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Chicago, Illinois 60690

August 7, 1980

Mr. Dennis M. Crutchfield, Chief
Operating Reactors - Branch 5
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Dresden Station Unit 1
Chemical Cleaning Solidification
System Demonstration
NRC Docket No. 50-10

Dear Mr. Crutchfield:

Enclosed for your use is information pertaining to the July 9 and 10, 1980 meeting and field demonstration of the Dresden 1 Chemical Cleaning waste solidification system.

In accordance with previous agreements with the NRC Staff, the following documents are enclosed:

1) Attachment A, which outlines the iron and nickel concentrations in the simulated radwaste used in the demonstration. This information was requested to assist in the performance of additional leach rate tests.

2) The results of the "Water Immersion Test" (Ref. Test Procedures for NS-1 Solidified Waste, Handout prepared for the NRC dated July 9, 1980 .

3) Identification Index for Corrosion Test Samples.

Please address any questions concerning this matter to this office.

One (1) signed original and thirty-nine (39) copies of this transmittal are provided for your use.

Very truly yours,

Robert F. Janecek
Nuclear Licensing Administrator
Boiling Water Reactors

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"Attachment A"
Iron (Fe) & Nickel (Ni) Concentration*
of Simulated Radwaste

	Atomic Absorption	Colorimetric
Fe	6520 ppm	6600 ppm
Ni	3070 ppm	3010 ppm

*Determined by Dow Nuclear Services

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Water Immersion Test Results

Ref: Test Procedures for NS-1 Solidified Waste
(Handout prepared for the NRC, July 9, 1980)

The purpose of this test was to determine the effect (if any) that water would have upon the structural integrity of the solid simulated radwaste matrix. Specifically, this test was performed using samples which were solidified in the Dresden Chemical Cleaning Facility.

The above referenced procedure was employed in the "Water Immersion Test." Two samples were photographed (Photographs 1,2, & 3) and weighed in order to document their initial conditions. The samples were placed in a beaker, sealed and then allowed to remain in the water for a one week period, from July 10-July 17, 1980.

Following the required one week exposure period, the samples were removed from the water, reweighed and rephotographed (Photographs 5,6,7). "Table A" shows the initial and final weight of the samples used in the water immersion test.

As can be seen in the "before and after" photographs, exposing the samples to the presence of water for one week had no visible effect upon the structural integrity of the solidified simulated radwaste. Additionally, there was a negligible weight change as a direct result of the water immersion test.

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TOP

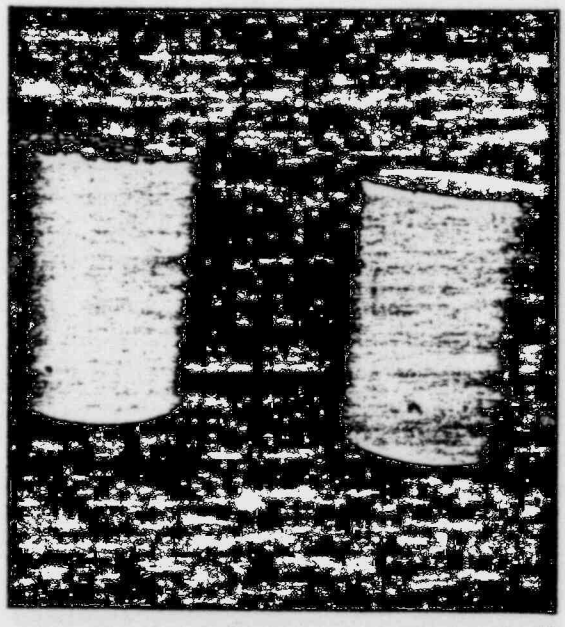
7-10-80

Photograph #1.

FRONT

7-10-80

Photograph #2.



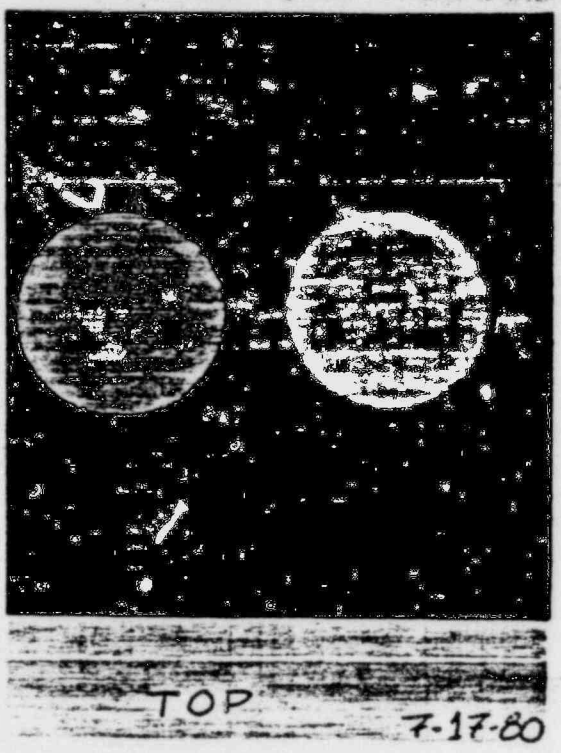
BACK

7-10-80

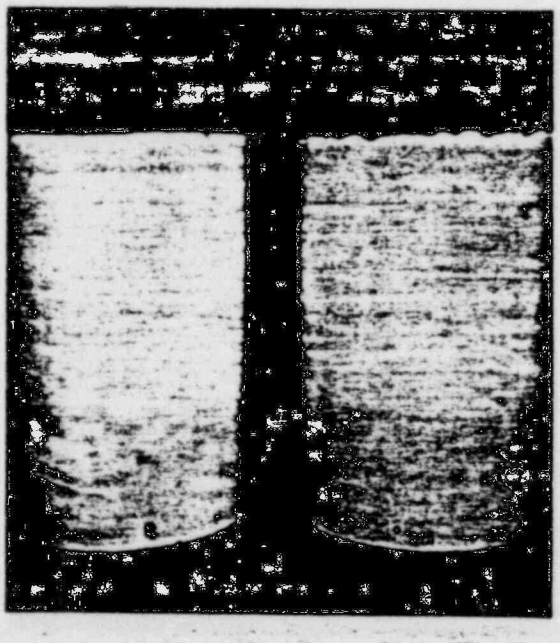
Photograph #3.

TOP VIEW OF SAMPLES
EXPOSED TO WATER 7-10-80

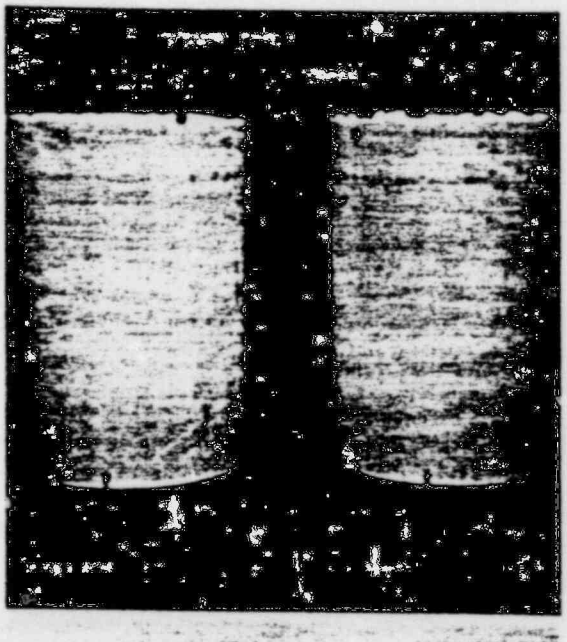
Photograph #4.



Photograph #5.



Photograph #6



Photograph #7.

"Table A"

Initial/Final Weight
of Water Immersion
Test Samples

Sample	Initial Weight (gm)	Final Weight (gm)
1	130	130
2	130	131

Identification Index

For

Corrosion Test Samples

Coupon #	Interval	Location	Sample #
1	00	Tp	1
2	00	Tp	2
3	00	Cr	1
4	00	Cr	2
5	00	Bm	1
6	00	Bm	2
7	30	Tp	1
8	30	Tp	2
9	30	Cr	1
10	30	Cr	2
11	30	Bm	1
12	30	Bm	2
13	60	Tp	1
14	60	Tp	2
15	60	Cr	1
16	60	Cr	2
17	60	Bm	1
18	60	Bm	2
19	90	Tp	1
20	90	Tp	2
21	90	Cr	1
22	90	Cr	2
23	90	Bm	1
24	90	Bm	2

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