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URANYL NITRATE HEXAHYDRATE NEUTRALIZATION PROJECT - PROCESSING SEQUENCE

06/09/95

DOE-1073-95
DOE-FN OEPA
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REPORT

-6951

Department of Energy
Fernald Environmental Management Project
P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155

JUN 09 1995
DOE-1073-95

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, OH 45402-2911

Dear Mr. Schneider:

URANYL NITRATE HEXAHYDRATE NEUTRALIZATION PROJECT - PROCESSING SEQUENCE

Reference: Letter, Thomas E. Crepeau to Jack R. Craig and Don Ofte, "Director's Final Findings and Orders," dated December 27, 1994

As you requested, enclosed is our currently anticipated processing sequence for the Uranyl Nitrate Hexahydrate (UNH) Neutralization Project. The table identifies each of the 20 batches anticipated to be required to complete neutralization of the UNH, along with our currently anticipated sequence for processing the batches.

In comparing this processing sequence with the sequence in the November 4, 1994, schedule referenced in the Director's Findings & Orders (DF&O), it is important to realize that the two schedules have different drivers. In November 1994, an increasing number of leaks had been identified from the UNH tanks and the integrity of several of the tanks was suspect. Therefore, the processing order was driven by the need to remove the UNH from the tanks that were considered to pose the worst threat for release.

As you are aware, our aggressive inspection, leak repair and maintenance programs have repaired most of the leaks; only three minor leaks are still occurring. We no longer feel that there is an appreciable difference in the risk posed by the different tanks; our current processing sequence is, therefore, driven by maximizing processing efficiency in order to expedite the completion of the project. For this reason, I feel it is important to preserve the ability to modify the processing sequence while the project is in progress to maximize the use of equipment, manpower and resolve other logistical issues.

Recycled and Recyclable

If you or your staff have any questions, please contact me at (513) 648-3101 or Chris White at (513) 648-3172.

Sincerely,

Johnny Reising

for Jack R. Craig
Fernald Remedial Action
Project Manager

FN:White

Enclosure: As Stated

cc w/enc:

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M. Yates, FERMCO, MS 9
AR Coordinator, FERMCO

NEUTRALIZATION / PRECIPITATION PROCESS SUMMARY

BATCH #	PPT'N TANK	SOURCE TANK(S)	Dilution water	UNH (gals)	Rinse water	MgO (gals)	TOTAL (gals)	PUMP sludge	HOLD Supernat	ISO. %E	REMARKS
01	F1-26	F1-25	4,000	12,200	0	1,465	17,665	11,165	6,500	0.994	
02	F1-26	F1-25 *	6,500	784	700	1,462	17,646	11,146	6,500	0.991	
		NE		7,000							
		D1-10		1,200							
03	F1-26	NE	6,500	7,000	700	1,440	17,056	10,056	7,000	0.997	
		D1-10 *		1,416							
04	F1-26	NE *	7,000	8,058	700	1,107	16,865	12,865	4,000	0.952	
05	F1-26	SE	4,000	8,000	700	794	15,289	11,289	4,000	1.009	
		F1-2 *		1,795							
06	F1-25	SE *	4,000	9,174	700	910	14,784	10,784	4,000	1.018	
07	F1-26	F3E-220*	4,000	2,036	1,400	874	11,128	7,128	4,000	0.970	
		F1-1 *		2,818							
08	F1-25	SW	4,000	11,875	0	1,444	17,319	13,319	4,000	0.997	
09	F1-26	SW	4,000	7,800	700	1,688	17,338	13,338	4,000	0.977	
		D1-2 *		3,150							== MOVE PUMP == DIGEST. >> HOT RAFF.
10	F1-25	SW *	4,000	2,700	1,400	1,041	17,709	13,709	4,000	1.015	
		NW *		8,568							== MOVE PUMP == CD >>> NFS
11	F1-26	F1-308 *	4,000	1,894	2,800	166	15,142	11,142	4,000	0.901	
		F1-301 *		1,990							
		F1-302 *		2,217							
		F1-303 *		2,075							== MOVE PUMP == HOT RAFF >>> OK LIQ.
12	F1-25	F2-605	5,400	11,000	0	1,244	17,644	13,644	4,000	0.991	
13	F1-26	F2-605	4,000	10,500	0	1,351	17,051	13,051	4,000	0.992	
		F3E-223		1,200							
14	F1-25	F2-608	4,000	9,998	0	1,468	16,666	12,666	4,000	0.997	
		F3E-223		1,200							
15	F1-26	F2-608	4,000	9,998	0	1,468	16,666	12,666	4,000	0.997	
		F3E-223		1,200							
16	F1-25	F2-606	4,000	11,000	0	1144	17,344	13,344	4,000	1.003	
		F3E-223		1,200							
17	F1-26	F2-606	4,000	11,000	0	1144	17,344	13,344	4,000	1.003	
		F3E-223		1,200							
18	F1-25	F2-607	4,000	11,000	0	1,030	17,582	13,582	4,000	1.041	
		F3E-223		1,552							
19	F1-26	F2-607	4,000	11,000	0	1,030	17,582	17,582	0	1.041	
		F3E-223		1,552							
20	F1-25	F2-605 *	4,000	1,776	700	385	11,814	11,814	0	1.011	
		F2-606 *		1,427	700						
		F2-607 *		726	700						
		F2=608 *		0	700						
		F3E-223*		0	700						
						22,655	Gals. MgO slurry				

* indicates tank washout schedule