		Trensfer Special Project FJO-935	
55 . Columbium Tanietum Source Material	Tanisium Netural Minerals				10 Drums		214 3	15		Transfer Special Project FJO-935	
55 Columbium Tamleium Source Material	Tenistum Natural Minerals	Brazillan	276	MRC-276						Transfer Special Project FJO-935	
55 Columbium Tentaham Source Material	Taniatum Netural Minerals	Nigerian	277	MRC-277	3 Drums		214 3	16			
55 Columbium Teritalum Source Material	Tantaium Naturai Minerals	Brezillen	278	MRC-278	22 Drums		214 3	15		Transfer Special Project FJO-935	
55 Columbium Terrielum Source Material	Tentetum Natural Minerals	- Erazilen	279	MRC-279	15 Drums		214 3	16		Transfer Special Project FJO-935	
55 Columbium Tantalum Source Material	Terrialum Netural Minerals	Nigerian	282	MRC-282	3 Drums	19010	214 3	15	739	Transfer Special Project FJO-935	
			,			,					

AAT COMMODITY															Printed: 5/11/9	99
55 Columbium Terrisium Source Malerial	TYPE	ORIGIN	GRADE	MIF Lot#	DRUM LOT	LOT#	QUANTITY UNIT	RR#	WHS	m ( ==						
55 Columbium Tantalum Source Material	Tentalum Natural Minerals	Nigerian		283		MRC-263	4 Drums	19051	214			ROW	NET WT.	CONTRACT #		
55 Columbium Tantalum Source Meterial	Tamaium Natural Minerals	Nigerian		284		MRC-284	7 Drums	18995	214		16		1,04			
55 Columbium Tantalum Source Material	Tentalum Natural Minerals	Nigerian		285		MRC-285	3 Drums	19089	214				1,93			
55 Columbium Tentalum Source Malerial	Tentalum Natural Minerals Tentalum Natural Minerals	Belgian	<del></del>	290		MRC-290	5 Drums	19090	214		16		731			
55 Columbium Tantalum Source Material	Tartalum Natural Minarals	Belgian		291		MRC-291-	18 Drums	19011	214		16		1,06			
55 Columbium Tentatum Source Material	Tentalum Natural Minerals	Beiglan		295		MRC-295	12 Drums	19052	214		15		3,54 2,400			
55 Columbium Tantalum Source Material	Tentelum Natural Minerals	Belgian Belgian	·	296		MRC-296	7 Drums	19053	214		15		1,369			
55 Columbium Fantalum Source Material	Tanialum Natural Minerals	Austrellan	<del></del>	297	<del></del>	MRC-297	7 Drums	19054	214		9			Transfer Special Project FJO-935		
55 Columbium Tantelum Source Material	Tantalum Natural Minerals	Austrelian	<del> </del>	300	<del> </del>	MRC-299	1 Drum	19091	214	3	9		277	Transfer Special Project FJO-935		
55 Columbium Tentalum Source Meterial	Tantalum Natural Minerals	Rhodesian	<del>- </del>	301	<del></del>	MRC-300	2 Drums	19012	214		18	<del></del>	311	Trensfer Special Project F3Q-935		
55 Columbium Tentakum Source Metertal	Tentalum Natural Minerals		<del> </del>	303	<del> </del>	MRC-301	1 Drum	19013	214	3	9		265	Transfer Special Project FJO-935		
55 Columbium Tantalum Source Meterial	Tentalum Natural Minerals		<del> </del>	305		MRC-303	33 Drums	19092	214		15		6,647	Transfer Special Project FJO-935		
55 Columbium Tanielum Source Meteriel	Tentalite Ore	Nigerian	<del> </del>	306		MRC-305	2 Drums	19093	214		15			Transfer Special Project FJO-935		
55 Columbium Tarrialum Source Material	Tamelum Netural Minerals	Ugenden	<del>                                     </del>	308	<del> </del>	MRC-306	3 Drums	18975	214		16		612	Transfer Special Project FJO-935		
55 Columbium Yantalum Source Material	Tantelum Natural Minerals	New Mexican	<del>                                     </del>	309		MRC-308	5 Drums	19094	214		15		1,005	Transfer Special Project FJO-935		
55 Columbium Tarrisium Source Malerial	Taniakm Natural Minerals	Belgien		311	<del></del>	MRC-309 MRC-311	10 Druma	19095	214		15		2,312	Transfer Special Project FJO-935		
55 Columbiam Tentalum Source Material	Tantalum Naturat Minerals	Australian	<del> </del>	312	<del></del>	MRC-312	3 Drums	19096	214		16	.	849	Transfer Special Project FJO-935		
55 Columbium Tardalum Source Material	Tentalum Natural Minorals	Australien	<u> </u>	313			1 Drum	19097	214		15		241	Transfer Special Project FJO-935		<del></del>
55 Columbium Tantalum Source Material	Tentalum Natural Minerals	Australian		314		MRC-313 MRC-314	1 Drum	19098	214		9			Transfer Special Project FJO-935	·	
55 Columbium Tantalum Source Material	Tentatum Natural Minerals	Australian		315	<del> </del>	MRC-315	2 Drums	18976	214		15		406	Transfer Special Project FJO-935		
55 Columbium Tantelum Source Material	Tantakan Natural Minerals	Australien	<del> </del>	317	<del></del>	MRC-317	11 Drums	18977	214		15		3,086	Transfer Special Project FJO-935	<del></del>	
55 Columbium Tentetum Source Material	Tanialum Natural Minerals	Australien		318		MRC-318	7 Drums	18970	214		15		1,456	Transfer Special Project FJO-935		
55 Columbium Terrialum Source Material 55 Columbium Terrialum Source Material	Tantelum Natural Minerals			320	<b></b>	MRC-318 MRC-320	11 Drums	19099	214		15		3,080	Transfer Special Project FJO-935	<del></del>	<del></del>
The state of the s	Tentalum Netural Minerals	Nigerian		321		MRC-321	2 Drums	18979	214		15		408	Transfer Special Project FJO-935		
The state of the s	Tentalum Netural Minerals	Nigerian	<del> </del>	322	† · · · · · · · · · · · · · · · · · · ·	MRC-322	15 Drums	18980	214		15		4,475	Transfer Special Project FJO-935		<del></del>
55 Columbium Tantalum Source Material	Tantalum Netural Minerala	Nigerian		323	<del></del>	MRC-322 MRC-323	5 Drums	18981	214		15		1,329	Transfer Special Project FJO-935		
55 Columbium Tentatum Source Material 55 Columbium Tentatum Source Material	Tantalum Natural Minerals	Australian		325	<del></del>	MRC-325	3 Drums 9 Drums	19100	214		16		781	Transfer Special Project FJO-935		
	Tantalum Natural Minarals	Australien		326	1	MRC-326	3 Drums	19055	214		9		1,740	Transfer Special Project FJO-935		
	Tantalum Natural Minerals	Ugandan		333		MRC-333	1 Drum	18996	214	3	15		723	Transfer Special Project FJO-935		<del></del>
55 Columbium Tantalum Source Material 55 Columbium Tentalum Source Material	Tantakım Nafural Minerals	Belgian		343		MRC-343	43 Drums	18982 19056	214	3	15	- <del> </del>	160	Transfer Special Project FJD-935		
55 Columbium Terriatum Source Material	Tanistum Natural Minerals			340		MRC-348	2 Drums	19057	214		15	- <del></del>	8,653	Transfer Special Project FJO-935		
55 Columbian Tantalum Source Material	Tantalum Natural Minerals	Ugandan		350		MRC-350	4 Drums	19058	214	3	15		314	Transfer Special Project FJO-935		
55 Columbium Tantalum Source Material	Tantelum Natural Minerals			352		MRC-352	9 Drums	19059	214	3	15	<del> </del> -	938	Transfer Special Project FJO-935		
55 Columbium Tantelum Source Maferiel	Temelum Netural Minerals Tamelum Netural Minerals	<del> </del>	<u> </u>	353		MRC-353	6 Drums	19060	214	1 3	15		1,824	Transfer Special Project FJO-935		
55 Columbium Tanisium Source Material	Tantalum Natural Minerals	Delglan		354		MRC-354	8 Drums	19061	214	3	9 9	<del></del>	1,235	Transfer Special Project FJO-935		
55 Columbium Tarristum Source Material	Tantalum Natural Minerals	Beigian	<b> </b>	355		MRC-355	67 Drums	19062	214	3	16	<del></del>	1,000	Transfer Special Project FJO-935		
55 Columbium Tanislum Source Malerial	Tentalum Natural Minerals	Belgian	<del> </del>	356		MRC-356	2 Drums	19101	214	3	15	<del> </del>	13,366	Transfer Special Project FJO-935		
35 Columbium Tanteium Source Material	Taniatum Natural Minerals	Migerian		359		MRC-359	12 Drums	18997	214	3	15	<del> </del>	2 202	Transfer Special Project FJO-935 Transfer Special Project FJO-935		
55 Columbium Taritalum Source Material	Tarrialum Natural Minerals	Nigerian		077		MRC-77	6 Drums	18998	214	3	15	<del></del>	1 174	Transfer Special Project FJO-935		
55 Columbium Tenletum Source Meterlet	Fentalum Natural Minerals	Ugenden Brezillen		081		MRC-81	2 Drums	18986	214	3	15		452	Transfer Special Project FJO-935		
55 Cotumbium Yarriatum Source Material	Tentalum Natural Minerals	Rhodesian	<u> </u>	980		MRC-86	22 Drums	19066	214	3	15		4,352	Transfer Special Project FJO-935		<del></del>
55 Columbium Tantalum Source Material	Tamaium Natural Minerals	TOTOGRAIGH		087 091		MRC-87	25 Drums	18987-A	214	3	16		7,700			
55 Columbium Taritalum Source Material	Tamatum Natural Minerals	<del> </del>	<del> </del>	092		MRC-91	95 Drums	19014	214	3	15	T	28,340	Transfer Special Project FJO-935	<del></del>	
55 Columbium Tantakum Source Material	Tarrielum Natural Minerals	Brezslan		094		MRC-92	θ Drums	18999	214	3	15		1,604	Transfer Special Project FJO-935		<del></del>
5 Columbium Tentalum Source Material	Tentelum Natural Minerals			179	E-179	MRC-94 ONSP-4E179	22 Drums	19067	214	3	15		4,324	Transfer Special Project FJO-935		
i5 Columbium Terkalum Source Material	Tantalum Najural Minerals			180	E-180	ONSP-4E180	7 Drums	19361	214	3	77	4	2,847	Relocation Project OMO-00001	15 Gal Drums	<del></del>
55 Columbium Fantalum Source Material 55 Tantalite Ore	Tanfalum Natural Minerals			101	E-181	ONSP-4E181	4 Drums	19365	214	3	18	1, ST 2	1,968	Relocation Project DMO-00001	15 Gel Drums	<del></del>
Tanada or	Netural Min.	Brezilan		IOE		Rio E	6 Orums 47 Drums	19366	214	3	77	4	2,110	Relocation Project DMO-00001	15 Gal Drums	
The state of the s	Tentalum Net, Min.	Austreillen		01F	RPS	RPS	1 Drum	10289	214	3	44	1, ST 1-6		GS-OOP-10032(SCM)-1F		
i5 Columbium Tantatum Source Material	Terdelum Netural Minerals			A-9		VA-9	1 Drum	5916	214	. 3	37	4		GS-OOP-1087-1F (SCM)		<del></del>
	TOTAL						3,246 Units	19103-A	214	3	9		167.75	Transfer Special Project FJO-935	-	
							3,248 Units	with Sweepin		<del> </del> -	<del> </del>	ļ	814,467			
i5 Teritalum Oxide					· · · · · · · · · · · · · · · · · · ·		5,245 51165	Mini Sweepli	rg =	<del> </del>		ļ	\$15,331	Lba		
i5 Tantalum Pentoxide	Chemically Precipitated Tantahan Oxida	Germen		-20	M-1-20	M 1-20 New York	20 Kegs	7017	214	<del></del>	<del> </del>					
i5 Tantalum Oxide	Chemically Precipitated Tantalum Oxide	Germen		-50	P-902	P-902	50 Kegs	7402	214	3	37	1,2,3	2,000.5	GS-OOP-3418-1F(SCM)		
35 Tartalum Penfoxida	Chemically Precipitated Tarrialum Oxide	Garmen		902	P-902	₽-902	50 Kegs	7491	214	<del>  3</del>	37	1,2,3		GS-OOP-3592(SCM)-1		
5 Tantalum Penioxide	Chemically Precipitated Tartleium Oxide	German		992	S-992	S-992	50 Kegs	7864	214	3	37	1,2,3		GS-OOP-3592(SCM)2F		
i5 Tantakın Pentoxide	Chemically Precipitated Tantalum Oxide Chemically Precipitated Tantalum Oxide	German		992	S-992	S-992	50 Kegs	7936	214	3	37	1,2,3		GS-OOP-3883-2 (SCM)		
i5 Tentatum Pentoxide	Chemically Precipitated Tentalum Oxide  Chemically Precipitated Tentalum Oxide	German		048	S-1048	S-1048-New York	50 Kegs	8017	214	3	37	1,2,3	4,980	GS-OOP-3883(SCM) 3F GS-OOP-7061 (SCM) 1		
i5 Tantalum Pentoxide	Chemically Precipitated Tantalam Oxide	German		050 <u>[</u>	S-1048	S-104B	too Kegs	8048	214	3	37	1,2,3		GS-OOP-7061 (SCM) 1		
5 Tantalum Peritoxide	Chemically Precipitated Tarriatum Oxide	<del>  </del>		OF OR /50	S-1138	9-1138	50 Kegs	8137	214	3	37	1,2,3		GS-OOP-7248-(SCM)-1	<del></del>	
5 Tertelum Oxide	Chemically Precipitated Tantalum Oxide		10	01 OR /50	S-1138	S-1138	50 Kegs	8258	214	3	37	1,2,3	5.020	GS-OOP-7248(SCM)-3	<del></del>	<del> </del>
5 Tenfelum Oxide	Chemically Precipitated Tantalum Oxide	German		138	5-1138	S-1138	50 Kegs	8477	214	3	37	1,2,3		GS-OOP-7248 (SCM)-2		+
5 Tantalum Oxide	Chemically Precipitated Tantelum Oxide	Gernan		00 4 250	S-1138	S-1138	100 Kegs	9092	214	3	37	1,2,3	10.005	GS-OOP-7248-(SCM)-4F		
5 Terriatum Oxide	Chemically Precipitated Tantakan Oxide	German		401 351	S-1138F 1138-G	S-1138/F	60 Kegs	9671	214	3	37	1,2,3	6,020	GS-OOP-7248(SCM)-7F		
5 Tentalum Oxide	Chemically Precipitated Tentalum Oxide	German		350	S-1138	S-1138G	50 Kegs	9609	214	3	37	1,2,3		GS-OOP-7248(SCM)-6		+
	TOTAL				3-1130	S-1138	100 Kegs	10573	214	3	37	1,2,3		GS-OOP-7248(SCM)-5		
F Towns David				<del></del> +			830 Kegs		<b></b>		ļ		92,331			1
5 Tentetan Pentoxide	Natural Concentrates			001		t	Pa Puma	10444		ļ	l	ļI				1
5 Taniatum Pentoxide	Natural Concentrates			002		ż	84 Drums 84 Drums	19411	214	3	27	<u>_</u>		DLA300-90-C-0031		
5 Tanialum Perioxide	Natural Concentrates			003		ã	84 Drums	19412	214	3	27	ļ		DLA300-90-C-0031		1
5 Tantsium Perioxide	Natural Concentrates			004	·	Ĭ.	36 Orums	19418	214	3	27		42,000	DLA300-90-C-0031		1
5 Tantalum Penioxide	Natural Concentrates			004		Ĭ.	48 Drums	19419	214	3	27			DLA300-90-C-0031		
5 Tenfahm Pentodde	Natural Concentrates			005		5	84 Drums	19419 19420	214	3	28	<b> </b>		DLA300-90-C-0031		
5 Tarrielum Periloxide 5 Tarrielum Periloxide	Natural Concentrates			300		6	84 Drums	19426	214	3	28	l		DLA300-90-C-0031		
y remailuri Pelinoxide	Natural Concentrates			007		7	59 Orums	19429	214	3	28			DLA300-90-C-0031		
	TOTAL					*	563 Drums	19423	14	3	28	<b></b>		DLA300-90-C-0031		
5 Columbium-Tametum Concentrates	26-1-5							1					281,500	LD2		
5 Columbium Tarifalum Concentrates	Chemically Processed			199		MGK-199	24 Drums	17200	214	3	13			70 00B 10115.4		
	Chemically Processed			199		MGK-199	1 Conf Sweep	17200	214	3	13			98-00P-10716(SCM)		
							1 Com Greek	11,400	417	- 3	13		84	3S-OOP-10716(SCM)		T

COMMODITY	TYPE	ORIGIN	GRADE	MIF Lot#	DRUM LOT	LOT#	I married I are		u 1 27.72		,					
	TOTAL	55	- GAGE	3717 EUL#	Drom Co.	1 501#	QUANTITY U	NIT RR	* WH	SE SEC	BAY	ROW	NET WT.	CONTRACT#		
			<del></del>		<del> </del>	-	23 0101113	·		<del>-</del>	<del> </del>	ļ	13,352	Tps .		Ļ
Columbium Terrialum Source Materials	Columbium Natural Minerals	Belgian Congo	11A	357		MRC-357	15 Drums	189	6 21	4 3	16	<del> </del> -	3 000	Transfer Special Project FJO-935		
Columbium Terrialum Source Materials	Columbium Natural Minerals	Belgien Congo	11A	633		GEO-633	106 Drums	189			17		21,228			·
Columbium Tanishum Source Meterials Columbium Tanishum Source Meterials	Columbium Natural Minerals	Beigian Congo	11A	834		GEO-834	111 Drums	189	8 21		17			Transfer Special Project FJO-935		<del></del>
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Conge	11A	837	<u> </u>	GEO-937	111 Drums			4 3	17		22,031.5	Transfer Special Project FJO-935		<del> </del> -
Columbian Tentelum Source Materials	Columbium Natural Minerals Columbium Natural Minerals	Belgian Congo	11A	838	ļ	GEO-838	111 Drums				17		22,127,5	Transfer Special Project FJO-935		<del> </del>
Columbium Tentalum Source Materials	Columbium Natural Minerals	Beigien Congo Beigien Congo	11A 11A	840	<del></del>	GEO-839	111 Drums	189			17		22,056,5	Transfer Special Project FJO-936		T
Columbium Tentalum Source Majeriais	Columbium Natural Minerals	Belgian Congo	11A	843		GEO-840 GEO-843	111 Drums	189			17			Transfer Special Project FJO-935		
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	2A	817	<del> </del>	GEO-817	110 Drums 109 Drums	189			17			Transfer Special Project FJO-935		
Columbium Tantalum Source Maleriels	Columbium Natural Minerals	Belgian Congo	2A	818	<b> </b>	GEO-818	108 Drums				17		21,785.26	Transfer Special Project FJO-935		
Columbium Tentalum Source Melerials	Columbium Natural Minerals	Belgian Congo	2A	821		G€O-821	107 Drums				17		21,466	Transfer Special Project FJO-935		L
Columbium Tanisium Source Materials	Columbium Natural Minerals	Belgian Congo	2A	836	· · · · · · · · · · · · · · · · · · ·	GEO-636	108 Drums				17		21,111,0	Transfer Special Project FJO-935 Transfer Special Project FJO-935		
Columbium Tanialum Source Melerials	Columbium Netural Minerals	Canada	. 11Å	280	1	MRC-280	3 Drums	189			17			Transfer Special Project FJO-935		
Columbium Tantelum Source Materials	Columbium Natural Minerals	Belgian Congo	11A	292		MRC-292	8 Drams	189			16			Trensfer Special Project FJO-935		<del> </del>
Columbium Tantatum Source Materials	Columbium Natural Minerals	Belgian Congo	2Å	340		MRC-340	44 Drums	189	0 21		17			Transfer Special Project FJO-935		<del> </del>
Columbium Tarifatum Source Materials	Columbium Natural Minerals	Beigien Congo	11A	351		MRC-351	14 Drums	189	1 21	1 3	16		2,726	Transfer Special Project FJO-935		
Columbium Tantalum Source Materials Columbium Tantalum Source Materials	Columbium Netural Minerals	Beiglan Congo	11A	816	<u> </u>	GEO-816	110 Drums	189			17			Transfer Special Project FJO-935		
Columbium Tantalum Source Materials	Columbium Natural Minerals	Brazil	2A	262	<del> </del>	MRC-262	21 Orums	189			16			Transfer Special Project FJO-935		· · · · · · · · · · · · · · · · · · ·
Columbium Tarsaium Source Materials	Columbium Natural Minerals Columbium Natural Minerals	Brazil	2A	281		MRC-281	28 Drums				9			Transfer Special Project FJO-935		
Columbium Fartelum Source Materials	Columbium Natural Minerals	India	2A	286		MRC-286	7 Orums	189			16			Transfer Special Project FJO-935		
Columbian Tentalum Source Materials	Columbium Natural Minerals	India Balgian Congo	2A 2A	287 293	<del> </del>	MRC-287 MRC-293	3 Orums 20 Drums	189			17		600	Transfer Special Project FJO-935		
Columbium Tardalum Source Materials	Columbium Natural Minerals	Beigian Congo	2A	293	<del> </del>	MRC-293 MRC-294	40 Drums	169			16		3,986	Transfer Special Project FJO-935		
Columbium Tentalum Source Melestets	Columbium Natural Minerals	Australia	2A	324	<del> </del>	MRC-294 MRC-324	3 Drums	1899			16	<del> </del>		Transfer Special Project FJO-935		
Columbium Tanialum Source Materials	Columbium Natural Minerals	Belgian Congo	2A	336	<del> </del>	MRC-336	4 Drums	189			16	· · · · · · · · · · · · · · · · · · ·		Transfer Special Project FJO-935		
Columbium Tanialum Source Materials	Columbium Natural Minerals	Beiglan Congo	2A	339	· · · · · · · · · · · · · · · · · · ·	MRC-339	24 Drums	169			17	ļ		Transfer Special Project FJO-935		ļ
Columbium Tanialum Source Materials	Columbium Neitoral Minerals	Nigerlan	2A	342	<del> </del>	MRC-342	4 Drums				17	<b></b>		Transfer Special Project FJO-935		ļ
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	2A	358		MRC-358	63 Drums	189			16	<del> </del>	1,061 24,863	Transfer Special Project FJO-935 Transfer Special Project FJO-935		
Columbium Tanialum Source Materiels	Columbium Natural Minerals	Beigien Congo	2A	819		GEO-819	107 Druma	189			16			Transfer Special Project FJO-935		
Columbium Tarrialum Source Malerial	Terriaken Natural Minarals			ONG		3 NONG	3 Drums	1939			34	4, ST 1-3			Drums	ļ
Columbium Tarifalum Source Malerial	Terrinkan Natural Minerals			811	GEO-811	ONSP-30811	275 Drums	1939			77	2			Drums	ļ <u>.</u>
Columbium Terdelum Source Maleriel	Tentakan Natural Minerals			170	E-178	ONSP-4E178	23 Drums	1935	9 214		77	3			Drums	
Columbium Tentalum Saurce Material	Tentalum Matural Minerals			102	E-182	ONSP 4E192	46 Drums	1931	0 214		77	3			Drums	<del></del>
	TOTAL				<u> </u>		2,088 Drums						448,705			
	PLOS MICARIANAN	ļ			ļ	-										
	AMP INFORMATION UNCOMITTED QUANTITIES				· · · · · · · · · · · · · · · · · · ·		6,754 Orums	·	includes sy	veapings			1,641,220			
	ORCOMITED GUARITIES	<del> </del>											821	ST		
		<del> </del>		ITEM#	<del> </del>	•				_						
Terdalum Oxide	Standard Grade R	· · · · · · · · · · · · · · · · · · ·		1	<del>                                       </del>				<del></del>		<del> </del> _	<u>.</u>				
Tantalum Oxide		1				. ,	82 Drums	1947			38			DLA-300-91-C-0017		ļ
	Standard Grade R Standard Grade R			2		2 3	82 Drums	1947.	A 214	3	38		25,910	DLA-300-91-C-0017		
Tantalum Oxide	Standard Grade R Standard Grade R Standard Grade R					2 3 4	82 Drums 82 Drums	1947. 1947	A 214	3	38 38		25,910 25,010	DLA-308-91-C-0017 DLA-308-91-C-0017		
Tarrialum Oxida Tarrialum Oxida	Standard Grade R Standard Grade R			2 3		2 3 4	82 Drums	1947 1947 1947	A 214	3	38		25,910 25,910 25,910	DLA-366-91-C-0017 DLA-366-91-C-0017 DLA-366-91-C-0017		
Tarrialum Oxida Tarrialum Oxida	Standard Grade R Standard Grade R Standard Grade R			2 3		2 3 4	82 Drums 82 Drums 82 Drums	1947 1947 1947	A 214	3	38 38		25,010 25,010 25,010 100,040	DLA-308-91-C-0017 DLA-308-91-C-0017 DLA-308-91-C-0017 Lbs		
Tarrialum Oxida Tarrialum Oxida	Standard Grade R Standard Grade R Standard Grade R			2 3		2 3 4	82 Drums 82 Drums 82 Drums	1947 1947 1947	A 214	3	38 38		25,910 25,910 25,910	DLA-308-91-C-0017 DLA-308-91-C-0017 DLA-308-91-C-0017 Lbs		
Tarrialum Oxida Tarrialum Oxida	Standard Grade R Standard Grade R Standard Grade R			2 3		3 4	82 Drums 82 Drums 82 Drums	1947 1947 1947	A 214	3	38 38		25,010 25,010 25,010 100,040	DLA-308-91-C-0017 DLA-308-91-C-0017 DLA-308-91-C-0017 Lbs		
Tarrialum Oxida Tarrialum Oxida	Standard Grade R Standard Grade R Standard Grade R			2 3		3 4	82 Drums 82 Drums 82 Drums	1947 1947 1947	A 214	3	38 38		25,010 25,010 25,010 100,040	DLA-308-91-C-0017 DLA-308-91-C-0017 DLA-308-91-C-0017 Lbs		
Tarrialum Oxida Tarrialum Oxida	Standard Grade R Standard Grade R Standard Grade R			2 3		3 4	82 Drums 82 Drums 82 Drums	1947 1947 1947	A 214	3	38 38		25,010 25,010 25,010 100,040	DLA-308-91-C-0017 DLA-308-91-C-0017 DLA-308-91-C-0017 Lbs		
Tarrialum Oxida Tarrialum Oxida	Standard Grade R Standard Grade R Standard Grade R			2 3		3 4	82 Drums 82 Drums 82 Drums	1947 1947 1947	A 214	3	38 38		25,010 25,010 25,010 100,040	DLA-308-91-C-0017 DLA-308-91-C-0017 DLA-308-91-C-0017 Lbs		
Tarrialum Oxida Tarrialum Oxida	Standard Grade R Standard Grade R Standard Grade R			2 3		3 4	82 Drums 82 Drums 82 Drums	1947 1947 1947	A 214	3	38 38		25,010 25,010 25,010 100,040	DLA-308-91-C-0017 DLA-308-91-C-0017 DLA-308-91-C-0017 Lbs		
Tarrialum Oxida Tarrialum Oxida	Standard Grade R Standard Grade R Standard Grade R			2 3		3 4	82 Drums 82 Drums 82 Drums	1947 1947 1947	A 214	3	38 38		25,010 25,010 25,010 100,040	DLA-308-91-C-0017 DLA-308-91-C-0017 DLA-308-91-C-0017 Lbs		
Tarrialum Oxida Tarrialum Oxida	Standard Grade R Standard Grade R Standard Grade R			2 3		3 4	82 Drums 82 Drums 82 Drums	1947 1947 1947	A 214	3	38 38		25,010 25,010 25,010 100,040	DLA-308-91-C-0017 DLA-308-91-C-0017 DLA-308-91-C-0017 Lbs		
Tarrialum Oxida Tarrialum Oxida	Standard Grade R Standard Grade R Standard Grade R			2 3		3 4	82 Drums 82 Drums 82 Drums	1947 1947 1947	A 214	3	38 38		25,010 25,010 25,010 100,040	DLA-308-91-C-0017 DLA-308-91-C-0017 DLA-308-91-C-0017 Lbs		
Tarrialum Oxida Tarrialum Oxida	Standard Grade R Standard Grade R Standard Grade R			2 3		3 4	82 Drums 82 Drums 82 Drums	1947 1947 1947	A 214	3	38 38		25,010 25,010 25,010 100,040	DLA-308-91-C-0017 DLA-308-91-C-0017 DLA-308-91-C-0017 Lbs		
Tarrialum Oxida Tarrialum Oxida	Standard Grade R Standard Grade R Standard Grade R			2 3		3 4	82 Drums 82 Drums 82 Drums	1947 1947 1947	A 214	3	38 38		25,010 25,010 25,010 100,040	DLA-308-91-C-0017 DLA-308-91-C-0017 DLA-308-91-C-0017 Lbs		
Tarrialum Oxida Tarrialum Oxida	Standard Grade R Standard Grade R Standard Grade R			2 3		3 4	82 Drums 82 Drums 82 Drums	1947 1947 1947	A 214	3	38 38		25,010 25,010 25,010 100,040	DLA-308-91-C-0017 DLA-308-91-C-0017 DLA-308-91-C-0017 Lbs		
Tarrialum Oxida Tarrialum Oxida	Standard Grade R Standard Grade R Standard Grade R			2 3		2 3 4	82 Drums 82 Drums 82 Drums	1947 1947 1947	A 214	3	38 38		25,010 25,010 25,010 100,040	DLA-308-91-C-0017 DLA-308-91-C-0017 DLA-308-91-C-0017 Lbs		
Tarrialum Oxida Tarrialum Oxida	Standard Grade R Standard Grade R Standard Grade R			2 3		2 3 4	82 Drums 82 Drums 82 Drums	1947 1947 1947	A 214	3	38 38		25,010 25,010 25,010 100,040	DLA-308-91-C-0017 DLA-308-91-C-0017 DLA-308-91-C-0017 Lbs		
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. Author: michael pecullan at ccpo14

Date: 6/9/99 1:24 PM

Priority: Normal TO: William Till

CC: Charles Delhoste, allen bixler Subject: Radiological Survey-New Haven

Bill-

I've read rept No. 7 & have a few questions:

What signs (nomenclature) are posted at the ore piles?

Are any radiation signs posted on or in the warehouses, what do they say?

Is the material in bays 9, 18, 38 of warehouse 214, section 3 within a "Restricted Area"?

What was the date of the last radiological training given to depot personnel?

The date (11/13/98) you provided for the FAG 40 indicates that it was overdue for calibration, is this correct?

Author: Lois Huddlestun at ccpo14

Date: 6/1/98 2:05 PM

Priority: Normal Receipt Requested

TO: kevin reilly at ccpo14

CC: michael pecullan at ccpo14, Frederic Brooks at ccpo14

Subject: Annual Radiological Survey

Kevin -

Attached you will find the radiological survey I performed at the depot. The format is that presented by Mr Pecullan at the DNSC Radiation Orientation in November of 1997. This will be entered into the radiation notebook as an inspection performed by the RPO. All discrepancies that are able to be corrected at the depot level are targeted to be corrected by the end of CY 1998. The discrepancies that are above depot level will be on hold until you or your representatives get back with us.

I do intend to attempt a survey such as this at least annually, with results being discussed with Fred and forwarded to you. I have attempted to be as thorough and as objective as possible. You will see that there are several Findings and several Recommendations.

If you have any comments or suggestions, please feel free to call.

annual~1.doc is the written portion of the survey

orepil-1.xls is the map of the ore piles showing the readings taken

whse\_r-1.xls is the map of the warehouse showing the readings taken

readings.xls is the written documentation of all the readings

The best way to view or print these files is to download them to the hard drive and print them off in the actual program that it pertains to, e.g. annual~1.doc is a MS Word file, the remainder of the files are Microsoft Excel files and will not print off properly from cc:mail. The Excel files must be downloaded and printed from Excel. If you have any questions, please feel free to call.

Thanks,

# Annual Radiological Survey for NRC License No. STC-133 DLA-DNSC-MONH New Haven Depot 15411 Dawkins Road

New Haven, IN 46774 DATED: 01 Jun 98

1. Radiological Officers:

(Ref: DNSC ORPP Appendix E)

- A. Radiological Protection Officer (RPO): Lois Mae Huddlestun, (219)-749-9544
- B. Radiological Safety Officer (RSO): William Till, (219)-749-8291

## 2. Training:

A. (Ref: DNSC ORPP par. 3.3, 4.8; DLAR 4145.23, par. 4-2; DLAR 6055.4 par. XII.B.10; 10 CFR 19.12) Records indicating annual training are maintained in the Radiation Program Notebook. The only documentation to date is for 1994, 1995, and an unknown date (estimated to be in 1988).

NOTE: The RPO is in the process of creating a training program and will implement the same upon completion at some point during the 1998 calendar year, at which time training will be documented and maintained in the Radiation Program Notebook. The RPO is also in the process of creating an initial training package to be included as part of the incoming package for new employees beginning work at New Haven Depot.

B. (Ref: DNSC ORPP par 5.5) In March of 1998 employees received their annual respiratory protection training at the same time that they received their annual respirator fit testing by the Respiratory Protection Designee – William Till.

**NOTE:** One employee has been eliminated from respirator use until such time as a properly fitted respirator can be located and another employee cannot wear a respirator without allowing for a fresh air break every 30 minutes.

#### 3. Instrumentation:

A. (Ref: DNSC ORPP par. 4.4 and 13.3)

Model/Type	Serial No.	Calibration Due
5-0002/FH 40F6	77-390	Being Calibrated
E-120	10122	23 Apr 99
E-520	3135	23 Apr 99
	5-0002/FH 40F6 E-120	5-0002/FH 40F6 77-390 E-120 10122

**NOTE:** All other equipment listed in previous reports is in the process of being excessed by DRMS.

#### Source Chips

Gamma Source Chip	Cs137	Serial Number 951
Alpha Source Chip	unknown	Serial Number 377

Monitoring Devices	Model/Type	Number of Units
Thermoluminescent Dosimeters	(TLD Badges)	26
Pocket Dosimeter	FEMA CDV-750	15
Pocket Dosimeter Charger	Model 6	1

**NOTE:** Four of the pocket dosimeters have been identified as drifters and have been separated from the others.

# Annual Radiological Survey for NRC License No. STC-133 DLA-DNSC-MONH New Haven Depot 15411 Dawkins Road New Haven, IN 46774 DATED: 01 Jun 98

- B. (Ref: DNSC ORPP par. 13.4) TLD badges are processed by US Army Aviation Missile Command, ATTN: AMSAM-TMD-SR-D (USAIRDB), Bldg 5417, Redstone Arsenal, AL 35898-5000. Thermoluminescent Dosimeters are exchanged on a quarterly basis and all individuals assigned to the depot (except the secretary) are on the dosimetry program.
- C. Radiological Instruments and Monitoring Devices are stored in Building T-136 in a room known as "the radiation store room". This room is locked at all times. Keys to open this room by special permission may be obtained from the Depot Manager, the RSO, or the key custodian. The radiological instruments are to be utilized only by the RPO or RSO.
- D. The monitoring devices are to be signed out only by the RPO, RSO, or Depot Manager (in the absence of the RPO and RSO). A form is completed showing the date, employees name, SS#, DOB, badge #, location of potential exposure, reason for exposure, starting and ending time (Initial and final readings for the pocket dosimeters), and the monitor's name. Normally a TLD and a pocket dosimeter are issued at the same time. The pocket dosimeter is utilized as a quick reference only.
- E. Source chips are stored in the vault in a file drawer labeled "dosimetry Program".

# 4. Dosimetry:

A. (Ref: DNSC ORPP par. 4.2; DLAR 1000.28 par 6-3a) DD Forms 1141 for each potentially exposed employee was began by the RPO.

NOTE: During an inspection by SSG Collins of the US Army Center for Health Promotion and Preventive Medicine, Aberdeen Proving Ground, MD, a suggestion was made to discontinue creation of the remainder of the DD Forms 1141 until the DNSC ORPP Manager, Kevin Reilly has a chance to read the recommendations. SSG Collins' recommendation is that the DD Form 1141 be discontinued since the ADRs are provided by the US Army, Redstone Arsenal, AL. These forms have previously been approved by the NRC. Since New Haven Depot already receives ADRs from US Army, the DD Form 1141 creates a duplication of paperwork.

B. (Ref: DNSC ORPP par. 4.6; DLAI 1000.30 par. 4-3) Quarterly reviews are documented on the ADR by the Depot RPO (Last date annotated - 06 May 98).
 NOTE: DD Forms 1141 are on hold until a final decision is rendered by DNSC ORPP Manager,

Kevin Reilly

C. (Ref: DNSC ORPP par 16.2; DLAR 1000.28 par. 6-6a.; DLAR 4145.23 par. 5-6a.; 10 CFR 19.13) There are no records to date documented to indicate the last time that exposure notifications were discussed with each employee.

**NOTE:** The RPO is going to present copies of exposure documentation to each employee during the annual radiation training session before the end of the 1998 calendar year.

# Annual Radiological Survey for NRC License No. STC-133 DLA-DNSC-MONH New Haven Depot 15411 Dawkins Road New Haven, IN 46774 DATED: 01 Jun 98

# 5. Posting:

- A. (Ref: DNSC ORPP par. 4.3; 10 CFR 40.7(e)(2); 10 CFR 19.11; 10 CFR 21.6) The following required documents are posted in Building T-136, directly over the employee sign-in logbook.
  - 1. Section 206 of Public Law 93-438 "Energy Reorganization Act of 1974
  - 2. NRC Form 3, "Notice to Employees" (dated 8/1997)
  - 3. The location of the NRC License
- B. (Ref: DNSC ORPP par 8; 10 CFR 20.1902(a)) CONTROLLED AREA NFPA 704 signs displaying the radiation symbol are posted on the north and south outside of Warehouse 214, Sections 3 and 4. The warehouses are locked and sealed at all times restricting entry to unauthorized personnel. The bays inside the warehouse containing the radioactive material referenced on the license (Tantalum) are posted with yellow and magenta labels and/or yellow and magenta signs containing a radiation symbol and the language "Caution, Radioactive Materials" or "Caution, Radiation Area". In addition, each of the bays in the warehouse containing the radioactive material on the license has been surrounded with yellow and magenta barricade tape with the radiation symbol and the language "Caution, Radiation Hazard".
- C. (Ref: DNSC ORPP par 8; 10 CFR 20.1902(a)) RESTRICTED AREA For the outside storage, the zirconium ore is completely surrounded by four strands of barbed wire fence with a gate and a combination padlock. Posted on the fence are also yellow and magenta signs containing a radiation symbol and the language "Caution, Radiation Area".
- 6. Rolling Radiation Library: The rolling radiation library is currently stored in the RPO's office during non-duty hours, but is available during duty hours to all employees. The records containing personal privacy act information are maintained in the locked top file portion of the library. Access to these files may be obtained through the RPO or Depot Manager IAW DLAR 1000.28 par.6-8.
  - A. Copies of the following are available in the "DNSC ORPP" notebook:
    - 1. DNSC ORPP, dated 25 Jun 97
    - Recommendations of the International Commission on Radiological Protection, ICRP, Publication 26, adopted January 17, 1977.
    - 3. US NRC License STC-133 with Amendments 1-20
    - 4. Radioactive Materials Inventory for New Haven Depot
    - 5. Decommissioning File
    - 6. DLAR 1000.28, dated 30 Jun 95
    - 7. DLAI 1000.30, dated 30 Jun 95
    - 8. DLAR 4145.23, dated 20 Aug 93
    - 9. DLAR 6055.4, dated 21 Jun 93
    - 10. DLAR 5400.21, dated 26 Mar 85
    - 11. DLAM 4145.8, dated 19 Apr 85

# Annual Radiological Survey for NRC License No. STC-133 DLA-DNSC-MONH New Haven Depot 15411 Dawkins Road New Haven, IN 46774 DATED: 01 Jun 98

- B. Copies of the following are available in the "New Haven Depot Radiation Surveys" notebook
  - 1. NRC Transaction Reports
  - 2. Fagmeter Calibration Certifications
  - 3. Geiger Counter (E-520) Calibration Certifications
  - 4. Geiger Counter (E-120) Calibration Certifications
  - 5. Annual Leakage Evaluations for Pocket Dosimeters
  - Annual Radiological Surveys
- C. Copies of the following are available in the "Radiation Program" notebook
  - 1. Local Emergency/Security Notifications
  - 2. Training Documents
  - 3. General Correspondence
  - 4. NVLAP Certificates of Accreditation (Ref: 10 CFR 20.1502 par. (c)(1))
  - 5. TLD Services Correspondence
- D. Copies of the following are available in the library (Revised versions to be purchased after July of 1998):
  - 1. 10 CFR Parts 0-199, revised as of January 1, 1997
  - 2. 40 CFR Parts 190-259, revised as of July 1, 1996
  - 3. 49 CFR Parts 100-185, revised as of October 1, 1997
  - 4. 49 CFR Parts 186-199, revised as of October 1, 1996
  - 5. 29 CFR Part 1926, revised as of July 1, 1996
  - 6. 29 CFR Parts 500-899, revised as of July 1, 1996
  - 7. 29 CFR Parts 1900-1910.999, revised as of July 1, 1996
  - 8. 29 CFR Parts 1910 (1910.1000 to END), revised as of July 1, 1996
  - 9. Respiratory Protection Program, revised as of 27 May 97

#### 7. Personal Protection:

- A. The decontamination facility is located in building T-214, section 1, west end. This facility is divided into three sections. The facility contains showers, toilets, wash basin, washer and dryer, and lockers. All air in this area is filtered with a self contained filtering system. The filtering system was originally set up for asbestos particulate.
- B. Personal Protective Equipment, in addition to the basic PPE issued, includes but is not limited to:
  - 1. Tyvek coveralls
  - 2. CPF II coveralls
  - Rubber gloves
  - 4. Disposable respirators
  - 5. Half-face respirators issued to each individual

## Annual Radiological Survey for NRC License No. STC-133 DLA-DNSC-MONH New Haven Depot 15411 Dawkins Road New Haven, IN 46774 DATED: 01 Jun 98

- 8. (Ref: DNSC ORPP par.11) Annual radiological survey is attached.
- 9. (Ref: DNSC ORPP par 9.1.2; 10 CFR 20.1003) "Restricted Area means an area, access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials."
  - A. See paragraphs 5B and 5C of this report for detailed descriptions of where restricted areas have been established.
  - B. The depot is secured by a seven foot high chainlink fence with three strands of barbed wire canted inward. The perimeter fence is six miles enclosing 268 acres of depot property. In addition, there is 24-hour manned guard service contracted by GSA. All warehouse doors are locked and sealed restricting entry to unauthorized individuals. Security guards are prohibited from entering restricted/controlled areas by Memo to District Commander, Federal Protective Services, dated 3 Mar 98.

## 10. Storage:

- A. The zirconium ore pile is in bulk form. The tantalum is containerized according to specifications at the time of acquisition. All containers appear to be in good condition.
- B. Storage and handling procedures are IAW DNSCM 4145.1, Defense National Stockpile Center Operations Manual.
- C. Inventory is maintained on the ACIS (Automated Commodity Inventory System) as well as on DLAH Form 45, Material Locator Cards as required by DNSCM 4145.1.
- D. There is no radioactive waste generated at the facility.
- E. The warehouse in which the tantalum is stored is 180' X 960' and is divided into four separate 180' X 240' sections with 79 bays for each section. Each section has four overhead doors on the north side and four overhead doors on the south side. Section four also contains an overhead door on the east side as well as a personnel door.
- F. See attached listing of all licensed materials showing their locations and quantities.

## 11. Emergency Procedures:

- A. (Ref: DNSC ORPP par.14.1) Emergency procedures are located in the Defense Logistic Agency, Defense National Stockpile Center Occupant Emergency Plan (OEP), New Haven Depot, New Haven, IN, dated May 98 in section II paragraph D. Hazardous Material; Leak/Spill/Personal Contamination. This OEP is forwarded annually to DNSC ORPP Manager, Kevin Reilly for approval. The OEP is disseminated annually to all employees on depot during a safety meeting to allow for any questions to be answered.
- B. (Ref. DNSC ORPP par.14.2) Arrangements are made with the local emergency response organization (New Haven Adams Township Fire Department) annually. The fire department makes an annual survey of the depot and discusses any possible hazards, which may be present. A knox box is located at the guardshack for use by the fire department should they be summoned to the depot for an emergency (Keys are maintained in the depot lock box and one

## Annual Radiological Survey for NRC License No. STC-133 DLA-DNSC-MONH New Haven Depot 15411 Dawkins Road New Haven, IN 46774 DATED: 01 Jun 98

key is encased in an emergency glass box that can be broken in case of an emergency). The knox box is updated semi-annually. The knox box contains folders for each warehouse and one for outside storage of commodities. On the outside of each folder are the NFPA 704 signs that are on each warehouse. There is also a listing showing all of the commodities stored in each section, then there are copies of the MSDS for each commodity in each section. Suggestion by SSG Collins is to document this arrangement by sending a letter to the fire department annually informing them of the knox box, etc. This suggestion will be completed by the end of CY 1998.

12. Medical Exams: (Ref: DNSC ORPP par. 15) Annual physicals for all personnel were conducted in 1998. For further information regarding annual physicals or results should be directed to Russell Bywaters, DLA-DNSC-MH, 703-767-6519. Mr Bywaters has sent to the Depot Manager via cc:mail, dated 1/5/98, a listing of personnel on depot and their restrictions or lack thereof based on the annual physicals.

## **FINDINGS ARE AS FOLLOWS:**

- 1. (Ref: DNSC ORPP par. 3.1) Position Description of RPO has not been annotated to reflect the additional duty.
- 2. (Ref: DNSC ORPP par. 4.2) DD Forms 1141 are on hold as instructed by the DNSC ORPP Manager, Kevin Reilly.
- 3. (Ref. DNSC ORPP par. 4.5) US NRC license located at the depot is incomplete. It does not contain the attachments necessary to complete each amendment.
- 4. (Ref: DNSC ORPP Par. 4.5) The diagrams provided in past annual radiological surveys appear to be reprints from previous audits.
- 5. (Ref: DNSC ORPP Par. 4.6) DD Forms 1141 have not been reviewed as they are on hold per DNSC ORPP Manager, Kevin Reilly.
- 6. (Ref: DNSC ORPP Par. 4.8 and Par. 16.2; DLAR 6055.4 par. XII.B.10; DLAM 4145.8 par 4-3) Past radiation training (initial and annual) has not been documented so is unavailable for the program's records.
- 7. (Ref: DNSC ORPP Par. 14.2) Documentation showing the prior arrangements with the local fire department should be maintained in the Radiation Notebook.
- 8. (Ref: DNSC ORPP Par. 16.2; DLAR 1000.28 par. 6-6.a.; DLAR 4145.23 section 1, par. 5-6A; 10 CFR 19.13) Documentation showing annual radiation exposure notifications has not been documented in the past so is unavailable for the program's records.
- 9. (Ref: DNSC ORPP Par 16.2; DLAR 6055.4 par. IX.D.2.) Documentation showing quarterly exposure reviews has not been documented in the past so is unavailable for the program's records.
- 10. (Ref. DLAR 1000.28 Appendix B, par. B.(1)) Blocks 11-20 are not completed on the DD Forms 1952 as instructed during DNSC Radiation Orientation Program.
- 11. (Ref: DLAR 1000.28 par. 6-1; DLAI 1000.30, par. 4-1; DLAR 4145.3 par. V.2.m.) A document is not available at the depot designating in writing the individual(s) responsible to serve as a dose record custodian.
- 12. (Ref: DLAR 6055.4 par. IX.A.5.) A document is not available at the depot designating the storage location for the personnel dosimetric devices.

# Annual Radiological Survey for NRC License No. STC-133 DLA-DNSC-MONH New Haven Depot 15411 Dawkins Road New Haven, IN 46774 DATED: 01 Jun 98

## RECOMMENDATIONS: (Awaiting decision from the DSNC ORPP Manager, Kevin Reilly)

- 1. It is good practice to send for calibration the source chip with the radiological instrument for constancy values.
- 2. It is good practice to stagger the calibration of radiological instruments throughout the year so that a calibrated instrument can be maintained on site at all times.
- 3. When the radiological instruments are sent in for calibration it is good practice to specify on the paperwork the calibration range (i.e. + or 20%)
- 4. There is no longer an alpha meter in use at the depot, it would be a good idea to properly dispose of or transfer the alpha emitting check source.
- 5. (DLAR 6055.4, par. IX.3.) Pocket Dosimeters should only be used as a reference and not as an official reading for records.
- 6. Dispose of the four pocket dosimeters labeled as drifters.
- 7. A leakage evaluation report for the pocket dosimeters should be performed and documented on a periodic basis.

## ANNUAL RADIOLOGICAL SURVEY FOR US NRC LICENSE NO. ST-133 NEW HAVEN DEPOT

Operation check with Cs137 source chip gave reading of 3.5 mR/hr - correct

NEW HAVEN DEPO NEW HAVEN, IN

LOCATION	SOURCE	INSTRUMENT USED	SHIELD POSITION	DISTANCE FROM SOURCE	SCALE FACTOR (RANGE)	METER READING	DOSE RATE
214-3 Door N-09	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	2.80	0.03
214-3 Door N-10	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	2.50	0.03
214-3 Door N-11	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.30	0.01
214-3 Door N-12	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.30	0.01
214-3 Door S-09	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.80	0.02
214-3 Door S-10	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.40	0.01
214-3 Door S-11	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.40	0.01
214-3 Door S-12	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	2.20	0.02
214-3-13	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.01	5.20	0.05
214-3-13	Tantalum	Eberline E-520	CLOSED	CONTACT	0.01	6.00	0.06
214-3-14	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	3.20	0.32
214-3-14	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	3.80	0.38
214-3-15	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	2.70	0.27
214-3-15	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	4.30	0.43
214-3-16	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	3.10	0.31
214-3-16	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	4.20	0.42
214-3-17	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	1.90	0.19
214-3-17	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	2.30	0.23
214-3-27	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	2.50	0.25
214-3-27	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	4.00	0.40
214-3-28	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	6.50	0.65
214-3-28	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	9.00	0,90
214-3-9	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	3.10	0.31
214-3-9	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	5.10	0.51

## ANNUAL RADIOLOGICAL SURVEY FOR US NRC LICENSE NO. ST-133 **NEW HAVEN DEPOT**

Operation check with Cs137 source chip gave reading of 3.5 mR/hr - correct

NEW HAVEN, IN

LOCATION	SOURCE	INSTRUMENT USED	SHIELD POSITION	DISTANCE FROM SOURCE	SCALE FACTOR (RANGE)	METER READING	DOSE RATE
214-4 Door E-01	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.30	0.01
214-4 Door N-13	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.40	0.01
214-4 Door N-14	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.20	0.01
214-4 Door N-15	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.50	0.02
214-4 Door N-16	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.30	0.01
214-4 Door S-13	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	3.50	0.04
214-4 Door S-14	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	2.20	0.02
214-4 Door S-15	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	4.50	0.05
214-4 Door S-16	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	4.60	0.05
214-4-11	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	2.20	0.22
214-4-11	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	3.70	0.37
214-4-21	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	1.00	0.10
214-4-21	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	1.50	0.15
214-4-31	Tantalum	Eberline E-520	CLOSED	1 F00T	0.10	1.10	0.11
214-4-31	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	2.70	0.27
214-4-41	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	3.10	0.31
214-4-41	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	4.10	0.41
214-4-42	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.01	5.70	0.06
214-4-42	Tantalum	Eberline E-520	CLOSED	CONTACT	0.01	10.00	0.10
214-4-45	Tantalum	Eberline E-520	CLOSED	1 F00T	0.01	5.20	0.05
214-4-45	Tantalum	Eberline E-520	CLOSED	CONTACT	0.01	7.00	0.07
214-4-51	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	2.30	0.23
214-4-51	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	2.60	0.26
214-4-61	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	1.50	0.15
214-4-61	Fantalum	Eberline E-520	CLOSED	CONTACT	0.10	2.20	0.22

## ANNUAL RADIOLOGICAL SURVEY FOR US NRC LICENSE NO. ST-133

## NEW HAVEN DEPOT NEW HAVEN, IN

Operation check with Cs137 source chip gave reading of 3.5 mR/hr - correct

LOCATION	SOURCE	INSTRUMENT USED	SHIELD POSITION	DISTANCE FROM SOURCE	SCALE FACTOR (RANGE)	METER READING	DOSE RATE
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.10	1.00	0.10
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.10	1.00	0.10
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.10	2.10	0.21
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.10	1.00	0.10
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.01	3.50	0.04
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.01	5.00	0.05
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.01	2.80	0.03
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.01	2.00	0.02
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.10	2.20	0.22
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.01	11.00	0.11

## ANNUAL RADIOLOGICAL SURVEY FOR US NRC LICENSE NO. ST-133

## NEW HAVEN DEPOT NEW HAVEN, IN

Operation check with Cs137 source chip gave reading of 3.5 mR/hr - correct

LOCATION		INSTRUMENT USED	SHIELD POSITION	DISTANCE FROM SOURCE	SCALE FACTOR (RANGE)	METER READING	DOSE RATE
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	1.80	1.80
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 F00T	1.00	1.50	1,50
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	2.00	2.00
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	1.90	1.90
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	1.90	1,90
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	1.90	1.90
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	1.80	1.80
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 F00T	1.00	2.00	2.00
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	2.00	2.00
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	1.80	1.80
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.20	2.20
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.10	2.10
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.70	2.70
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.80	2.80
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.10	2.10
Агеа 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	1.90	1.90
	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.10	2.10
4r42 / 3	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.50	2.50
Afes /	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.20	2.20
A163 / I	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.00	2,00

## ANNUAL RADIOLOGICAL SURVEY FOR US NRC LICENSE NO. ST-133

NEW HAVEN DEPOT NEW HAVEN, IN

Operation check with Cs137 source chip gave reading of 3.5 mR/hr - correct

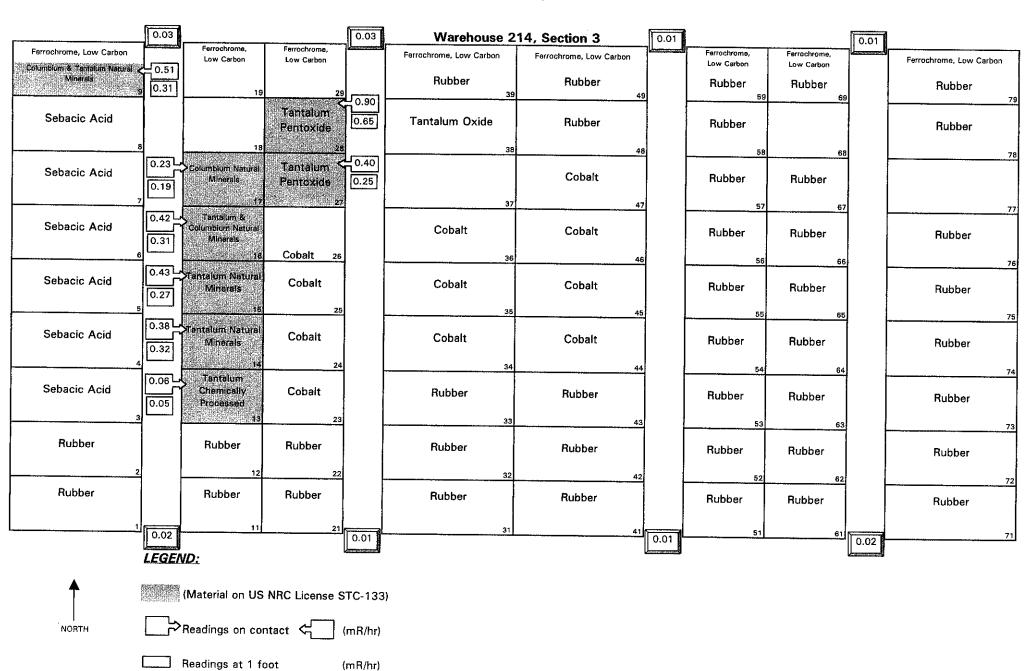
LOCATION	SOURCE	INSTRUMENT USED	SHIELD POSITION	DISTANCE FROM SOURCE	SCALE FACTOR (RANGE)	METER READING	DOSE RATE
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	0.01	4.00	0.04
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	0.10	1.20	0.12
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	0.01	13.00	0.13
Агеа 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	0.10	2.20	0.22
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	0.01	12.00	0.12
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	0.10	2.00	0.20
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	0.01	10.00	0.10
Агеа 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	0.01	6.00	0.06
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	0.10	1.80	0.18
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	0.01	17.00	0.17
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	0.10	3.40	0.34
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	0.01	14.00	0.14
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	0.10	3.00	0.30
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	0.01	13.00	0.13

Readings at Door

(mR/hr)

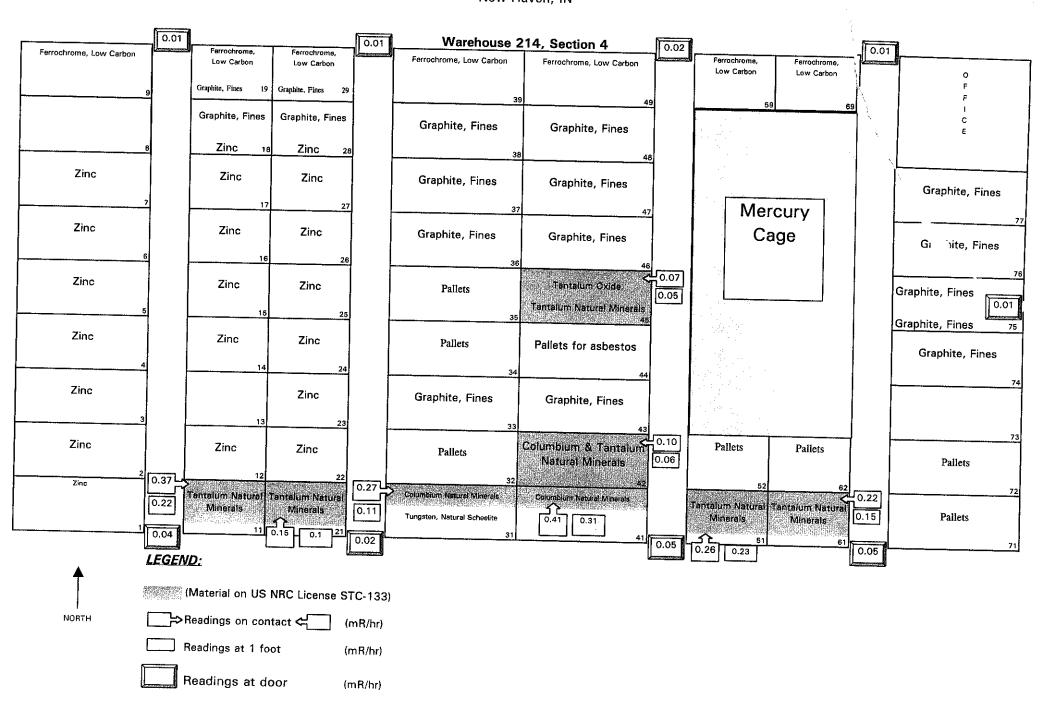
## Annual Radiological Survey New Haven Depot New Haven, IN

Dated Printed: 6/9/98



## Annual Radiological Survey New Haven Depot New Haven, IN

Diated Printed: 6/9/98



## NOTIFICATION OF STOCKPILE INSPECTION 1. NAME & LOCATION OF DEPOT OR FACILITY DLA/DNSC Depot New Haven, Indiana 5A. Date of Last Inspection 1. NAME & LOCATION OF DEPOT OR FACILITY DLA/DNSC Depot New Haven, Indiana 3. SERIAL NO. 6 4.CODE

08 Apr 97 STORAGE AND ♦

5B. Date of This Inspection
06 May 98 DEPOT AREA ♦ INSIDE STORAGE: Warehouse 214, Sections 3 and 4

7. NAME AND TITLE OF PERSON RESPONSIBLE FOR MATERIAL 7A. TEL. NO. OR CODE 7B. EXTENSION Mr. Frederic W. Brooks, Depot Manager (219)749-5953 N/A INSPECTION DATA (Check and complete. Explain negative responses) N/A 8. STORAGE A. Storage Facilities Are of the Type Prescribed in the Storage Manual B. Storage Facilities are Maintained in Good Order A. Material Is Stored In the Manner Prescribed in the Storage Manual 9. MATERIAL B. Material is Free of Deterioration, Infestation, Contamination, Commingling, Migration and Erosion A. Depot Manager Confirmed that all entries have been Posted 10. RECORDS B. Depot Postings indicate last RR No. dated ; Last OSR No. dated Quantity Indicated in 14h reflects Depot Posting and agrees with actual and/or computed count 11. UNITS 12. SECURITY Security and Fire Protection are being provided in accordance with AND FIRE Quality Assurance and Material Inspection Handbook **PROTECTION** And Storage Manual Requirements 13 A. Material is Stored in Proper Containers (Check only if applicable) B. All Containers, Piles and/or Units Are Marked as Prescribed in the Storage Manual CONTAINERS

Class III under remarks) OTHER UNITS % % 14. DESCRIPTION OF CONTAINERS, PILES, OR OTHER UNITS N/A PRO-TYPE(Pile, case, Nominal Size TOTAL NUM Diamg. AVERAGE WEIGHT OF UNIT BER OF UNITS GRAM Width Height ingot, bale, etc.) Length eter i.. Total Weight (1) Gross (2) Net (2) Net d h. (1) Gross

(2) Class II

(3) Class III

(1) Class I

C. Condition of Containers (Give exact number in

PILES, OR

#### SEE CONTINUATION SHEETS

15. RECOMMENDATIONS (Not to be construed by storage depot of facility as authorization to proceed with remedial measures beyond the scope of usual authority)

## SEE CONTINUATION SHEETS

		na.	
17.	[1] DNSC-MQ	[1] SUPERVISORY QA	
DISTRIBUTION	[1] ORIGINATING DEPOT	[4] OTHER(SPECIFY) DNSC-MQBI,ME,MQBR,MQNH	
	[ ] STOCKPILE OP. DIVISION	1	
18. NAME OF QUALITY ASSURA	ANCE SPECIALIST (Type of print)	18A. SIGNATURE (Reviewed by Acting SQAS: MLD)	18B. DATE OF SIGNATURE
Mary L. Davidson, Acting	SQAS	Man Of Danisha	6 Aug 98
This is a computerized version of a DL	AH Form 30 Dec 88	Lan.	

<sup>15.</sup> REMARKS (Review all other appropriate questions contained in "guide for the inspection of stockpiled materials and storage Facilities," and, if deficiencies are found, give the appropriate guide numbers and complete details in this block)

## 1.) Purpose:

This report is issued to document the required annual radiological survey at the above listed DLA/DNSC Depot, New Haven, Indiana. Reference: 10 CFR Part 20 subpart F. This facility is listed in Conditions (Item 10) on the Defense Logistics Agency, Defense National Stockpile, Materials License number STC-133, Docket or Reference No. 040-00341. Current Amendment No. 20, expires 31 Oct 99.

Accompanying me on this survey were both Bill Till (RSO-New Haven Depot), and Lois Huddlestun (RPO-New Haven). Bill Till was present during the entire survey while Lois Huddlestun accompanied us as time and workload permitted.

## 2.) Disposition of Licensable Commodities:

Licensed material at this installation is either stored in outside bulk ore piles or containerized. Material is stacked/piled in accordance with DNS regulations and containers meet the specifications of Class No. 1 containers (DNSCM 8200.9, Part 9, 3-903a.). The warehouses containing the licensed material appear to be in excellent condition. Attached are three maps that graphically depict both the dispositions of the ore piles and of the material stored within warehouse 214, Sections 3 and 4.

The two bulk ore Piles are surrounded by a fence. A padlocked gate controls access to the fenced area. Cognizant Depot personnel maintain control of the combination in accordance with Chapter 3, Section VI, Paragraph 3-32 of the Physical Security Manual DLAI 5710.1. Additionally cognizant Depot personnel in compliance with the above referenced directive also maintain access to the warehouses.

Reserve samples of the Columbium/Tantalum batch samples from previous samplings are being stored in Warehouse 213 Section 1 For specifics of sampling techniques see DLAH FORM 32 Report 1F-New Haven dated 04 May 94. Based on these results, memo from DNSC-ME dated 25 Feb 98 requests a License Amendment which would reduce the amount of material housed at this installation on Source License STC-133 to 32,885,420 pounds including the bulk ore piles. Since no further information is known concerning this request, Source License STC-133 Amendment No. 20 will be the referenced document for this report and the following information will be based on the information presented in that amendment.

## 2.) Disposition of Licensable Commodities (Cont'd):

The attached pages document the location of the containerized material. Spreadsheets are sorted by warehouse/section/bay. Reference should be made to the accompanying two maps which spatially depict the location of the material in each of the respective warehouses. The following lists the disposition of the two ore piles included on the applicable source license referenced in this report:

Pile Number	Width (ft)	Length (ft)	Height (ft)	Net Lbs.
111	60	285	25	
111A	45	100	20	31,981,398 2,783,706
			Total:	34,765,104

The attached map graphically depicts the configuration of these piles.

## 3.) Safety:

A decontamination facility is maintained at this depot which contains changing rooms, showers, toilets, and laundry facilities. All of the equipment appeared to be in good working condition. Respiratory equipment and protective clothing are also available.

## 4.) Instrumentation:

## a.) Survey Instruments:

<u>I<b>NSTRUMENT</b></u> Fag 40 F6 Dosimeter	MODEL/TYPE	<u>SERIAL NO.</u> 5-0002	CALIBRATION DUE See Note 1
Eberline Geiger Counter	E-120	10122	4/23/98
Eberline Geiger Counter	E-520	3135	4/23/98
Charger Dosimeter Minometer II Transistorized Charger	FEMA-750 687-0 362	A-004264 357	N/A See Note 2 See Note 2
Reader Victoreen V-750	357 6V-138 Dosimeter	39403/50793	N/A See Note 2

## 4.) Instrumentation (Cont'd):

\*Cognizant Depot personnel are aware of calibration date.

Note 1: Instrument was sent in for calibration prior to date of survey.

Note 2: Instruments were not at this installation. The absence of these instruments/equipment does not cause a deficiency. L. Huddlestun advised this writer they were submitted to DRMS.

## b.) Individual Monitoring Devices:

No. of Units	<b>Disposition</b>
9	See Note 2 above
15	See Note 2 above
26	
	9 15

The Film badges documented above are on a quarterly rotational program from the USAIRDC, US Army TMDE Activity, Redstone Arsenal, AL. This program provides the submitter with a printout of exposures, as well as, transcribes this information into a permanent database for each individual with a badge submitted. Copies of these printouts are maintained by the Depot RPO.

## c.) Source Check: Cs<sup>137</sup>

The source check has not been calibrated since issuance. Source chip has a serial number of 951. NOTE: Since the initial investigation it has been brought to this writer's attention that another Source Check is available at this installation, simply with the numerical designation 377.

## 5.) Records Inspection:

The following information is based on evaluation of the "Radiological Data Book" (ORPP para 16.2). This book is maintained by the Depot RPO in the Storage Specialist's Office, until such time that a permanent place can be established. This "book" was in excellent order and contained most of the information necessary for compliance with DNSC-ORPP regulations, except that information referenced below.

Additionally it is noted that SSG Collins of USACHPPM visited the New Haven Depot 29-30 April 1998. This writer was not present during his visit, but I was supplied with a copy of his exit briefing. It was documented in this brief that he did inspect every aspect of the DNSC ORPP at this installation. Some of the information documented below reflects the findings of his investigation and deserves mention.

## 5.) Records Inspection (Cont'd):

- a.) Radiological Officer: Appendix E of the DNSC ORPP designates: Lois Huddlestun (RPO) and Bill Till (RSO). Depot RPO can be reached at 219/749-5953 and Depot RSO can be reached at 219/749-8291.
- b.) Documentation of all training received by Depot personnel is not included in the above referenced book (memo from DNSC-M to dated Jun 13 1997). When time and workload permit this will be done (personal communication L. Huddlestun, 6 May 1998). Documentation of RPO and RSO training is also not included in the above referenced book.
- c.) Directive DNSC ORPP par. 4.2 mandates use of individual exposure records DD Form 1141's. This writer did not see any DD Form 1141's due to privacy concerns; however, I was informed by the Depot RPO (L. Huddlestun) that forms had been created, but were not up-to-date. Based on information included in the exit briefing SSG Collins said that there is no need for completing the 1141's because the paperwork provided by the USAIRDC, US Army TMDE Activity, Redstone Arsenal, AL meets compliance standard DLAR 100.28, 6-3a; therefore, the Depot RPO did not update the 1141 Forms.
- d.) There is no documentation of neither quarterly nor annual review of the 1141's (ORPP par. 4.6). Again, the 1141's are not up-to-date at this installation. However, all of the information provided by the USAIRDC, US Army TMDE Activity, Redstone Arsenal, AL is kept on file by the Depot RPO, although not viewed by this writer. There is no documentation in file that this paperwork was reviewed by the RPO/RSO or the information was given to/discussed with Depot personnel.
- e.) DD Form 1952's have been compiled for all Depot personnel at the New Haven Depot (per L. Huddlestun RPO); however, the blocks 11-20 have been left blank per DNSC directive.
- f.) In compliance with ORPP par. 4.3 NRC Form 3 (8/97) "Notice to Employees" with information denoting the location of the NRC License is posted. Also posted is the Energy Reorganization Act of 1974, Section 206. One copy of each form is posted in the main office area of the administrative building.

## 5.) Records Inspection (Cont'd):

- g.) An emergency plan has been established for the New Haven Depot. This plan includes reference to all commodities, but does not specify radiologic commodities (ORPP par. 14.1) (they are included with hazardous commodities). Prior arrangements have been coordinated with local fire and emergency response organizations. Meetings/coordination with local authorities will be documented in the above referenced "Radiologic Book" as time and workload permit (personal communication L. Huddlestun 6 May 1998).
- h) Included within the "Radiologic Data Book" are copies of pertinent documents that supplement the DNSC ORPP. These documents include but are not limited to: DLAR 1000.28, DLAR 4145.23, calibration certificates and prior radiological surveys. Also 10 CFR part 20 & 40, 29 CFR Part 1910, and 49 CFR Parts 171 through 189 are available at the Depot. In reference to the prior radiologic surveys, SSG Collins documented that these reports were not original and simply photocopied from year to year. It appears that some of the reports in the "Book" were simply amendments, therefore, the data would remain the same. There was however one report that did have erroneous data, this has been addressed and will be corrected in the future.
- i) Records are on file at the Depot that document both the respiratory fit testing and annual physicals have been completed for each of the applicable Depot employees. It should be noted that the Depot only has information documenting that personnel have had physicals, not the outcome of said physicals.

## 6.) Physical Inspection:

a). Licensed materials at this facility are located in Warehouse 214, Sections 3 and 4 or in bulk ore piles. Maps that graphically depict current storage locations are attached. Warehouse doors were "sealed" with embossed numbered plastic strip seals maintained and controlled by designated depot personnel.

## 6.) Physical Inspection (Cont'd):

- b.) The New Haven Depot is a "controlled area" by definition because it is an area that lies between the edge of the restricted are and the Depot perimeter. The DNSC Exposure Criteria 9.1.2 of the Occupational Radiation Protection Program (updated Feb 92), DNSC states the maximum permissible dose rate within a "Controlled area" shall not exceed 0.5 mr/hr. Data attached documents the fact those gamma emissions in Warehouse 214, Section 3, bays 27 and 28 exceed this reading of 0.5 mR/hr., as well as, the outside bulk Zirconium ore piles. All other inside storage has readings beneath 0.5 mR/hr (see attached). The area surrounding the ore piles has been defined as a "restricted area" and access had been limited for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials. The physical means used to make this area was the placement of a fence with signage designating the area to have controlled access. Warehouse 214, Section 3, bays 27 and 28 are not contained within a "restricted" area, however, Kevin Reilly DNSC-MH has determined that since these readings are only at contact (therefore, not defined as a dose rate) no further action is required.
- C.) This survey was conducted in accordance with the Defense National Stockpile Center Occupational Radiation Protection Program guidelines. The instrumentation utilized was an Eberline E-120 Geiger Counter, referenced in 4.a. above, with the beta shield in the "closed" position. It should be noted that although the above referenced guideline stipulates that readings should be taken at 1 foot from commodity, it would be impractical to take readings at 1 foot from an outside ore pile. Due to the irregular shape of the stored commodity. This would require climbing the Pile and taking readings in areas that are not encountered by personnel. Both the RPO and the RSO were present during this investigation. See attached "Monitoring Radiation Report" for specific survey results and attached maps for a graphic depiction of the analytic data.

## 7.) Security Door Seal(s):

- 1.) All seal (s) embossed red plastic door seals.
- 2.) Seal(s) removed were during this writer's absence.
- 3.) New seal(s) were affixed by Depot personnel during this writer's absence.

## 8.) Observances:

- a). The Radiation Protection Program at New Haven Indiana is fundamentally in compliance with all DNSC directives; however, it appears based on SSG Collins review that there remains some discrepancies. Since most of the Depots have been investigated by SSG Collins, there may be changes in the DNS Program based on his findings; however, the DNS ORPP is still in effect. If and when changes are made to the DNSC ORPP then changes can be instituted at the Depot level, until such time caution must be taken in applying SSGT Collin's recommendations.
- b). Although material in warehouse 214, Section 3, bays 27 and 28 has readings above 0.5 mR/hr, no action is require per K. Reilly DNSC-MH, because readings were only in contact.
- c). Proper information dissemination is critical to any Occupational Safety and Health program. Communication between Depot personnel and DNSC representatives should continue and bridge any informational/technical deficiencies that may be present (Reference: Internal Management Review criteria).

#### 9.) Conclusions:

- a.) Results of this survey indicate that licensed materials appear to be stored in accordance with applicable regulations.
- b.) All required warning signs, labels, markings and placards appear to be properly posted.
- c.) The maximum permissible occupational dose rate of 5.0 rems per year was not reached or exceeded by any employee (personal communication with L. Huddlestun 06 May 1998)
- d.) To the best knowledge of this writer, the dose rate within the "controlled area" (exclusive of the "restricted area") does not exceed 0.50 mr/hr nor does the dose rate at the perimeter fence of the Depot exceed background.
- e.) A draft copy of this report was submitted to both the Depot Radiation Protection Officer and the Depot Radiation Safety Officer for edit. This report was then generated after edit.

## 10.) Recommendations:

- a.) The source  $Cs^{137}$  should be submitted with the Geiger counter at the time of factory calibration for calibration.
- b.) The unknown source (noted as number 377) should be submitted with a. above for calibration.
- c.) Documentation of Depot training records should be kept in the "Radiological Data Book".
- d.) Documentation of annual and quarterly review of individual exposure records should be kept in the "Radiological Data Book".
- e.) Documentation of coordination between DNS New Haven and fire/emergency response teams should be kept in the "Radiological Data Book".
- f.) Occupational Radiation Protection Program information that is not protected by privacy regulations, should be disseminated and shared with all Depot personnel. This information should be kept in the Depot Library (Reference: Internal Management Review criteria).

## MONITORING RADIATION REPORT

Monitors M.L. Davidson, B. Till, L. Huddlestun

Date:		1998	

(See para. 2 of attached report)

Report No.: 6

,	Whse 214		Instrument	Shield				R/hr>
Time		Object or Person Monitored	Used	Open Closed	Distance	Range	Reading	Dose Rate
	Section 3		Eberline	Х	Contact	0.1	0.8	0.08
N/A	BAY 38	Columbium/Tantalum	E-120	x	1 foot	0.1	0.7	0.08
11	Section 3		Eberline	X	Contact	0.1	3	0.07
	BAY 27	Columbium/Tantalum	E-120	x	1 foot	0.1	2	
"	Section 3		Eberline	X	Contact	0.1	6	0.2
	BAY 28	Columbium/Tantalum	E-120	x x	1 foot	0.1	5	0.6 0.5
"	Section 3		Eberline	X	Contact	0.1	0.5	
	BAY 13	Columbium/Tantalum	E-120	x	1 foot	0.1	0.5	0.05
"	Section 3	1	Eberline	X	Contact	0.1	2.2	0.05
	BAY 14	Columbium/Tantalum	E-120	X	1 foot	0.1		0.22
**	Section 3	INSIDE STORAGE:	Eberline	X	Contact	0.1	2	0.2
	BAY 15	Columbium/Tantalum	E-120	X	1 foot	0.1	4	0.4
"	Section 3	INSIDE STORAGE:	Eberline	X	Contact	0.1	2	0.2
	BAY 16	Columbium/Tantalum	E-120	x	1 foot	0.1	4	0.4
**	Section 3	INSIDE STORAGE:	Eberline	X	Contact		3	0.3
	BAY 17	Columbium/Tantalum	E-120	x	1 foot	0.1	2.5	0.25
"	Section 3	INSIDE STORAGE:	Eberline	X	Contact	0.1	2	0.2
	BAY 09	Columbium/Tantalum	E-120	x	1 foot	0.1	3	0.3
"	Section 4	INSIDE STORAGE:	Eberline	X	Contact	0.1	3	0.3
	BAY 11	Columbium/Tantalum	E-120	x	1 foot	0.1	2	0.2
"	Section 4	INSIDE STORAGE:	Eberline	X	Contact	0.1	1.2	0.12
	BAY 21	Columbium/Tantalum	E-120	x	1 foot	0.1	1.4	0.14
"	Section 4	INSIDE STORAGE:	Eberline	X	Contact		0.8	0.08
	BAY 31	Columbium/Tantalum	E-120	X	1 foot	0.1	0.2	0.02
"	Section 4	INSIDE STORAGE:	Eberline	X		0.1	0.2	0.02
	BAY 41	Columbium/Tantalum	E-120		Contact	0.1	3.2	0.32
"	Section 4	INSIDE STORAGE:	Eberline	. X	1 foot	0.1	2	0.2
ľ	BAY 42	Columbium/Tantalum	E-120	X	Contact	0.1	2.5	0.25
"		INSIDE STORAGE:		X	1 foot	0.1	2	0.2
ĺ	BAY 45	Columbium/Tantalum	Eberline	Х	Contact	0.1	0.2	0.02
"		INSIDE STORAGE:	E-120	X	1 foot	0.1	0.2	0.02
ł	· · · · · · · · · · · · · · · · · · ·	Columbium/Tantalum	Eberline	X	Contact	0.1	3.5	0.35
"			E-120	X	1 foot	0.1	1.8	0.18
ļ		INSIDE STORAGE:	Eberline	X	Contact	0.1	1.8	0.18
· · ·		Columbium/Tantalum	E-120	Х	1 foot	0.1	1.2	0.12
ſ		Doors	Eberline	Х	Contact	0.1	0.2	0.02
OMMEN		Doors ground Reading: Approximately	E-120	X	Contact	0.1	0.2	0.02

COMMENTS: Background Reading: Approximately 50' from storage warehouse: 0-0.02 mR/hr.

## MONITORING RADIATION REPORT

Monitors M.L.	Davidson,	В.	Till,	L.	Huddlestun
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Date:	06 May		

(See para. 2 of attached report)

Report No.: 6

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Time			Instrument	Shield				Dose
rime		Object or Person Monitored	Used	Open Closed	Distance	Range	Reading	Rate
- /-		OUTSIDE STORAGE:	Eberline	Х	Contact	1	1.7-3.0	1.7-3.0
N/A	Pile 111	Zirconium Ore Pile	E-120					
**		OUTSIDE STORAGE:	Eberline	Х	Contact	1	0.03-2.2	0.03-2.2
W	Pile 111A	Zirconium Ore Pile	E-120		:			
**			Eberline	X	Contact	1	0.02-0.28	0.02-0.2
		FENCE SURROUNDING PILES	E-120					
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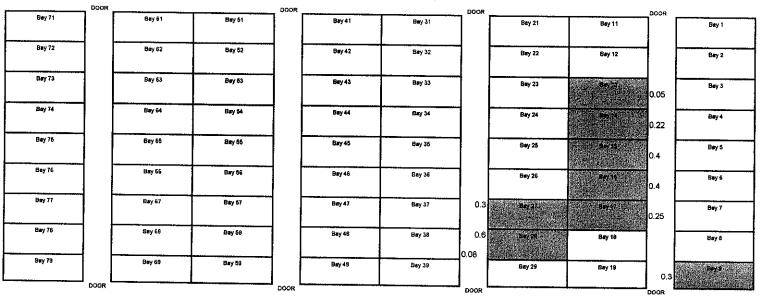
COMMENTS: Background Reading: Approximately 50' from storage warehouse: 0-0.02 mR/hr.

## READINGS TAKEN IN CONTACT WITH MATERIAL

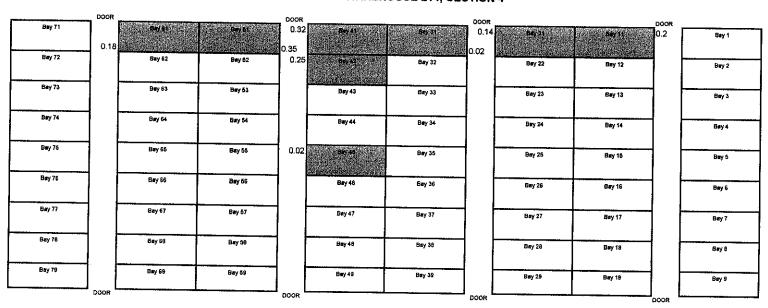
(All readings in mR/hr)

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## WAREHOUSE 214, SECTION 3



## **WAREHOUSE 214, SECTION 4**

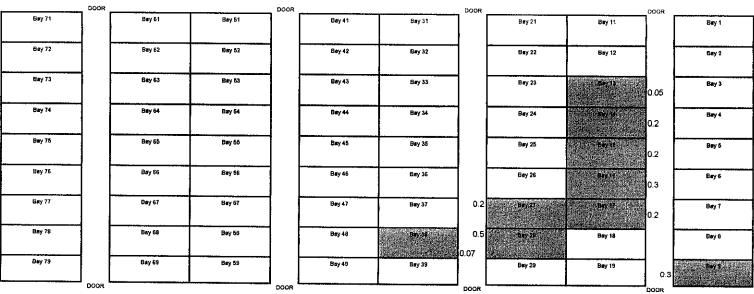


### **READINGS TAKEN ONE FOOT AWAY FROM MATERIAL**

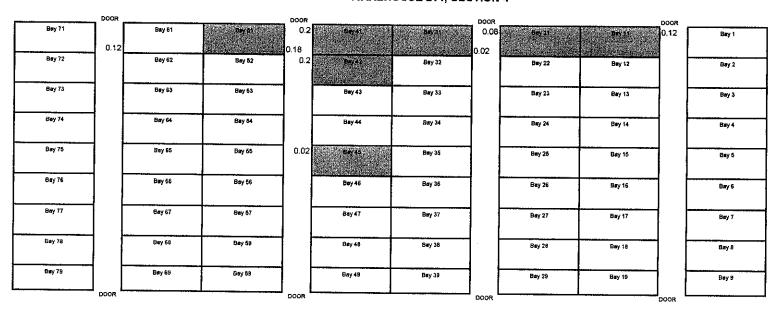
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(All readings in mR/hr)

## WAREHOUSE 214, SECTION 3



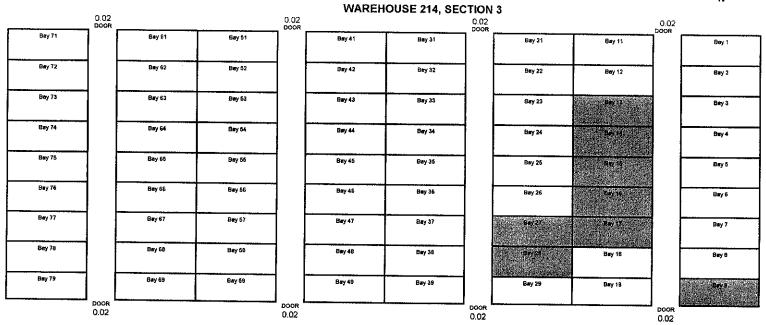
### **WAREHOUSE 214, SECTION 4**



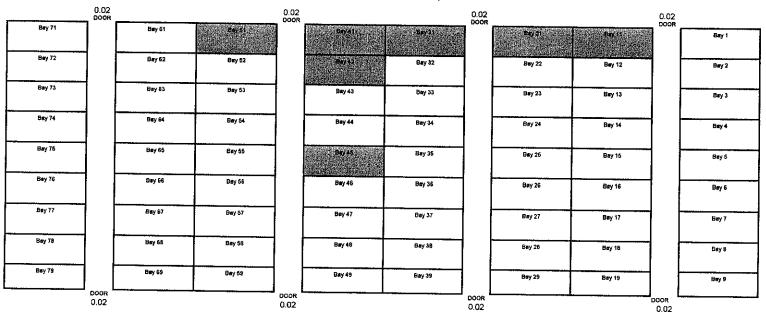
## **READINGS TAKEN AT WAREHOUSE EXIT DOORS**

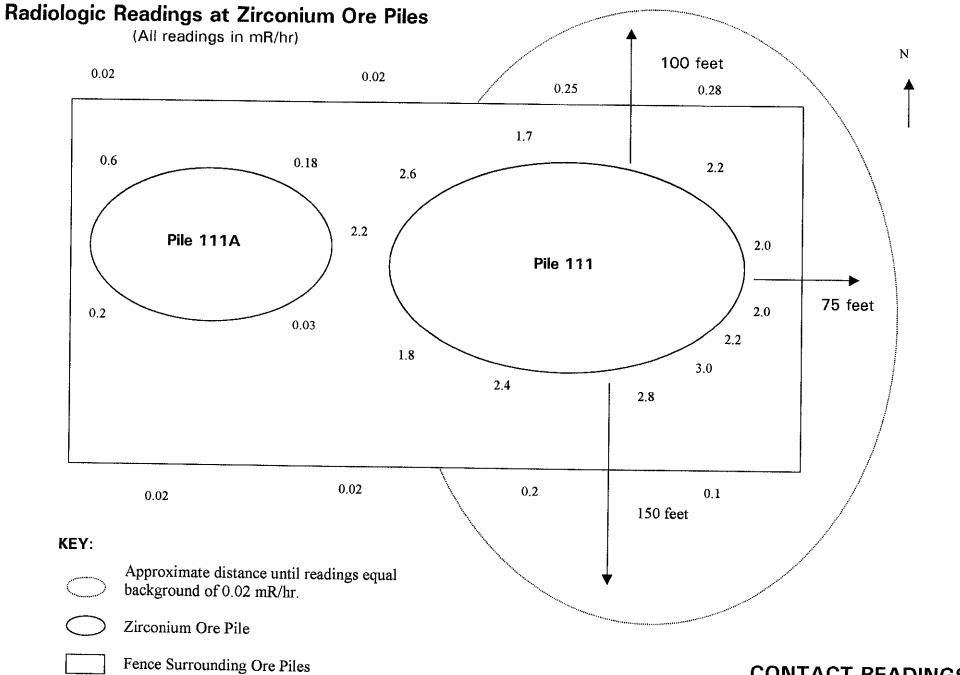
(All readings in mR/hr)





## **WAREHOUSE 214, SECTION 4**





**CONTACT READINGS** 

COMMODITY	TYPE	ORIGIN	MIF Lot #	LOT#	QUANTITY UNIT	WHSE	SEC	BAY	NET WT.
Columbium Tantatum Source Material	Tantalum Natural Minerals	Brazilian	023	23	5 Drums	214	3	9	2,182
Columbium Tantaium Source Material	Tantalum Natural Minerals	Brazilian	024	24	5 Drums	214	3	9	2,200
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	025	25	5 Drums	214	3	9.	2,202
Columbium Tantajum Source Material	Tantalum Natural Minerals		113	83/113	38 Drums	214	3	9	21,282
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	187	MRC-187	11 Drums	214	3	9	2.201
Columbium Tantalum Source Material	Tantalum Natural Minerals	Belgian	229	MRC-229	11 Drums	214	3	9	2.218
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	264	MRC-264	9 Drums	214	3	9	4,435
Columbium Tantalum Source Material	Tantalum Natural Minerals	Nigerian	272	MRC-272	7 Drums	214	3	9	1,320
Columbium Tantalum Source Material	Tantalum Natural Minerals	Belgian	297	MRC-297	7 Drums	214	3	9	1,385
Columbium Tantalum Source Material	Tantalum Natural Minerals	Australian	299	MRC-299	1 Drum	214	3	9	277
Columbium Tantalum Source Material	Tantalum Natural Minerals	Rhodesian	301	MRC-301	1 Drum	214	3	9	265
Columbium Tantalum Source Material	Tantalum Natural Minerals	Australian	313	MRC-313	1 Drum	214	3	9	235
Columbium Tantalum Source Material	Tantalum Natural Minerals	Australian	325	MRC-325	9 Drums	214	3	9	1,740
Columbium Tantaium Source Material	Tantalum Natural Minerals	Belgian	354	MRC-354	8 Drums	214	3	9	1.655
Columbium Tantalum Source Material	Tantalum Natural Minerals		A-9	VA-9	1 Drum	214	3	9	167.75
Columbium Tantaium Source Materials	Columbium Natural Minerals	Brazil	281	MRC-281	28 Drums	214	3	9	5,676
Columbium-Tantalum Concentrates	Chemically Processed		199	MGK-199	24 Drums	214	3	13	13,268
Columbium-Tantalum Concentrates	Chemically Processed		199	MGK-199	1 Cont Sweep	214	3	13	84
Columbium Tantalum Ore	Tantalum Source Material	S. Rhodesian	138	1138	16 Bags	214	3	14	2,215
Columbium Tantalum Ore	Tantalum Source Material	Australian	140	1140	153 Bags	214	3	14	9,379
Columbium Tantatum Ore	Tantalum Source Material	Brazilian	146	1146	40 Bags	214	3	14	4,407
Columbium Tantaium Ore	Columbium Tantalum	English	165	1165	11 Drums	214	3	14	4,347
Columbium Tantalum Ore	Tantalum Source Material	Brazilian	46A	1146A	40 Bags	214	3	14	4,326
Columbium Tantalum Ore	Tantalum Source Material	Brazilian	46B	1146B	40 Bags	214	3	14	4,404
Columbium Tantalum Ore	Tantalum Source Material	Brazilian	46C	1146C	40 Bags	214	3	14	4,395
Columbium Tantalum Ore	Tantalum Source Material	Brazilian	46D	1146D	40 Bags	214	3	14	4,381
Columbium Tantalum Ore	Tantalum Source Material	Brazilian	46E	1146E	50 Bags	214	3	14	5,493
Columbium Tantalum Ore	Tantalum Source Material	Brazilian	46F	1146F	50 Bags	214	3	14	5,485
Columbium Tantalum Ore	Tantalum Source Material	Brazilian	46G	1146G	60 Bags	214	3	14	6,618
Columbium-Tantalum Ore	Tantalum Source Material	British	105	1105	43 Bags	214	3	14	3,098
Columbium-Tantalum Ore	Tantalum Source Material	Brazilian	147	1147	113 Bags	214	3	14	9,915
Columbium Tantalum Source Material	Tantalum Natural Minerals	DIBERRAIT	001	1	10 Drums	214	3	15	3,000
Columbium Tantalum Source Material	Tantalum Natural Minerals		A+2	1A&2	3 Drums	214	3	15	694
Columbium Tantalum Source Material	Tantalum Natural Minerals	Belgian	22C	GEO-822C	13 Drums	214	3	15	2,443
Columbium Tantalum Source Material	Tantalum Natural Minerals	Belgian	831	GEO-831	15 Drums	214	3	15	3,007
Columbium Tantalum Source Material	Tantalum Natural Minerals	Belgian	832	GEO-832	16 Drums	214	3	15	3,007
Columbium Tantalum Source Material	Tantalum Natural Minerals	Rhodesian	100	MRC-100	11 Drums	214	3	15	3,300
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	117	MRC-100	8 Drums	214	3	15	2,150
	Tantalum Natural Minerals		126	MRC-117	11 Drums	214	3	15	2,150
Columbium Tantalum Source Material Columbium Tantalum Source Material		Belgian	120	MRC-126 MRC-129		214	3	15	
	Tantalum Natural Minerals	Brazilian		MRC-129 MRC-139	22 Drums	214	3	15	6,424 1,595
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	139	MRC-139 MRC-144	6 Drums		_		952
Columbium Tantalum Source Material	Tantalum Natural Minerals	Nigerian	144		5 Drums	214	3	15	
Columbium Tantalum Source Material	Tantalum Natural Minerals	Australian	150	MRC-150	5 Drums	214	3	15	1,282
Columbium Tantalum Source Material	Tantalum Natural Minerals	Belgian	151	MRC-151	6 Drums	214	3	15	1,270
Columbium Tantalum Source Material	Tantalum Natural Minerals	Australian	153	MRC-153	1 Drum	214	3	15	300
Columbium Tantalum Source Material	Tantalum Natural Minerals	Rhodesian	162	MRC-162	10 Drums	214	3	15	2,026
Columbium Tantalum Source Material	Tantalum Natural Minerals	Niberian	164	MRC-164	2 Drums	214	3	15	486
Columbium Tantalum Source Material	Tantalum Natural Minerals	Belgian	166	MRC-166	15 Drums	214	3	15	3,053
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	173	MRC-173	11 Drums	214	3	15	2,200
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	174	MRC-174	11 Drums	214	3	15	2,168
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	175	MRC-175	8 Drums	214	3	15	2,266
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	176	MRC-176	11 Drums	214	3	15	2,158

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COMMODITY	TYPE	ORIGIN	MIF Lot #	LOT#	QUANTITY UNIT	WHSE	SEC	BAY	NET WT.
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	177	MRC-177	11 Drums	214	3	15	
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	178	MRC-178	11 Drums	214	3	15	2,188
Columbium Tantalum Source Material	Tantalum Natural Minerals		179	MRC-179	8 Drums	214	3		2,188
Columbium Tantalum Source Material	Tantaium Natural Minerals		180	MRC-180	11 Drums	214	3	15 15	2,185
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	186	MRC-186	12 Drums	214	3	15	2,196
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	189	MRC-189	11 Drums	214	3	1	2,443
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	190	MRC-190	8 Drums	214	3	15	2,280
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	193	MRC-193	10 Drums	214	3	15	2,197
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	195	MRC-195	8 Drums	214		15	2,078
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	199	MRC-199	7 Drums	214	3	15	2,190
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	206	MRC-206	8 Drums		3	15	2,100
Columbium Tantalum Source Material	Tantalum Natural Minerals	Salt Lake City	213	MRC-213	13 Drums	214	3	15	2,200
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	216	MRC-216	22 Drums	214	3	15	3,215
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	217	MRC-217		214	3	15	4,426
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	218	MRC-217	22 Drums	214	3	15	4,375
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	219		22 Drums	214	3	15	4,380
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	219	MRC-219	21 Drums	214	3	15	4,311
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	222	MRC-222	22 Drums	214	3	15	4,393
Columbium Tantalum Source Material	Tantalum Natural Minerals		· · · · · · · · · · · · · · · · · · ·	MRC-223	22 Drums	214	3	15	4,397
Columbium Tantalum Source Material		Brazilian	224	MRC-224	15 Drums	214	3	15	4,394
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	238	MRC-238	8 Drums	214	3	15	2,177
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	239	MRC-239	8 Drums	214	3	15	2,192
Columbium Tantalum Source Material	Tantalum Natural Minerals		244	MRC-244	21 Drums	214	3	15	4,247
	Tantalum Natural Minerals	Brazilian	245	MRC-245	15 Drums	214	3	15	4,504
Columbium Tantalum Source Material	Tantalum Natural Minerals	Nigerian	247	MRC-247	4 Drums	214	3	15	843
Columbium Tantalum Source Material	Tantalum Natural Minerals	Australian	251	MRC-251	12 Drums	214	3	15	2,470
Columbium Tantalum Source Material Columbium Tantalum Source Material	Tantalum Natural Minerals	Rhodesian	254	MRC-254	7 Drums	214	3	15	1,940
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	259	MRC-259	11 Drums	214	3	15	2,191
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	260	MRC-260	8 Drums	214	3	15	2,190
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	261	MRC-261	8 Drums	214	3	15	2,182
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	263	MRC-263	15 Drums	214	3	15	4,404
Columbium Tantalum Source Material	Tantalum Natural Minerals		265	MRC-265	22 Drums	214	3	15	4,386
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	266	MRC-266	22 Drums	214	3	15	4,393
	Tantalum Natural Minerals	Brazilian	267	MRC-267	15 Drums	214	3	15	4,395
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	268	MRC-268	15 Drums	214	3	15	4,380
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazillan	269	MRC-269	22 Drums	214	3	15	4,412
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	270	MRC-270	16 Drums	214	3	15	4,791
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	271	MRC-271	22 Drums	214	3	15	4,387
Columbium Tantalum Source Material	Tantalum Natural Minerals	Nigerian	273	MRC-273	2 Drums	214	3	15	595
Columbium Tantalum Source Material	Tantalum Natural Minerals	Ugandan	274	MRC-274	2 Drums	214	3	15	522
Columbium Tantalum Source Material	Tantalum Natural Minerals	Ugandan	275	MRC-275	3 Drums	214	3	15	559
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	276	MRC-276	10 Drums	214	3	15	2,920
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	278	MRC-278	22 Drums	214	3	15	6,487
Columbium Tantalum Source Material	Tantalum Natural Minerals	Nigerian	282	MRC-282	3 Drums	214	3	15	739
Columbium Tantalum Source Material	Tantalum Natural Minerals	Nigerian	284	MRC-284	7 Drums	214	3	15	1,935
Columbium Tantalum Source Material	Tantalum Natural Minerals	Belgian	290	MRC-290	5 Drums	214	3	15	
Columbium Tantalum Source Material	Tantalum Natural Minerals	Belgian	291	MRC-291	18 Drums	214	3	15	1,066
Columbium Tantalum Source Material	Tantalum Natural Minerals	Belgian	295	MRC-295	12 Drums	214			3,541
Columbium Tantalum Source Material	Tantalum Natural Minerals	Belgian	296	MRC-296	7 Drums		3	15	2,400
Columbium Tantalum Source Material	Tantalum Natural Minerals	Australian	300	MRC-300	2 Drums	214	3	15	1,369
Columbium Tantalum Source Material	Tantalum Natural Minerals	, (dolland)	303	MRC-303	33 Drums	214	3	15	311
Columbium Tantalum Source Material	Tantalum Natural Minerals		305	MRC-305	<del></del>	214	3	15	6,647
Columbium Tantalum Source Material	Tantalum Natural Minerals	Handen			2 Drums	214	3	15	411
The state of the s	1 Tantatum Natural Willerais	Ugandan	308	MRC-308	5 Drums	214	3	15	1,005

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COMMODITY	TYPE	ORIGIN	MIF Lot#	LOT#	QUANTITY UNIT	WHSE	SEC	BAY	NET WT.
Columbium Tantalum Source Material	Tantalum Natural Minerals	New Mexican	309	MRC-309	10 Drums	214	3	15	2.312
Columbium Tantalum Source Material	Tantalum Natural Minerals	Australian	312	MRC-312	1 Drum	214	3	15	241
Columbium Tantalum Source Material	Tantalum Natural Minerals	Australian	314	MRC-314	2 Drums	214	3	15	406
Columbium Tantalum Source Material	Tantalum Natural Minerals	Australian	315	MRC-315	11 Drums	214	3	15	3,086
Columbium Tantalum Source Material	Tantalum Natural Minerals	Australian	317	MRC-317	7 Drums	214	3	15	1,456
Columbium Tantalum Source Material	Tantalum Natural Minerals	Australian	318	MRC-318	11 Drums	214	3	15	3,080
Columbium Tantalum Source Material	Tantalum Natural Minerals		320	MRC-320	2 Drums	214	3	15	408
Columbium Tantalum Source Material	Tantalum Natural Minerals	Nigerian	321	MRC-321	15 Drums	214	3	15	4,475
Columbium Tantalum Source Material	Tantalum Natural Minerals	Nigerian	322	MRC-322	5 Drums	214	3	15	1,329
Columbium Tantalum Source Material	Tantalum Natural Minerals	Australian	326	MRC-326	3 Drums	214	3	15	723
Columbium Tantalum Source Material	Tantalum Natural Minerals	Ugandan	333	MRC-333	1 Drum	214	3	15	160
Columbium Tantalum Source Material	Tantalum Natural Minerals	Belgian	343	MRC-343	43 Drums	214	3	15	8.653
Columbium Tantalum Source Material	Tantalum Natural Minerals		348	MRC-348	2 Drums	214	3	15	314
Columbium Tantalum Source Material	Tantalum Natural Minerals	Ugandan	350	MRC-350	4 Drums	214	3	15	838
Columbium Tantalum Source Material	Tantaium Natural Minerals		352	MRC-352	9 Drums	214	3	15	1,824
Columbium Tantalum Source Material	Tantalum Natural Minerals		353	MRC-353	6 Drums	214	3	15	1,024
Columbium Tantalum Source Material	Tantalum Natural Minerals	Belgian	356	MRC-356	2 Drums	214	3	15	347
Columbium Tantalum Source Material	Tantaium Natural Minerals	Nigerian	359	MRC-359	12 Drums	214	3	15	2,303
Columbium Tantalum Source Material	Tantaium Natural Minerals	Nigerian	077	MRC-77	6 Drums	214	3	15	1,174
Columbium Tantalum Source Material	Tantalum Natural Minerals	Ugandan	081	MRC-81	2 Drums			15	d
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	086	MRC-86		214	3		452
Columbium Tantalum Source Material	Tantalum Natural Minerals	Diazman	091	MRC-86 MRC-91	22 Drums 95 Drums	214	3	15	4,352
Columbium Tantalum Source Material	Tantalum Natural Minerals		092	MRC-91	8 Drums	214	3	15	28,340
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	092	MRC-92 MRC-94	22 Drums		3	15	1,604
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	012	12	9 Drums	214	3	15	4,324
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	013	13	16 Drums	214	3	16	4,379
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	015	15				16	7,665
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	020	20	7 Drums	214	3	16	3,280
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	020	20 21	5 Drums	214	3	16 16	6,535 2,178
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	021	22	5 Drums	214	3	16	2,178
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	026	26	5 Drums	214	3	16	2,184
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	030	30	34 Drums	214	3	16	16,643
Columbium Tantalum Source Material	Tantalum Natural Minerals	Belgian	107	107	10 Drums	214	3	16	3,831
Columbium Tantalum Source Material	Tantalum Natural Minerals	Belgian	809	GEO-809	98 Drums	214	3	16	19,648
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	113	MRC-113	23 Drums	214	3	16	6,642
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	138	MRC-138	10 Drums	214	3	16	2,853
Columbium Tantalum Source Material	Tantalum Natural Minerals	Diazilian	183	MRC-183	8 Drums	214	3	16	2,003
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	196	MRC-196	8 Drums	214	3	16	2,250
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	226	MRC-196	9 Drums			[	
Columbium Tantalum Godree Material	Tantalum Natural Minerals		227	MRC-226		214	3	16	4,500
Columbium Tantalum Source Material		Brazilian			15 Drums	214	3	16	4,358
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	228	MRC-228	10 Drums	214	3	16	4,676
Columbium Tantaium Source Material	Tantalum Natural Minerals	Brazilian	243	MRC-243	15 Drums	214	3	16	4,368
	Tantalum Natural Minerals	Brazilian	246	MRC-246	12 Drums	214	3	16	3,524
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	256	MRC-256	9 Drums	214	3	16	2,194
Columbium Tantalum Source Material	Tantalum Natural Minerals	Nigerian	277	MRC-277	3 Drums	214	3	16	879
Columbium Tantalum Source Material	Tantalum Natural Minerals	Brazilian	279	MRC-279	15 Drums	214	3	16	4,388
Columbium Tantalum Source Material	Tantalum Natural Minerals	Nigerian	283	MRC-283	4 Drums	214	3	16	1,041
Columbium Tantalum Source Material	Tantalum Natural Minerals	Nigerian	285	MRC-285	3 Drums	214	3	16	738
Columbium Tantalum Source Material	Tantalite Ore	Nigerian	306	MRC-306	3 Drums	214	3	16	612
Columbium Tantalum Source Material	Tantalum Natural Minerals	Belgian	311	MRC-311	3 Drums	214	3	16	849
Columbium Tantalum Source Material	Tantalum Natural Minerals	Nigerian	323	MRC-323	3 Drums	214	3	16	781
Columbium Tantalum Source Material	Tantalum Natural Minerals	Belgian	355	MRC-355	67 Drums	214	3	16	13,388

COMMODITY	TYPE	ORIGIN	MIF Lot#	LOT#	QUANTITY UNIT	WHSE	SEC	BAY	NET WT.
Columbium Tantalum Source Material	Tantalum Natural Minerals	Rhodesian	087	MRC-87	25 Drums	214	3	16	7,700
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	357	MRC-357	15 Drums	214	3	16	3,082
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	818	GEO-818	108 Drums	214	3	16	21,466
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	292	MRC-292	8 Drums	214	3	16	1,665
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	351	MRC-351	14 Drums	214	3	16	2,728
Columbium Tantalum Source Materials	Columbium Natural Minerals	Brazil	262	MRC-262	21 Drums	214	3	16	4,446
Columbium Tantalum Source Materials	Columbium Natural Minerals	India	286	MRC-286	7 Drums	214	3	16	1,909
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	293	MRC-293	20 Drums	214	3	16	3,986
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	294	MRC-294	40 Drums	214	3	16	8,022
Columbium Tantalum Source Materials	Columbium Natural Minerals	Australia	324	MRC-324	3 Drums	214	3	16	683
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	339	MRC-339	24 Drums	214	3	16	7,220
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	358	MRC-358	83 Drums	214	3	16	24,863
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	819	GEO-819	107 Drums	214	3	16	
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	833	GEO-833	106 Drums	214			21,298.5
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	834	GEO-834	111 Drums		3	17	21,228
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	837	GEO-837	111 Drums	214	3	17	22,037
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	838	GEO-838		214	3	17	22,031.5
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	839	GEO-839	111 Drums	214	3	17	22,127.5
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	840	GEO-839 GEO-840	111 Drums	214	3	17	22,056.5
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	843		111 Drums	214	3	17	22,056
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	817	GEO-843	110 Drums	214	3	17	21,826
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	821	GEO-817 GEO-821	109 Drums	214	3	17	21,785,25
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	836	GEO-836	107 Drums 108 Drums	214	3	17	21,111.5
Columbium Tantalum Source Materials	Columbium Natural Minerals	Canada	280	MRC-280		214	3	17	21,617
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	340	MRC-260	3 Drums	214	3	17	650
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	816	GEO-816	44 Drums	214	3	17	13,222
Columbium Tantalum Source Materials	Columbium Natural Minerals	India	287	MRC-287	110 Drums 3 Drums	214	3	17	22,432.5
Columbium Tantalum Source Materials	Columbium Natural Minerals	Belgian Congo	336	MRC-336	4 Drums	214	3	17	600
Columbium Tantalum Source Materials	Columbium Natural Minerals	Nigerian	342	MRC-342	4 Drums	214	3	17	1,221
Tantalum Pentoxide	Natural Concentrates	regeniari	001	1	84 Drums	214	3	17	1,061
Tantalum Pentoxide	Natural Concentrates		002	2	84 Drums	214	3	26	42,000
Tantalum Pentoxide	Natural Concentrates		003	3	84 Drums	214	3	26	42,000
Tantalum Pentoxide	Natural Concentrates		004	4	<del></del>			26	42,000
Tantalum Pentoxide	Natural Concentrates		004	4	36 Drums 48 Drums	214	3	26	18,000
Tantalum Pentoxide	Natural Concentrates		005	5	· · · · · · · · · · · · · · · · · · ·	214	3	28	24,000
Tantalum Pentoxide	Natural Concentrates		006	6	84 Drums	214	3	28	42,000
Tantalum Pentoxide	Natural Concentrates		007	7	84 Drums	214	3	28	42,000
Columbium Tantalum Source Material	Tantalum Natural Minerals		111	111	59 Drums	214	3	28	29,500
Columbium Tantalum Source Material	Tantalum Natural Minerals		001		3 Drums	214	4	11	2,043
Columbium Tantalum Source Material	Tantalum Natural Minerals			001060001	10 Drums	214	4	11	6,640
Columbium Tantalum Source Material	Tantalum Natural Minerals		001	0021980001	4 Drums	214	4	11	1,771
Columbium Tantalum Source Material			574	0782362574	5 Drums	214	4	11	2,322
	Tantalum Natural Minerals		678	0782362678	4 Drums	214	4	11	1,693
Columbium Tantalum Source Material	Tantalum Natural Minerals		00E	0010700E	5 Drums	214	4	11	3,454
Columbium Tantalum Source Material	Tantalum Natural Minerals		00F	001107000F	6 Drums	214	4	11	3,781
Columbium Tantalum Source Material	Tantalum Natural Minerals		00G	001107000G	13 Drums	214	4	11	8,674
Columbium Tantalum Source Material	Tantalum Natural Minerals		180	ONSP-4E180	4 Drums	214	4	11	1,988
Columbium Tantalum Source Material	Tantalum Natural Minerals		002	001060002	13 Drums	214	4	21	8,765
Columbium Tantalum Source Material	Tantalum Natural Minerals		005	001060005	18 Drums	214	4	21	11,014
Columbium Tantalum Source Material	Tantalum Natural Minerals		013	11080013	10 Drums	214	4	21	5,364
Columbium Tantalum Source Material	Tantalum Natural Minerals		014	11080014	10 Drums	214	4	21	5,308
Columbium Tantalum Source Material	Tantalum Natural Minerals		00A	1116000A	9 Drums	214	4	21	3,146
Columbium Tantalum Source Material	Tantalum Natural Minerals		533	0021671533	3 Drums	214	4	31	1,762

COMMODITY	TYPE	ORIGIN	MIF Lot#	LOT#	QUANTITY	11207	1 3471-		T	<del></del>
Columbium Tantalum Source Material	Tantalum Natural Minerals		00D	001107000D		UNIT	WHSE	SEC	BAY	NET WT.
Columbium Tantalum Source Material	Tantalum Natural Minerals		ONG	3 NONG		Drums	214	4	31	1,033
Columbium Tantalum Ore	Tantalite	Belgian	206	DMS-206		Drums	214	4	31	1,188
Columbium Tantalum Ore	Tantalite	Belgian	216	DMS-206		Drums	214	4	41	8,053
Columbium Tantalum Ore Concentrates	Tantalite	Belgian	99A			Drums	214	4	41	3,323
Tantalite	Natural Min.	Delgian	001	199-A		Drums	214	4	41	3,325
Tantalite	Natural Min.	Brazilian	106	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Drums	214	4	41	660
Tantalite	Natural Min.	Brazilian	108	106		Drums	214	4	41	4,265
Tantalite	Natural Min.	Brazilian		108		Drums	214	4	41	6,397.5
Tantalite	Natural Min.		118	118		Drums	214	4	41	8,550
Tantalite	Natural Min.	Belgian	207	207	7	Drums	214	4	41	1,699
Tantalite	Natural Min,	Malayan	272	2272	8	Drums	214	4	41	2,026
Tantalite	Natural Min.	Australian	329	2329	3	Drums	214	4	41	715.5
Tantalite	Natural Min.	Belgian	52A	A-DMS-123	31	Drums	214	4	41	8,553
Tantalite Concentrates	Natural Min.	Belgian	52B	B-DMS-B1	14	Drums	214	4	41	3,685
Tantalite Concentrates	Natural Min.		059	59	8	Drums	214	4	41	2,157
Tantalite Concentrates	Natural Min.	<del></del>	060	60	8	Drums	214	4	41	2,125
Tantalite Ore			03B	DMS-203-B	9	Drums	214	4	41	2,434.5
Tantalite Ore Concentrates	Natural Min.	Nigerian	002	2	9	Drums	214	4	41	2,257
Columbium Tantaium Source Material	Natural Min.		001	1	13	Drums	214	4	41	3,768
Columbium Tantalum Source Material	Tantalum Natural Minerals		001	0011620001	7	Drums	214	4	42	4,379
Columbium Tantalum Source Material	Tantalum Natural Minerals		179	ONSP-4E179	7	Drums	214	4	42	2,847
Columbium Tantalum Source Material	Tantalum Natural Minerals		181	ONSP-4E181		Drums	214	4	42	2,110
Columbium Tantalum Source Material	Tantalum Natural Minerals		811	ONSP-30811	275	Orums	214	4	42	54,866
Columbium Tantalum Source Material	Tantalum Natural Minerals		178	ONSP-4E178	23 (	Drums	214	4	42	9,223
Tantalite	Tantaium Naturai Minerais		182	ONSP 4E182	46 [	Orums	214	4	42	19,321
Tantalite	Tantalum Nat. Min.		104	MGK-104	22 [	Boxes	214	4	45	1,981
Tantalite	Tantalum Nat. Min.		108	MGK-108		Orums	214	4	45	3,660
Tantalite	Tantalum Nat. Min.		110	MGK-110	8 [	Drums	214	4	45	3,000
Tantalite	Tantalum Nat, Min.		112	MGK-112	15 E	Boxes	214	4	45	2,162
Tantalum Oxide	Tantalum Nat. Min.	Austrailian	01F	RPS	1 [	Orum	214	4	45	1,487
Tantalum Oxide	Chemically Precipitated Tantalum Oxide	German	-20	M 1-20 New York	20 H	(egs	214	4	45	2,000.5
Tantalum Oxide	Chemically Precipitated Tantalum Oxide	German	902	P-902	50 H		214	4	45	5,014
Fantalum Oxide	Chemically Precipitated Tantalum Oxide		138	S-1138	50 K		214	4	45	5,004
Fantalum Oxide	Chemically Precipitated Tantalum Oxida	German	200 & 250	S-1138	100 K		214	4	45	10,005
Fantalum Oxide	Chemically Precipitated Tantalum Oxide	German	401	S-1138/F	60 K		214	4	45	6,020
Tantalum Oxide	Chemically Precipitated Tantalum Oxide	German	351	S-1138G	50 K		214	4	45	5,031.5
Fantalum Pentoxide	Chemically Precipitated Tantalum Oxide	German	350	S-1138	100 K		214	4	45	
	Chemically Precipitated Tantalum Oxide	German	-50	P-902	. 50 K		214	4	45	10,017
Tantalum Pentoxide	Chemically Precipitated Tantalum Oxide	German	992	S-992	50 K		214			5,012
antalum Pentoxide	Chemically Precipitated Tantalum Oxide	German	992	S-992	50 K		<del> </del>	4	45	5,007
antalum Pentoxide	Chemically Precipitated Tantalum Oxide	German	048	S-1048-New York	50 K	egs	214	4	45	5,004
antalum Pentoxide	Chemically Precipitated Tantalum Oxide	German	050	S-1048			214	4	45	4,980
antalum Pentoxide	Chemically Precipitated Tantalum Oxide		101 OR /50	S-1138	100 K		214	4	45	9,196
antalum Pentoxide	Chemically Precipitated Tantalum Oxide		101 OR /50	S-1138	50 K	egs	214	4	45	5,020
Columbium Tantalum Source Material	Tantalum Natural Minerals		444		50 K		214	4	45	5,020
Columbium Tantalum Source Material	Tantalum Natural Minerals		111	111	10 D		214	4	51	6,590
Columbium Tantalum Source Material	Tantalum Natural Minerals		111		10 D		214	4	51	6,603
Columbium Tantalum Source Material	Tantalum Natural Minerals	<del> </del>	111	111	10 D		214	4	51	6,448
Columbium Tantalum Source Material	Tantalum Natural Minerals		111	111		rums	214	4	51	2,284
clumbium Tantalum Source Material	Tantalum Natural Minerals	<del></del>	569		10 D		214	4	51	6,566
Columbium Tantalum Source Material	Tantalum Natural Minerals	<del></del>	111	1107(569)		rums	214	4	51	1,567
olumbium Tantalum Source Material	Tantalum Natural Minerals	ļ	111	111	16 D	rums	214	4	61	10,635

COMMODITY	TYPE	ORIGIN	MIF Lot#	LOT#	QUANTITY UNIT	1444000		Ţ	
Tantalite	Natural Min.	Swedish	001	4		WHSE	SEC	BAY	NET WT.
Tantalite	Natural Min.		·	1	13 Drums	214	4	41/42	3,144
Tantalite		Swedish	001	11	4 Drums	214	4	41/42	911
Tantalite	Natural Min.	Brazilian	105	105	8 Drums	214	4	41/42	
Tantalite	Natural Min.	1	053	1053	22 Drums	4 · · · · · · · · · · · · · · · · · · ·	7 -		2,192
	Natural Min.		53A	1053A		214	. 4	41/42	6,594
Tantalite	Natural Min.		53B	the second of the contract of	8 Drums	214	4	41/42	2,184
Tantalite	Natural Min.	D-1-1	+	1053B	8 Drums	214	4	41/42	2,128
Tantalite	*	Beigian	99B	199-B	29 Drums	214	4	41/42	7.917
Tantalite	Natural Min.	Belgian	99C	199-C	22 Drums	214	4	41/42	
	Natural Min.	Belgian	99D	199-D	11 Drums	214	<del></del>		5,355
Tantalite	Natural Min.	Belgian	52C	C-DMS-C-1			4	41/42	2,851
Tantalite	Natural Min.		01F		21 Drums	214	4	41/42	5,670
Tantalite	Natural Min.			DMS-137	50 Drums	214	4	41/42	13,729.5
Tantalite Concentrates		Belgian	138	DMS-138	52 Drums	214	4	41/42	14.010
Tantalite Ore	Natural Min.	Brazilian	0AS	AS	4 Drums	214	<del></del>		
Tankaike Ore	Natural Min.	Brazilian	IOE	Rio E				41/42	925
					47 Drums	214	4	41/42	10,798.5
			:	Grand Total:	6752 Drums				1,640,356

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DNSC-MQ

MEMORANDUM FOR DNSC-MO

SUBJECT: Annual Radiological Report

DLAH Form 30, S/N 6, dtd Aug 6, 1998

New Haven, IN

The attached report indicates a somewhat incomplete inspection because the Radiological Safety Officer was apparently denied access to some depot records under the guise of Public Law No. 93-579, Privacy Act of 1974. Please direct depot personnel to provide all requested documents during future annual surveys. Failure to do so prevents us from fulfilling our responsibilities mandated by the DNSC Occupational Radiation Protection Program.

Notwithstanding the above, we concur with the following recommendations in the attached subject report:

Calibrate two check sources maintained at the depot.

Include documentation of radiation safety training in the depot's "Radiological Data Book".

Include documentation of coordination with emergency response personnel in the depot's "Radiological Data Book".

Place copies of the DNSC Occupational Radiation Protection Program, DLA and NRC Regulations, and the DNSC Source Materials License in the depot library so they are available to all personnel without requiring them to request access.

Review individual exposure records quarterly, document the reviews, advise employees and document the annual advisories. Include documentation in the depot's "Radiological Data Book."

## /S/ Peter O.I.M. Porton

PETER O.I.M. PORTON
Chief, Quality Assurance &
Technical Services Division

Attachment

CC: Off. file - MQ DNSC-ME, DNSC-MQBI, DNSC-MQBR, DNSC-MQNH

DNSC-MQ/Mpecullan:mjp/767-7620/9/3/98

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#### RADIOLOGICAL SURVEY

Apr 8,1997

#### Purpose:

This report is to document the annual Radiological survey conducted at New Haven Depot. The depot has in storage seven (7) commodities which are covered on the NRC Source licenses STC-133, expiration date 31 Oct. 1999. The licensable commodities are Columbium Tantalum, Source Material, Natural Minerals; Columbium Tantalum, Source Material, Chemically Processed; Columbium Tantalum, Source Material; Tantalum Oxide, Columbium Tantalum, Source Material; Rear Earth(Sodium Sulfate); Zirconium Ore, (Baddeleyite Material) of which are all stored in Whs. 214, 215 and Area 7A.

Disposition of licensable commodity: The warehouse sizes are 180' X 960' and is divided into four (4) separate 180' X 240' sections with 79 bays with eight (8) roll-up doors per section. Licensable commodities are stored in accordance with the storage manual. Specification and stack cards (DLAH-1660) are visible and accessible. Warning signs, labels, marking and placards are in place. Accessibility is controlled by the Depot Manager and RPO on location, warehouse doors are locked for security. The depot has chain link fencing with three strands of barbed wire for additional security. This depot is also provided with twenty fours a day, seven days a week guard service.

## 2. Safety:

This depot installation maintains a decontamination area in section 1, warehouse 214, west end, which is divided into two sections. This facility is furnished with showers, toilets, wash basins, laundry facilities, change room and locker rooms. All the air in this area is filtered with a self contained filtering system and set up for asbestos particulate.

## 3. Equipment Procedure:

The procedure utilized during this survey involved three integral parts.

- 1. Instrumentation/Calibration
- 2. Equipment
- 3. Source Chip Check

All radiological equipment is checked for calibration and proper operation using a CS-137 source chip.

### 4. Physical Survey:

The subject materials were surveyed in two separate warehouses and one open storage area. They were monitored using the FAG 40F6 Dosimeter model 50002. Additional equipment available are Eberline E-120 and E-520 Geiger counters. Calibration dates on the FAG meter is 3/97 due 3/98, E-120 is 3/97 due 3/98 and the E520 calibration date is 3/97 and due 3/98, In-house calibration check is accomplished prior to use.

- (a) The first survey involves the random selection of seventeen (17) locations along the perimeter fence. At each location three (3) readings were taken. All readings were recorded on a chart of the perimeter fence. The average background readings were well within the depot background level of detection of 0.02 0.03 mr/hr. (See exhibit # 1)
- (b) The second portion of this survey involves the readings at two (2) Zirconium (Baddeleyite) Ore piles, one being the base material which is mostly stone and dirt from a previously stored location. Material is completely fenced with a gate and pad lock. All radioactive signs are in place. Readings for pile 111 on

contact were  $3.50\,$  mr/hr max. The contaminated pile 111-A were  $0.09\,$ mr/hr max. (See exhibit # 2 attached.)

- (c) The third portion of this survey involves recorded reading at each entrance of warehouse #214, and #215 where licensable goods are stored, by bay and section, for location and list of four (4) readings at each location. (See exhibit #3 page 1 & 2)
- (d) The fourth portion of the survey involves recording readings on the warehouse stored commodities. Four (4) separate readings were taken. (See the attached exhibit for data information). Readings were 0.9 mr/hr max. and 0.06 mr/hr min.(See exhibit # 4 attached page 1 & 2.)

#### Conclusion:

The perimeter fence line readings indicates that concentration of radiation released does not exceed the background reading for any of the locations selected at random. Background is 0.02 - 0.03 mr/hr for New Haven Depot. The background radiation reading was established during survey from (30 to 50 feet) to the nearest building using the Dosimeter FH40F6 and the E-120 Geiger Counter as backup.

The overall storage of these licensable commodities is satisfactory and in compliance with DLA/DNSC directives and NCR revised 10CFR part 20 Sub part F.

## 5. Equipment List and Information:

Instrument	Model/Type	Serial No.	Calibration Due Date
FAG 40 F6 Dosimeter		5-0002	( 3/24/98 )
Eberline-Geiger-Counter	E-120	10122	(3/21/98)
Eberline - Geiger Counter	E-520	3135	(3/21/98)
Charger, Dosimeter	FEMA-750	A-004264	( Meters are out
Minometer II	687-0	357	for Re-calibration)
Transistorized Charger	362		· · · · · · · · · · · · · · · · · · ·
Reader Victoreen	357		
V-750	6 V-138 Dosimeter	39403/50793	

#### 6. Personnel Equipment consisting of:

- (9) ea. Pocket Dosimeter Victoreen
- (15) ea. V-138 Dosimeter used for backup
- (16) ea. Thermoluminescent Dosimeter LTD (Film Badges) Rotated Quarterly with the Army

Pocket dosimeters are assigned only when duties require actual exposure in the handling of stored licensable commodities. Film badges are issued each time personnel are in the general vicinity of source material. Evaluation of film badges is provided by USAIRDC, DS Army TMDE ACT., Lexington, KY.

## a. Records Inspection:

Accurate records are maintained by the RPO and are in satisfactory condition.

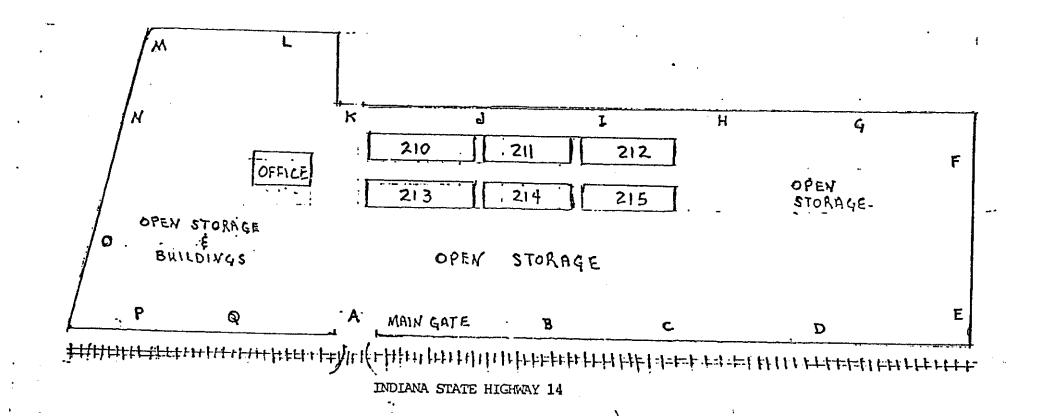
#### b. Training:

All personnel are trained as to commodities and level of radiation in each area of responsibility, in addition to Data Safety Sheet and Hazardous Material.

#### AMENDMENT dtd 14 Aug 1997

- Radiological Protection Officer: Lois Huddleston, Depot RPO William Till, RSO (alt.)
- 2. Annual safety training is conducted on a yearly basis during the depot monthly safety training meeting. Records are available for all safety meetings.
- 3. All dosimeters and counters were checked for operation during the annual radiological survey.
- 4. All employees here at New Haven Depot has a history of radiation exposure. There is no record of any exposure being maintained on a DD Form 1141. Quarterly reviews are maintained and keep on file. The March 1997 report has individual signatures.
- 5. The current NRC Form 3 (1-96) is posted.
- Restricted areas are all established. These areas and readings are referenced in Exhibit # 2 & 4
  of this report. The barriers have "Caution Radioactive Material" signs posted.
- 7. Available Specifications and Regulations:
  - a. DNSC Occupational Radiation Protection Program (dtd 25 Jun 1997)
  - b. NRC License STC-133 (lt. dtd 17 Jul 1996)
  - c. DLAR 1000.28 (dtd 15 Mar 1982)
  - e. Code of Federal Reg's 10 (dtd 1993) Code of Federal Reg's 49 (dtd 1992)
- 8. Protective clothing available:
  - a. Tyvex coveralls with gloves, hood and boots.
- 9. Protective equipment:
  - a. Confo respirators are available to all employees that would have a need to be in restricted areas or would work with radioactive material that presents dust.
  - b. Employees who ware respirators received annual training and medical exams.

Note: Re	Note: Readings are in mr/hr				RADIOLOGICAL MONITOR SURVEY PERIMETER FENCELINE NEW HAVEN DEPOT					Exhibit # 1				W			
Locatio	ons	• • • •							٠							S	
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Note:	Readings are in mr/hr	RADIOLOGICAL MONITOR SURVEY Zirconium Ore Pile - 111 & Base Material

.05

.02

.08

.03

.04

.03

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Pile # 111	A	В	С	D	E	F	G	н	I.	J	к
Contact Reading 1 Foot " 6 Foot " 9 Foot " At Fence "	2.45 1.20 .60 .40	2.20 1.40 .70 .50 .25	2.50 1.35 .70 .50 .25	3.30 1.40 .70 .50	2.40 1.50 .80 .60	2.35 1.10 .55 .40 .20	2.20 1.40 .70 .50 .30	2.95 1.35 .75 .60	2.80 1.35 .75 .60	2.60 1.40 .70 .60	3.50 1.60 .80 .60
Base Pile 111A	A	). <b>B</b>	С	D						**	
Contact Reading 1 Foot	.06 .04	.10 .08	.30 .10	.09		•	. · · · · · · · · · · · · · · · · · · ·	:		<del></del> .	•

Pile # 111A

6 F∞t

9 Foot

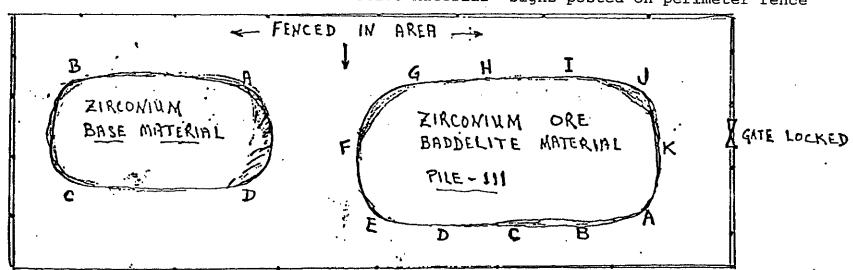
At Fence

Base Material ( more stone than ore )

.04

.02

"Caution Radioactive Material" signs posted on perimeter fence



Warehouse # 214

New Haven Depot, IN

Each WHSE has (4) sections 180' wide X 240' long
Radioactive material is located in section
Date of readings
All readings are in mr/hr

High average at door interance is .02 - .03

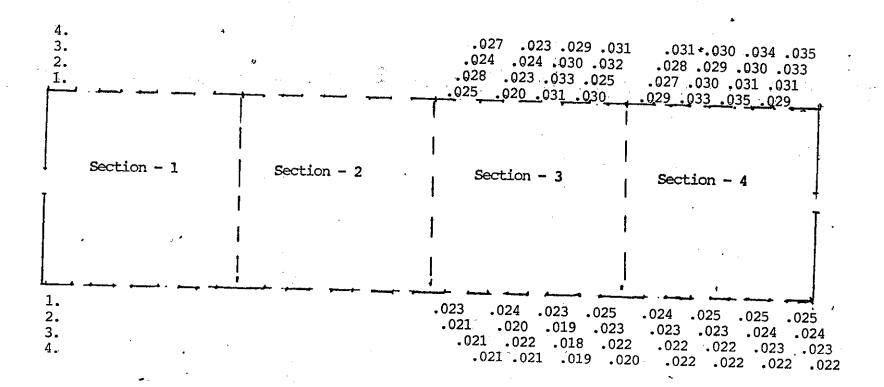
At door entrance

1. = 1 ft.

2. = 3 ft.

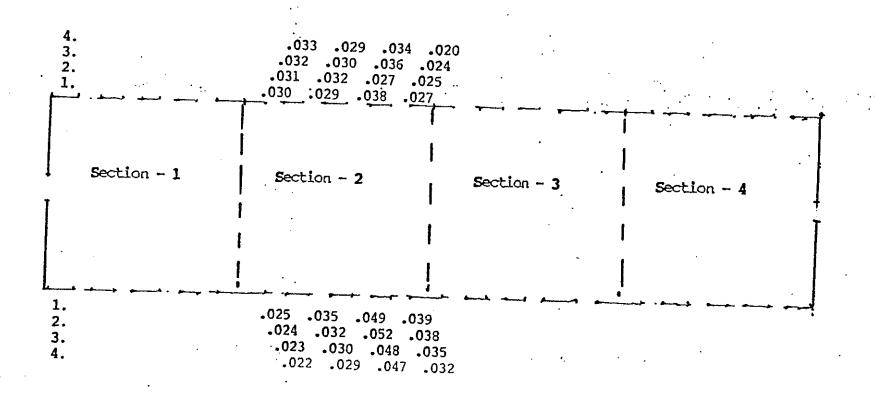
3. = 6 ft.

4. = 9 ft.



Warehouse # 215
New Haven Depot, IN
Each WHSE has (4) sections 180' wide X 240' long
Radioactive material is located in section

All readings are in mr/hr
High average at door interance is .02 - .03



.4. = 9 ft.

Note: All readings are in mr/hr

	1. 4 -	T-			lin reading for total bays listed
WHSE	LSA	Monitor		Reading	Dose Rate is Converted to
Location	Commodity	Used	Distance	ur/hr 1000	
214-3	Columbium Tantalum	Fag-FH40	Listed		
Ba <b>ys</b>	Columbium Natural	Meter-F6	Below	Ì	
9 ,13 ,14,	Minerals				
15, 16, 17	Tantalum Oentoxide		Contact	900	0.9
	Columbium Tantalum				
27 & 28	Tantalum Natural		1 ft	600	0.6
	Minerals				
			6 ft	200	0.2
			12 ft	10 <b>0</b>	0.1
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#### Radiation Monitoring Survey

Note: All readings are in mr/hr
Max and Min reading for total b

				Max and M	lin reading for total bays listed
WHSE	LSA	Monitor			Dose Rate is Converted to
Location	Commodity	Used	Distance	ur/hr 1000	
214 <del>-4</del>	Columbium Tantalum	FAG-FH40	Listed	,	
Bays	Columbium Natural	Meter-F6	Below		
11-21, 45	Minerals				
41 - 42	Tantalite Columbium		Contact	600	0.6
51 - 61	Source Material				<u> </u>
	Tantalum Pentoxide		1ft	400	0.4
	Chemically				0.7
	Processed		6 ft	200	0.2
			12 ft	100	0.1
<del></del>					

Note: All readings are in mr/hr Max and Min reading for total bar

WHSE	LSA	18.6	<del>,</del>		in reading for total bays listed
<b>f</b>	1	Monitor		Reading	Dose Rate is Converted to
Location	Commodity	Used	Distance	ur/hr 1000	mr/hr
Ī	Rare Earth	Fag-FH40	Listed		
215-2	Sodium Sulfate	Meter-F6	below		
Bays				<del> </del>	
36,41,42,		Yes	Contact	700	0.7
46,52,53					0.7
54 & 62		Yes	1 ft	500	0.5
		Yes	6 ft	300	0.3
<del></del>		Yes	12 ft	60.0	0.06
	<u> </u>				
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### Radiation Monitoring Survey

Note:

Open document

Note: All readings are in mr/hr

WHSE Location	LSA Commodity	Monitor Used	Distance	Reading ur/hr 1000	Dose Rate is Converted to
		Fag-FH40 Meter-F6	Distalloc	di//// 1000	mr/hr
			Contact		
			1 ft		
			6 ft		
			12 ft		
110					



#### DEFENSE LOGISTICS AGENCY DEFENSE NATIONAL STOCKPILE CENTER 8725 JOHN J. KINGMAN RD. SUITE. 4616 FT. BELVOIR, VA 22060-6223



IN REPLY
REFER TO DNSC-MQ

July 2, 1997

#### MEMORANDUM FOR DNSC-MQF

**SUBJECT:** 

Radiological Survey

DLAH Form 30, S/N 5, dtd April 8, 1977

New Haven, IN

A review of the subject survey report (attached) indicates that we need additional data for the record. Please have an addendum submitted which includes the following information as of the date of the survey:

- 1. Identify the depot Radiological Protection Officer (RPO).
- 2. Are records available indicating that the depot Radiological Protection Officer (RPO) has conducted <u>annual</u> radiation safety training?
  - 3. Was an operational check of all dosimeters conducted during the survey?
- 4. Are individual exposure records maintained on DD Form 1141? Is there a record of quarterly reviews by the depot RPO? Do records indicate the last time these were discussed with each employee? When?
  - 5. Is a current version of NRC Form 3 posted as required?
- 6. Have restricted areas been established? Where? What are the perimeter barriers? Are the perimeters posted with proper signs (see DNSC Occupational Radiation Protection Program)? Have measurements of dose rates been taken at the perimeters of restricted areas?
  - 7. Are copies available at the depot of:
    - a. DNSC Occupational Radiation Protection Program?
    - b. NRC License STC-133?
    - c. DLAR 1000.28?
    - d. Applicable Parts of Titles 10 and 49 of the Code of Federal Regulations?

8. Is protective clothing available? Specify.

9. Is protective equipment (respirators) available? Have employees received annual training and medical exams?

/s/ James D. Jenkins

JAMES D. JENKINS, SR. Chief, Quality Assurance & Technical Services Division

Attachment

CC:

Official?

Reading

MPecullan/MQ/767-7620/July 1, 97/mjp

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#### RADIOLOGICAL SURVEY

Apr 8,1997

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Disposition of licensable commodity: The warehouse sizes are 180' X 960' and is divided into four (4) separate 180' X 240' sections with 79 bays with eight (8) roll-up doors per section. Licensable commodities are stored in accordance with the storage manual. Specification and stack cards (DLAH-1660) are visible and accessible. Warning signs, labels, marking and placards are in place. Accessibility is controlled by the Depot Manager and RPO on location, warehouse doors are locked for security. The depot has chain link fencing with three strands of barbed wire for additional security. This depot is also provided with twenty fours a day, seven days a week guard service.

#### Safety:

This depot installation maintains a decontamination area in section 1, warehouse 214, west end, which is divided into two sections. This facility is furnished with showers, toilets, wash basins, laundry facilities, change room and locker rooms. All the air in this area is filtered with a self contained filtering system and set up for asbestos particulate.

#### 3. Equipment Procedure:

The procedure utilized during this survey involved three integral parts.

- 1. Instrumentation/Calibration
- 2. Equipment
- 3. Source Chip Check

All radiological equipment is checked for calibration and proper operation using a CS-137 source chip.

#### Physical Survey:

The subject materials were surveyed in two separate warehouses and one open storage area. They were monitored using the FAG 40F6 Dosimeter model 50002. Additional equipment available are Eberline E-120 and E-520 Geiger counters. Calibration dates on the FAG meter is 3/97 due 3/98, E-120 is 3/97 due 3/98 and the E520 calibration date is 3/97 and due 3/98, In-house calibration check is accomplished prior to use.

- (a) The first survey involves the random selection of seventeen (17) locations along the perimeter fence. At each location three (3) readings were taken. All readings were recorded on a chart of the perimeter fence. The average background readings were well within the depot background level of detection of 0.02 0.03 mr/hr. (See exhibit # 1)
- (b) The second portion of this survey involves the readings at two (2) Zirconium (Baddeleyite) Ore piles, one being the base material which is mostly stone and dirt from a previously stored location.

Material is completely fenced with a gate and pad lock. All radioactive signs are in place. Readings for pile 111 on contact were 3.50 mr/hr max. The contaminated pile 111-A were 0.09 mr/hr max. (See exhibit # 2 attached.)

- (c) The third portion of this survey involves recorded reading at each entrance of warehouse # 214, and # 215 where licensable goods are stored, by bay and section, for location and list of four (4) readings at each location. (See exhibit # 3 page 1 & 2)
- (d) The fourth portion of the survey involves recording readings on the warehouse stored commodities. Four (4) separate readings were taken. (See the attached exhibit for data information). Readings were 0.9 mr/hr max. and 0.06 mr/hr min.(See exhibit # 4 attached page 1 & 2.)

#### Conclusion:

The perimeter fence line readings indicates that concentration of radiation released does not exceed the background reading for any of the locations selected at random. Background is 0.02 - 0.03 mr/hr for New Haven Depot. The background radiation reading was established during survey from (30 to 50 feet) to the nearest building using the Dosimeter FH40F6 and the E-120 Geiger Counter as backup.

The overall storage of these licensable commodities is satisfactory and in compliance with DLA/DNSC directives and NCR revised 10CFR part 20 Sub part F.

#### 5. Equipment List and Information:

Instrument FAG 40 F6 Dosimeter Eberline-Geiger-Counter Eberline - Geiger Counter Charger, Dosimeter Minometer II Transistorized Charger Reader Victoreen	Model/Type  E-120 E-520 FEMA-750 687-0 362 357	Serial No. 5-0002 10122 3135 A-004264 357	Calibration Due Date ( 3/24/98 ) ( 3/21/98 ) ( 3/21/98 ) ( Meters are out for Re-calibration)
V-750	6 V-138 Dosimeter	39403/50793	

#### 6. Personnel Equipment consisting of:

- (9) ea. Pocket Dosimeter Victoreen
- (15) ea. V-138 Dosimeter used for backup
- (16) ea. Thermoluminescent Dosimeter LTD

(Film Badges) Rotated Quarterly with the Army

Pocket dosimeters are assigned only when duties require actual exposure in the handling of stored licensable commodities. Film badges are issued each time personnel are in the general vicinity of source material. Evaluation of film badges is provided by USAIRDC, DS Army TMDE ACT., Lexington, KY.

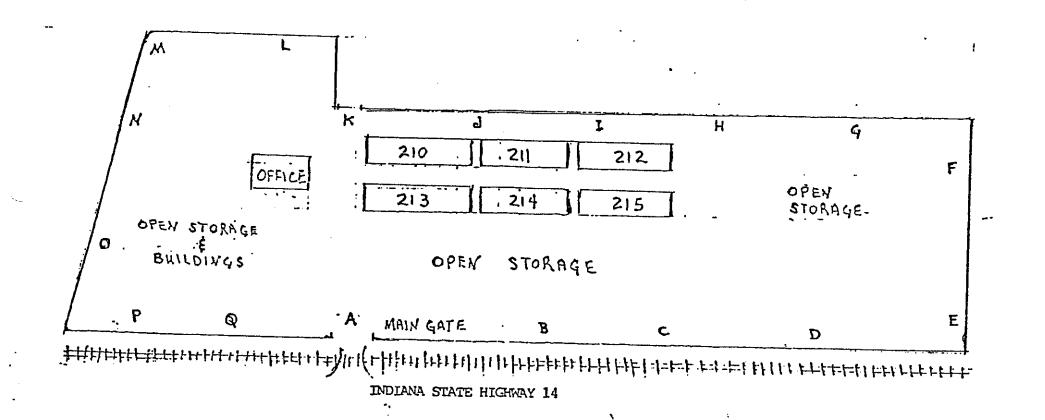
#### a. Records Inspection:

Accurate records are maintained by the RPO and are in satisfactory condition.

#### b. Training:

All personnel are trained as to commodities and level of radiation in each area of responsibility, in addition to Data Safety Sheet and Hazardous Material.

Note: Readings are in mr/hr						RADIOLOGICAL MONITOR SURVEY PERIMETER FENCELINE NEW HAVEN DEPOT					Exhibit # 1				w 1		
Locatio	ons	• • • •														Ş	
A .014 .020 .020	B .013 .018 .023	.018 .020 .022	D .017 .022 .024	E .016 .023 .024	F .015 .018 .021	G .013 .018 .022	.017 .019 .023	.014 .019 .023	J .016 .018	K .015 .017 .021	L016 .019 .023	M .016 .018 .022	N •014 •020 •025	.013 .019 .021	.017 .021 .024	Q .013 .019 .023	
Ave::.018	.018	.020	.021	.021	.018	.017	.019	.018	.018	.017	.019	.018	.019	•017	•020	.018	



Note: Readings are in mr/hr

RADIOLOGICAL MONITOR SURVEY
Zirconium Ore Pile - 111 & Ease Material

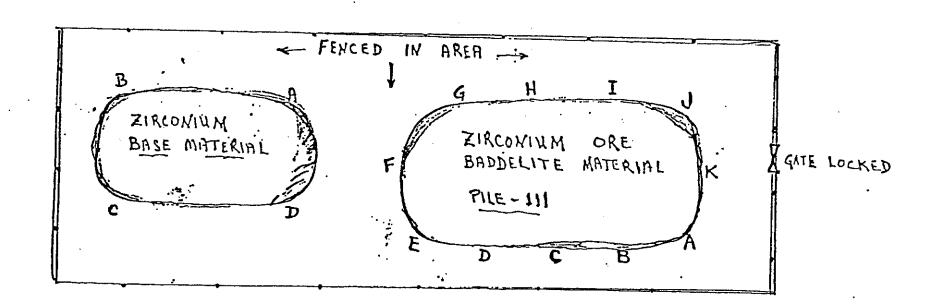
Exhibit # 2

W ... E

Pile # 111 Contact Rea 1 Foot 6 Foot 9 Foot At Fence		A 2.45 1.20 .60 .40 .23	2.20 1.40 .70 .50 .25	2.50 1.35 .70 .50	3.30 1.40 .70 .50	2.40 1.50 .80 .60	F 2.35 1.10 .55 .40 .20	G 2.20 1.40 .70 .50 .30	2.95 1.35 .75 .60	2.80 1.35 .75 .60	2.60 1.40 .70 .60	3.50 1.60 .80 .60
Base Pile Contact Rea Foot		.06	.10	<b>c</b> •30	<b>D</b>				·		*¢	.•
6 Foot 9 Foot	76 79	.04 .04 .03	.08 .05 .02	.10 .08 .03	.05 .04 .02	·	• •				<del>-</del> .	1. S.

Pile # 111A

Base Material ( more stone than ore )



New Haven Depot, IN Each WHSE has (4) sections 180' wide X 240' long Radioactive material is located in section Date of readings All readings are in mr/hr High average at door interance is

.02 - .03

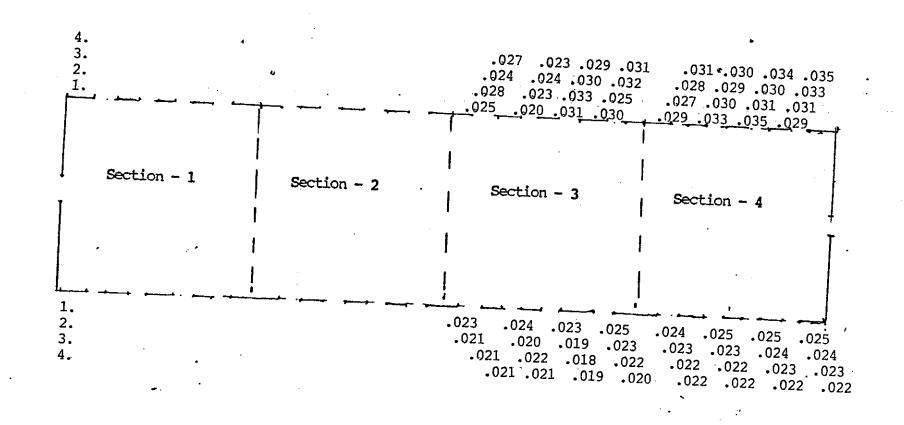
1. = 1 ft.

2. = 3 ft.

At door entrance

3. = 6 ft.

4. = 9 ft.



WHSE	LSA	la a		Max and N	eadings are in mr/hr fin reading for total bays listed
Location 214-3	Commodity	Monitor Used	Distance	Reading ur/hr 1000	Dose Rate is Converted to
Bays	Columbium Tantalum Columbium Natural	Fag-FH40 Meter-F6	Listed Below		710778
9 ,13 ,14, 15, 16, 17	Minerals Tantalum Oentoxide Columbium Tantalum		Contact	900	0.9
27 & 28	Tantalum Natural Minerals		1 ft	600	0.6
			6 ft	200	0.2
			12 ft	100	0.1
<u> </u>					

## Radiation Monitoring Survey

Note: All readings are in mr/hr

				eadings are in mr/hr	
LSA	Monitor	<del>,</del>	Max and M	lin reading for total bays listed	
		D	Reading	Dose Rate is Converted to	
	CAC CITA	Distance	ur/hr 1000	mr/hr	
		I			
	Meter-1-6	Below			
Tantalite Columbium		Contact	600		
			- 300	0.6	
Tantalum Pentoxide		1 ft	400	_	
Chemically			400	0.4	
Processed		6 ft	200	0.2	
		12 ft	100	0.1	
	Commodity Columbium Tantalum Columbium Natural Minerals Tantalite Columbium Source Material Tantalum Pentoxide Chemically	Commodity Used Columbium Tantalum FAG-FH40 Columbium Natural Meter-F6 Minerals Tantalite Columbium Source Material Tantalum Pentoxide Chemically	Commodity Used Distance Columbium Tantalum Columbium Natural Meter-F6 Meter-F6 Below Minerals Tantalite Columbium Source Material Tantalum Pentoxide Chemically Processed Distance Address FAG-FH40 Below Contact Contact Contact A ft	Columbium Tantalum Columbium Natural Meter-F6 Below  Minerals Tantalite Columbium Source Material Tantalum Pentoxide Chemically Processed Columbium Attribute Columbium Contact Chemically Processed Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically Chemically C	

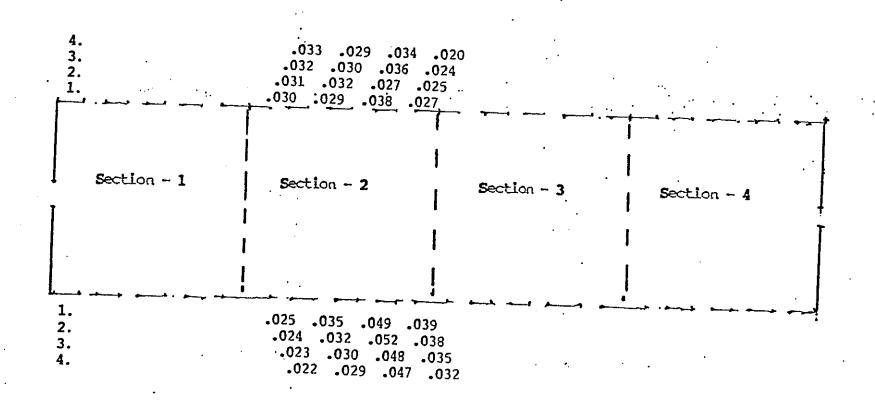
Warehouse 215 New Haven Depot, IN Each WHSE has (4) sections 180' wide X 240' long Radioactive material is located in section

All readings are in mr/hr High average at door interance is .02 - .03 At door entrance Exhibit # 3 Page 2 of 2 1. = 1 ft.

2. = 3 ft.

3. = 6 ft.

.4. = 9 ft.



Note: All readings are in mr/hr

				Tioto, All II	eadings are in mr/hr			
WHSE	LSA	Max and Min reading for total have liste						
Location	Commodity	Monitor Used	Distance	Reading ur/hr 1000	Dose Rate is Converted to			
215-2	Rare Earth Sodium Sulfate	Fag-FH40 Meter-F6	Listed below		1117711			
Bays 36,41,42, 46,52,53		Yes	Contact	700	0.7			
54 & 62		Yes	1 ft	500	0.5			
		Yes	6 ft	300	0.3			
		Yes	12 ft	60.0	0.06			

## Radiation Monitoring Survey

Note:

Open document

Note: All readings are in mr/hr

WHSE	LSA	Monitor		10	
Location	Commodity	Used	Distance	Reading ur/hr 1000	Dose Rate is Converted to mr/hr
·		Fag-FH40 Meter-F6			110/10
			Contact		
			1 ft		
<del> </del>			6 ft		
			12 ft		
	·				