

**Department of Energy**

**Ohio Field Office
Fernald Closure Project
175 Tri-County Parkway
Springdale, Ohio 45246
(513) 648-3155**

JUL 28 2005

Mr. Paul Pardi, RCRA Group Leader
and FFCA Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

DOE-0292-05

Dear Mr. Pardi:

TREATMENT COMPLETED OF TWO CONTAINERS OF URANYL NITRATE

Reference: Letter, W. Taylor, U. S. DOE to T. Ontko, Ohio EPA, "Information Regarding Containers of Uranyl Nitrate," dated July 7, 2005

This letter provides information regarding the treatment of two containers of uranyl nitrate. As discussed in the above-referenced letter, these containers were discovered last month at the Advanced Waste Water Treatment (AWWT) Facility during Decontamination and Demolition operations. The containers had been transferred to AWWT for treatment and had remained at this facility after paperwork had been incorrectly completed indicating that the waste had been treated. Note that these two drums were exceptions to a very successful waste treatment tracking system. Approximately 2,000 containers were approved and treated at AWWT without any problems.

One container (W50536) contained purified uranyl nitrate solution generated by Ames Laboratory. This material had been managed as product due to its uranium content until it was declared to be waste in 2002. The second container (W228178) contained uranyl nitrate generated in 2002 by the on-site lab from the analysis/assay of Fernald Closure Project (FCP) wastes. Both containers were characterized as D002 since they had a pH of less than 2. No underlying hazardous constituents (UHC's) were identified for these wastes.

The above-referenced letter established a July 31, 2005 date for completing the disposition of these wastes through on-site treatment or off-site shipment. The FCP completed the treatment of these wastes on site on July 25-26, 2005 in accordance with this date. Treatment was conducted using elementary neutralization. The waste was pumped to a tote tank containing 100 gallons of water and eighty pounds of lime. Approximately 560 pounds of Portland Cement were added to complete neutralization (pH of approximately 11) and solidify the waste.

Mr. Pardi

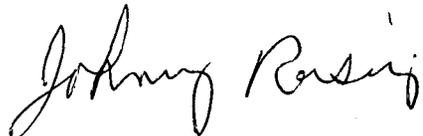
DOE-0292-05

The final waste form is non-hazardous and meets land disposal restriction requirements since there are no UHC's associated with this waste. The treated waste will be shipped to Envirocare of Utah for disposal as low-level radioactive waste.

In a July 25, 2005 email, you also requested additional information regarding the two containers of uranyl nitrate. Enclosed is the requested information; this was also emailed to you on July 26, 2005.

If you have any questions regarding this matter, please contact Ed Skintik at (513) 246-1369.

Sincerely,

for 
William J. Taylor
Director

FCP:Skintik

Enclosure: As Stated

cc w/enclosure:

- E. Skintik/OH-FCP
- K. Alkema, Fluor Fernald, Inc./MS1
- E. Brucken, Fluor Fernald, Inc./MS88
- F. Johnston, Fluor Fernald, Inc./MS12
- AR Coordinator, Fluor Fernald, Inc./MS78

-----Original Message-----

From: Paul Pardi [mailto:Paul.Pardi@epa.state.oh.us]
Sent: Monday, July 25, 2005 7:23 AM
To: Elizabeth.Brucken@fernald.gov
Subject: Uranyl Nitrate Containers

Betsy, I'm doing some followup to the July 7 letter regarding the found uranyl nitrate containers. I'm trying to get a handle on how this information impacts DOE satisfaction of Site Treatment Plan milestones for the WWT technology and whether a revision to the STP might be necessary. I need some additional information to complete my evaluation. Could you send me the following?

- The wastewater discharge form that was improperly completed.
- A copy of the page from SWIFTS which shows the history of this container.
- To the extent that the above documents don't detail the following information, please provide:
 - date of generation of drum
 - date waste was moved to the AWWT
 - date drums were discovered
 - date drums were moved to the storage lockers

Also, if you all have done your own analysis of STP issues and have a position, please let me know. Call me at 937-285-6079 with any questions. Paul

Brucken, Elizabeth

From: Brucken, Elizabeth
Sent: Tuesday, July 26, 2005 4:18 PM
To: 'Paul Pardi'
Cc: Alkema, Ken; Skintik, Ed; Brucken, Elizabeth
Subject: RE: Uranyl Nitrate Containers



WWDR-04-G037.pdf WWDR-04-G038.pdf SWIFTS Report.pdf

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Hi Paul - Per your request, attached is the following

information:

Copies of the 2 Wastewater Discharge Request Forms that were completed for the 2 containers. The inventory numbers for these containers are W050536 and W228178.

A SWIFTS report which includes the waste accum dates for the 2 containers, the dates the 2 drums were initially moved to AWWT for treatment and the date that the 2 drums were moved to the haz store locker after they were discovered.

A couple of items to note on this - W050536 contains purified uranyl nitrate that was generated at Ames Laboratory. Although SWIFTS has a 6/24/1988 accum date for this drum, it was actually considered to be product (due to its uranium content) and was managed as such until 2002 when it was officially declared to be waste. The second drum contains uranyl nitrate that was generated by the on-site laboratory from the analysis/assay of FCP wastes. This waste was generated on 10/7/2002.

Also, both drums were first discovered at AWWT about one week before they were moved into the haz store locker (this occurred on 6/16/05). We were still hoping to find a way to treat them immediately at AWWT rather than have to put them back into storage. When it became apparent that we could not do this, the drums were moved back into the haz store locker.

We talked with Tom Ontko this morning about your STP question. What we are proposing to do is to document the treatment of these drums in the Annual STP Update (due by the end of December), also follow up with a letter that we will submit to you within the next week stating that we have completed treatment of these wastes. Part of the STP Update consists of documenting compliance with STP milestones, so we would include information on these drums in this section. This way we would not have to go through a formal STP revision to establish milestones for treating these wastes when we have already treated them, yet we would still document what happened with them.

Tom also mentioned that you were looking for information regarding how these containers were packaged. W050536 consisted of a 10 gallon container overpacked into a 30 gallon container, overpacked into a 55-gallon drum, which was inside of an 85 gallon drum. W228187 consisted of a 55 gallon drum inside of an 85 gallon drum.

We still want to discuss this with you, also see if you have any other questions. Ken returned you phone call and left another message to try him on his cell phone (513-476-3504).

Thanks.

- Betsy Brucken

WASTEWATER DISCHARGE REQUEST FORM

SECTION I: WASTEWATER INFORMATION		
Wastewater Source Description: UNH solution W228178 <i>229027</i>		
Wastestream/Container Identification (Inventory #, MEF #, Lot #, Well #, Unique project identifier): Be as specific as possible: MEF 1575		
Most Recent Analytical Data Attached: <input type="checkbox"/> YES <input type="checkbox"/> NO		
Total volume and/or flow rate of proposed discharge: Approx. 40 gal. of UNH solution in 55 gal. drum pH 1.0		
Requested Discharge Date: 6-03-04		
Requestor: Jerry Brandenburg	Telephone Number: 648-4606	Date: 6-03-04
SECTION II: ACCEPTABILITY EVALUATION		
Discharge Allowed? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
If yes, describe basis of decision and required point of entry into WWTS: <i>Discharge to AWWT slurry Dewatering Facility. This is hazardous waste for corrosivity (pH < 2)</i>		
If no, describe basis for denial:		
Evaluated By: <i>F.L. Johnston</i>	Date: <i>6/3/04</i>	
SECTION III: DISCHARGE VERIFICATION		
In order for any wastewater to be discharged, Section II must be checked "Y" and the point of entry into the WWTS must be defined. If there are any questions or concerns about the proposed discharge, contact Soil & Water Environmental Compliance at 648-5294.		
Discharge Accepted: <i>Yes</i>	Date of Discharge: <i>6/7/04</i>	Volume of Discharge: <i>40.0</i>
Discharge Rejected:	Reason:	
Wastewater Operations Signature: <i>JIM CONNER</i>		

The above signature certifies the discharge was accomplished as directed in Section II.

WASTEWATER DISCHARGE REQUEST FORM

SECTION I: WASTEWATER INFORMATION

Wastewater Source Description: Thorium nitrate solution W060536
UNH

Wastestream/Container Identification (Inventory #, MEF #, Lot #, Well #, Unique project identifier): Be as specific as possible:

MEF 60193

Most Recent Analytical Data Attached: YES NO

Total volume and/or flow rate of proposed discharge: Approx. 30 gal. of Thorium nitrate solution in 55 gal. drum pH 1.0
UNH

Requested Discharge Date: 6-03-04

Requestor: Jerry Brandenburg

Telephone Number: 648-4606

Date: 6-03-04

SECTION II: ACCEPTABILITY EVALUATION

Discharge Allowed? YES NO

If yes, describe basis of decision and required point of entry into WWTS:

Discharge to Aunt Sherry Dewatering Facility for treatment of metals.

If no, describe basis for denial:

Evaluated By: F.L. Johnston

Date: 6/7/04

SECTION III: DISCHARGE VERIFICATION

In order for any wastewater to be discharged, Section II must be checked "Y" and the point of entry into the WWTS must be defined. If there are any questions or concerns about the proposed discharge, contact Soil & Water Environmental Compliance at 648-5294.

Discharge Accepted: Yes Date of Discharge: 6/7/04 Volume of Discharge: 30 GALLONS

Discharge Rejected: Reason:

Wastewater Operations Signature: Jim Cannel

The above signature certifies the discharge was accomplished as directed in Section II.

RECORD

6024

Container Inquiry												
Inventory No	W228178			Lot ID	R107	733	V	072	0490	000001	Cont Type	085
Overpack Inv				Material	U OR TH NITRATE SOLUTIONS, HIGH IMF					MBA	990	
Waste Type	RCRA			Loc/Area	SL-3	MS-11					Gross Wt	482
Serial No				R/Ex/S/L							Tare Wt	137
Status	ACTIVE			Cont Comnt	FOUND NOT PUMPED AT AWWT, UNCON					Net Wt	345	
Requisition No				Inv. Comt								
	Project	559	Descr	LABORATORY OPERATIONS & MISCELLANEOUS DEBRI								

Detail	Dates	Overpack	Repack	Mel/Epa	Prof/App	RTR	Picture
Modification Dates							
Status Date	06/16/2005	By	SWIFTS	Mba Date	10/10/2002	By	OPS\$GREE0077
Lot Id. Date	06/16/2005	By	OPS\$STAF9830	Prod Date		By	
Ws Type Date	06/16/2005	By	OPS\$SPRI1642	Cont. Issue Date		By	
Overpack Date		By		Cont Recd. Date	10/03/2002	By	OPS\$STAF9830
Location Date	07/20/2005	By	OPS\$STAF9830	Ws Accum Date	10/07/2002		
DCAR	DCAR	Issued	Cleared	Comments			

W 228178

HISTORY



Location History:

Loc	Area Description	Row	Ext	Stk	Level	Date	Name
0079	BAY A STAGED					01/28/2004	OPS\$STAF9830
0079	BAY C	1		5	1	03/22/2004	OPS\$STAF9830
0079	MS-4					03/29/2004	OPS\$STAF9830
0079	BAY A STAGED					05/11/2004	OPS\$STAF9830
0079	BAY B STAGED					05/17/2004	OPS\$STAF9830
0079	BAY A STAGED					06/01/2004	OPS\$STAF9830
051B	AWWT					06/07/2004	OPS\$STAF9830
0000	MS-10 BY ROSE GARDEN					06/16/2005	OPS\$STAF9830

W28 178

6024

Container Inquiry

Inventory No	W050536	Lot ID	S000	CAK	1	204	0013	000001	Cont Type	085	
Overpack Inv		Material	PURE UNH SOLUTION						MBA	900	
Waste Type	RCRA	Loc/Area	SL-3	MS-11					Gross Wt	340	
Serial No		R/Ex/S/L							Tare Wt	166	
Status	ACTIVE	Cont Comnt	FOUND NOT PUMPED AT AWWT, UNCON						Net Wt	174	
Requisition No		Inv. Comt									
		Project		Descr							

Detail	Dates	Overpack	Repack	Mef/Epa	Prof/App	RTR	Picture
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Modification Dates

Status Date	06/16/2005	By	OPS\$STAF9830	Mba Date	09/29/1999	By	OPS\$MCAHLC
Lot Id. Date	06/18/1997	By	OPS\$MCACJS	Prod Date	06/24/1988	By	
Ws Type Date	02/27/1995	By	SWIFTS	Cont. Issue Date		By	
Overpack Date		By		Cont Recd. Date	10/30/1991	By	NULL
Location Date	07/20/2005	By	OPS\$STAF9830	Ws Accum Date	06/24/1988		

DCAR	DCAR	Issued	Cleared	Comments

W050536

1A-6024

HISTORY

Location History:

Loc	Area Description	Row	Ext Stk	Level	Date	Name
0079	BAY C	1	6	1	01/14/2004	OPS\$STAF9830
0079	BAY C	1	2	1	03/22/2004	OPS\$STAF9830
0079	M5-4				03/29/2004	OPS\$STAF9830
0079	BAY A STAGED				05/11/2004	OPS\$STAF9830
0079	BAY B STAGED				05/17/2004	OPS\$STAF9830
0079	BAY A STAGED				06/01/2004	OPS\$STAF9830
051B	AWWT				06/07/2004	OPS\$STAF9830
0000	MS-10 BY ROSE GARDEN				06/16/2005	OPS\$STAF9830

W050536