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WEEKLY REPORT - URANYL NITRATE HEXAHYDRATE NEUTRALIZATION PROJECT

12/19/94

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REPORT

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Department of Energy
Fernald Environmental Management Project
P. O. Box 398705
Cincinnati, Ohio 45239-8705
(513) 648-3155

DEC 19 1994
DOE-0325-95

Mr. James A. Saric, Remedial Project Director
U.S. Environmental Protection Agency
Region V - 5HRE-8J
77 W. Jackson Boulevard
Chicago, Illinois 60604-3590

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

Dear Mr. Saric and Mr. Schneider:

WEEKLY REPORT - URANYL NITRATE HEXAHYDRATE NEUTRALIZATION PROJECT

Enclosed is the weekly report for Uranyl Nitrate Hexahydrate (UNH) Neutralization Project Removal Action. The telephone conference call will be at 1:00 PM this afternoon.

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

Sincerely,

Chris White
Chris White
UNH Project Manager

Enclosure: As Stated

cc w/enc:

K. H. Chaney, EM-423/QO
G. Jablonowski, USEPA-V, AT-18J
J. Kwasniewski, OEPA-Columbus
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UNH NEUTRALIZATION PROJECT

WEEKLY REPORT

DECEMBER 19, 1994

Six of the Operations supervisors were sent offsite for training to enhance their supervisory skills Wednesday through Friday. Operators and supervisors received RCRA sampling training and were given time to read the Standing Orders. Operation of the east EIMCO filter, being operated to provide on-the-job-training, was ceased because of problems being experienced by the existing filtrate pumps. As of Monday, December 19, two of the three existing filtrate pumps have been fixed.

Testing of subsystem equipment and instrumentation continued throughout the week. Numerous equipment installation problems were discovered and corrective measures were implemented. This included items such as: 1) when pump skid electric was turned off, electric heat tracing for freeze protection went down; 2) automatic valves fail in open rather than closed positions; 3) emergency stop button for EIMCOs did not hold in off position; 4) valve interlocks at Plant 8 holding tanks were wired wrong at the factory; and 5) eight of thirteen ball valves (purchased from a single vendor) leaked.

There were three additional problems identified last week as follows: 1) the double diaphragm pumps had excessive vibrations (about 1/2"); 2) piping near pumps was vibrating excessively; and 3) automatic safety valves were slamming shut causing a water hammer to be experienced at the various pumping locations. Item 3 was felt to be a safety concern, and DOE requested that FERMCO not conduct any testing that would result in water hammer in the piping. In order to address these concerns, the FERMCO UNH Project Manager decided to return the remaining leaking or potentially leaking valves so that, per agreement with the supplier, they could be fixed over the weekend, and to delay restart of System Operability Testing until at least Tuesday, December 20.

Purchase orders for the equipment needed for hoisting the new 60 hp motor were issued as well as the orders for the platform materials and other items needed for installation. Installation of the platform is anticipated to begin this week.

Maintenance is preparing to install the changes necessary to combine the Plant 2/3 and CD blend secondary containment areas. A letter summarizing the proposed changes is anticipated to be issued to the OEPA and USEPA December 19, 1994.

The Hot Raffinate Floor was flooded to verify its secondary containment capacity. It was determined that the actual capacity was less than that required. Calculations and a design for modifying the secondary containment will be done this week along with initiation of the maintenance work order.

FERMCO and DOE concluded agreement on the responses to the comments concerning the Final Safety Analysis Report on Friday morning. The summary of responses was issued to DOE on Friday afternoon, December 16.

UNH Weekly Report
December 19, 1994

The delivery of the dust collector has been changed from Friday, December 16, to Monday, December 19. This delay is due to the need to replace the 3 hp motor with a 5 hp to ensure adequate air flow. Inspection of the completed assembly was performed Thursday, December 15, at the company's facility in Lynchburgh, Virginia. The testing indicated that the equipment met the requirements of the purchase specification.

Attached is an updated leak fact sheet as of December 12, 1994. All of the new leaks were less than one drop/minute and are located in secondary containment areas. The leaks which can be isolated from the UNH storage tanks (one valve between leak and tank), will be tightened to repair the leaks. The remaining leaks will be evaluated for installation of PLIDCOs. It was noted that two PLIDCO valves were determined to be leaking at this point. The PLIDCOs will be evaluated to see if the fluid installed to control the leaks has depressurized. Other corrective measures will be evaluated.

UNH NEUTRALIZATION PROJECT
UNH LEAK FACT SHEET (as of 12/12/94)

Remaining Leaks Found Prior to 10/5/94

	Tank	Leak Description	Leak Rate
1.	F1-301	Leak on discharge flange	1 drop/minute

Remaining Leaks Found on 10/5/94 and 10/6/94

	Tank	Leak Description	Leak Rate
1.	F2E-6 (NE)	Leak through 1" gash on bottom of tank	1 drop/day
2.	F2E-8 (SW)	Stain on secondary containment floor beneath tank	UNKNOWN

Leaks Found on 11/7/94 and 11/8/94

	Tank	Leak Description	Leak Rate
1.	F2E-5 (SE)	Leak on Upper Decant Valve Flange and Valve packing	<1 drop/minute
2.	F2E-5 (SE)	Leak on Middle Upper Decant Valve Flange and Valve packing	<1 drop/minute
3.	F2E-5 (SE)	Leak on Middle Bottom Decant Valve Flange and Valve packing	<1 drop/minute
4.	F2E-5 (SE)	Leak on Bottom Decant Valve Flange and Valve packing	<1 drop/minute
5.	F2E-5 (SE)	Leak on Decant Valve packing	REPAIRED
6.	F2E-5 (SE)	Leak through Decant Valve	REPAIRED
7.	F2E-5 (SE)	Leak through Decant Valve	REPAIRED
8.	F2E-8 (SW)	Leak on Decant Blank Flange	<1 drop/minute
* 9.	F1-301/302/303	Leak on Common Discharge Header Flange	<1 drop/minute
* 10.	F1-301/302/303	Leak on Common Discharge Header Flange	<1 drop/minute

UNH NEUTRALIZATION PROJECT
UNH LEAK FACT SHEET (Continued)

	Tank	Leak Description	Leak Rate
* 11.	F1-301/302/303	Leak on Common Discharge Header Flange	<1 drop/minute
12.	F2-605	Leak on Discharge Pipe Flange	<1 drop/minute
13.	D1-1	Leak on Condensate Flange	<1 drop/minute
14.	D1-1	Leak on Condensate Flange	<1 drop/minute
15.	F1-25	Leak on Side Discharge Flange	<1 drop/minute

Leaks Found on 12/12/94

	Tank	Leak Description	Leak Rate
1.	F1-301	Leak on Sample Valve Through Threaded Connection on Discharge Side	<1 drop minute
2.	F1-301	Leak on Sample Valve Through Threaded Connection on Discharge Side	<1 drop/minute
3.	F2E-6 (NE)	Leak on Upper Decant Valve Flange	<1 drop/minute
4.	F2E-5 (SE)	Leak on Bottom Sample Valve Discharge Flange	<1 drop/minute
5.	F2E-5 (SE)	Leak on Valve Packing on Valve UNH-41	<1 drop/minute
6.	F2E-8 (SW)	Leak on Bottom Sample Valve Discharge Flange	<1 drop/minute
7.	D1-1	Leak on Bottom Discharge Pipe Flange	<1 drop/minute
8.	D1-10	Leak on Bottom Discharge Pipe Flange	<1 drop/minute
9.	D1-10	Leak on Screwed Plug on Instrument Connection Flange	<1 drop/minute

UNH NEUTRALIZATION PROJECT
UNH LEAK FACT SHEET (Continued)

	Tank	Leak Description	Leak Rate
10.	D1-7	Leak on Bottom Discharge Valve Flange	<1 drop/minute
11.	F1-1	Leak on Discharge Valve Packing	<1 drop/minute
12.	F1-1	Leak on Discharge Piping Flange	<1 drop/minute
13.	F3E-223	Leak on Bottom Discharge Valve Packing	<1 drop/minute
14.	F3E-220	Leak on Bottom Valve Packing on Level Gauge	<1 drop/minute
15.	F1-302	Leak on Bottom Discharge Flange. Flange has PLIDCO Cover on it. Leak is Coming Through Seal of PLIDCO and Flange	<1 drop/minute
16.	F1-302	Leak on Bottom Discharge Valve. Valve has PLIDCO Cover on it. Leak is Coming Through Seal of PLIDCO and Valve Flange.	<1 drop/minute
17.	F1-302	Leak on Sample Valve Packing	<1 drop/minute
18.	F1-302	Leak on Discharge Pipe Flange	<1 drop/minute
19.	F1-301 302 303	Leak on Common Discharge Header Flange	<1 drop/minute

* Leaks that were repaired by tightening flange, but has started leaking again