

R2-B11

**REPORT OF SOIL SAMPLING  
SOLVENT EXTRACTION AREA**

**WESTINGHOUSE ELECTRIC CORPORATION  
COMMERCIAL NUCLEAR FUEL DIVISION  
COLUMBIA, SOUTH CAROLINA**

**Project No. CLWE044**

**January 20, 1992**

**Prepared by:**

**WESTINGHOUSE ENVIRONMENTAL  
AND GEOTECHNICAL SERVICES, INC.  
11 Technology Circle  
Columbia, South Carolina 29203**

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January 20, 1992

**Mr. Roger E. Fischer, Senior Engineer  
Westinghouse Electric Corporation  
Commercial Nuclear Fuel Division  
Post Office Drawer R  
Columbia, South Carolina 29250**

**Re: Report of Soil Sampling  
Solvent Extraction Area  
Westinghouse CNFD Facility  
Columbia, South Carolina  
Project No. CLWE044**

**Dear Mr. Fischer:**

Westinghouse Environmental and Geotechnical Services, Inc. (WEGS) performed soil sampling in the solvent extraction area of the Westinghouse Commercial Nuclear Fuel Division (CNFD) plant on November 18 through 22, 1991. Prior to arrival of the WEGS technician, Westinghouse CNFD personnel cored through the concrete floor in the solvent extraction area at 13 locations (see enclosed map), exposing soil underneath the floor for sampling. It was observed that between 7 and 14.5 inches of concrete occurred at each sampling location and that coreholes HA-7, HA-9, and HA-11 contained fluid. Prior to sampling at these locations, the fluid was pumped from the coreholes and the coreholes were swabbed to dryness. At each location, the upper 0.5 to 1.0 foot of soil was containerized for disposal by Westinghouse CNFD as low level waste. All soil below the upper 1.0 foot was observed to be dry at each boring except for borings HA-3 and HA-8 where ground water was intercepted at 12 and 13 feet, respectively.

Soil at each location was sampled at two-foot intervals by the WEGS technician using a 3 1/4-inch diameter, closed-top, stainless steel hand auger. The soil samples were placed by the WEGS technician in 32-ounce bottles provided by Westinghouse CNFD. The hand-auger boring was advanced between sample intervals using a 3 1/4-inch diameter, open-sided, stainless steel hand auger. Soil Boring Records for borings HA-1 through HA-13 are enclosed which indicate the sample intervals for each boring. Depths on the Soil Boring Records are referenced from the bottom of the concrete floor.

The closed-top hand auger was decontaminated prior to collection of each sample and the open-sided hand auger was decontaminated between borings. The decontamination procedure involved an initial rinse with tap water, cleansing in a solution of Alconox and water, another rinse with tap water, and a final rinse with deionized water.

All of the borings were abandoned using a sequence of backfilling with the remaining excavated soil and tamping with a piece of pipe. Borings HA-3 and HA-8 which penetrated the water table were sealed at the bottom of the boring with a 1-foot thick layer of bentonite. The

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upper 0.5 to 1 foot of each boring was backfilled with bentonite to the bottom of the concrete floor. Westinghouse CNFD refilled the concrete coreholes once the sampling was completed.

Should any questions arise concerning the soil sampling at the solvent extraction area, please contact either of the undersigned.

Sincerely,

WESTINGHOUSE ENVIRONMENTAL  
AND GEOTECHNICAL SERVICES, INC.

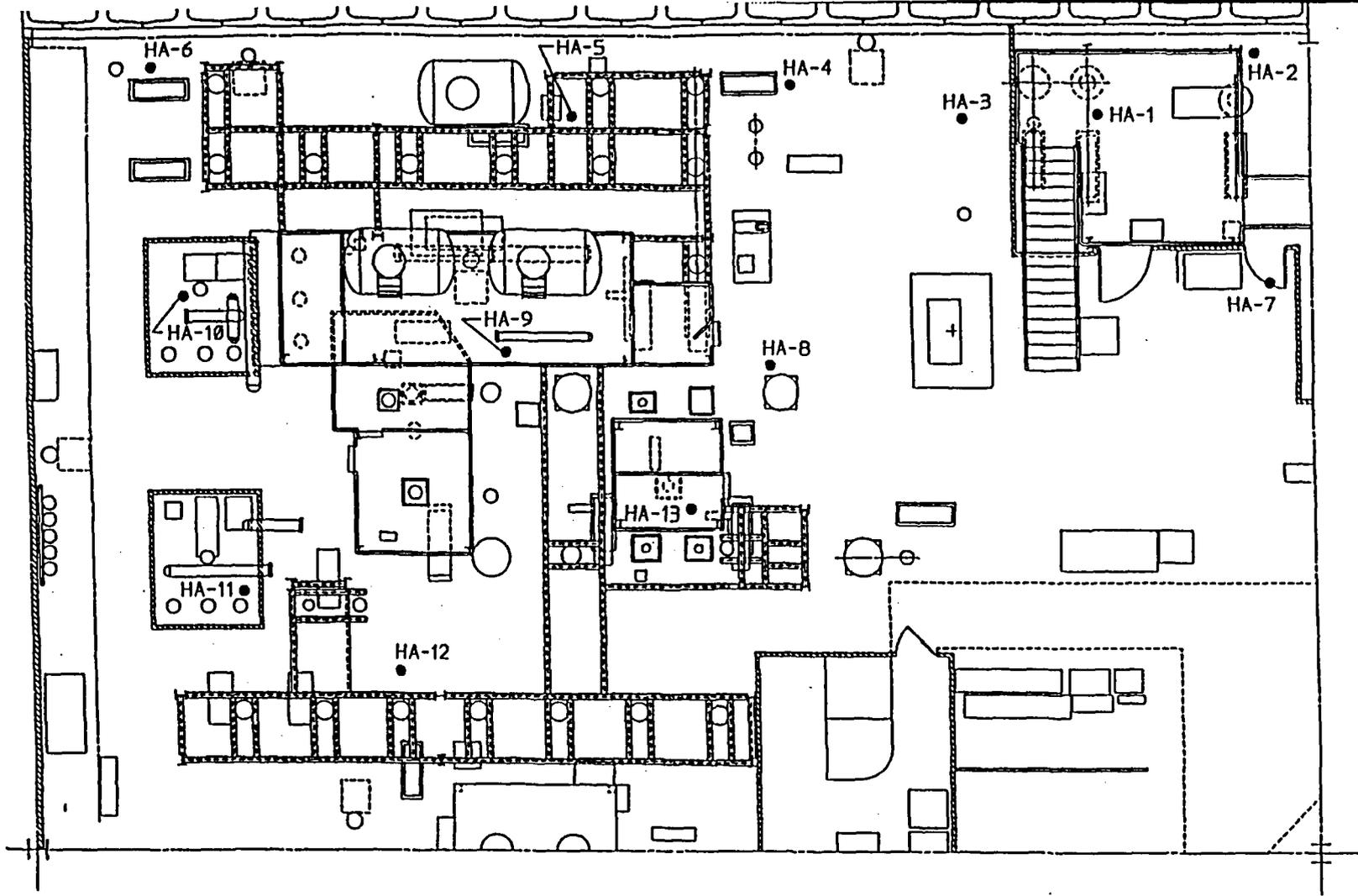


David P. Sanders, P.G.  
Project Hydrogeologist



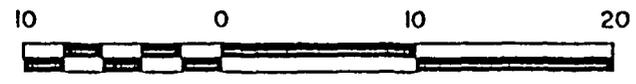
Dario J. Dal Santo, PH-GW  
Senior Hydrologist  
Director, Project Management

Enclosures



**LEGEND**

HA-10 ● HAND-AUGER SOIL SAMPLING LOCATION



APPROXIMATE SCALE IN FEET

WESTINGHOUSE ELECTRIC CORPORATION  
 COMMERCIAL NUCLEAR FUEL DIVISION  
 COLUMBIA, SOUTH CAROLINA  
 CLWEO44



Westinghouse Environmental  
 and Geotechnical Services, Inc.

SOIL SAMPLING LOCATIONS  
 SOLVENT EXTRACTION AREA

# SOLVENT EXTRACTION SOIL SAMPLING

## RADIOACTIVITY RESULTS

NOVEMBER 22, 1991

	<u>DEPTH</u>	<u>RESULTS, pCi/G</u> <u>GROSS ALPHA</u>
<u>SAMPLE 1</u> <i>(Highest)(Inside)</i>	2'	645
	4'	2068
	6'	2711 ← *
	8'	2584
	10'	2412
<u>SAMPLE 2</u>	2'	752
	4'	549
	6'	184
		Hit Rock
<u>SAMPLE 3</u>	2'	385
	4'	69
	6'	811
	8'	328
	10'	2.5
	12'	Liquid (31)
<u>SAMPLE 4</u> <i>(2<sup>nd</sup> highest)(Inside)</i>	2'	1962
	4'	1601
	6'	2045
<u>SAMPLE 5</u>	2'	44
	4'	11
<u>SAMPLE 6</u>	2'	2.5
	4'	4.8
<u>SAMPLE 7</u>	2'	208
	4'	7.8

	<u>DEPTH</u>	<u>RESULTS, pCi/G</u> <u>GROSS ALPHA</u>
<u>SAMPLE 8</u>	2'	8.7
	4'	10
	6'	5
	8'	3.7
	10'	6.4
	12'	1.9
<u>SAMPLE 9</u>	2'	2.5
	4'	5.3
<u>SAMPLE 10</u>	2'	24
	4'	5.3
<u>SAMPLE 12</u>	2'	16.0
	4'	5.0
	6'	3.4
	8'	3.4
	10'	2.1
<u>SAMPLE 11</u>	2'	24
	4'	27
	5.5'	11
	8'	34
	10'	2.7
<u>SAMPLE 13</u>	2'	252
	3'	183

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