

Borehole

41-01-11

Log Event A

Borehole Information

Farm : <u>SX</u>	Tank : <u>SX-101</u>	Site Number : <u>299-W23-192</u>
N-Coord : <u>35,592</u>	W-Coord : <u>75,680</u>	TOC Elevation : <u>663.00</u>
Water Level, ft : <u>96.60</u>	Date Drilled : <u>11/18/1974</u>	

Casing Record

Type : <u>Steel-welded</u>	Thickness : <u>0.280</u>	ID, in. : <u>6</u>
Top Depth, ft. : <u>0</u>	Bottom Depth, ft. : <u>100</u>	

Equipment Information

Logging System : <u>1</u>	Detector Type : <u>HPGe</u>	Detector Efficiency: <u>35.0 %</u>
Calibration Date : <u>03/1995</u>	Calibration Reference : <u>GJPO-HAN-1</u>	

Logging Information

Log Run Number : <u>1</u>	Log Run Date : <u>5/10/1995</u>	Logging Engineer: <u>Bob Spatz</u>
Start Depth, ft.: <u>0.0</u>	Counting Time, sec.: <u>100</u>	L/R : <u>L</u> Shield : <u>N</u>
Finish Depth, ft. : <u>12.5</u>	MSA Interval, ft. : <u>0.5</u>	Log Speed, ft/min.: <u>n/a</u>

Log Run Number : <u>2</u>	Log Run Date : <u>5/11/1995</u>	Logging Engineer: <u>Bob Spatz</u>
Start Depth, ft.: <u>11.5</u>	Counting Time, sec.: <u>100</u>	L/R : <u>L</u> Shield : <u>N</u>
Finish Depth, ft. : <u>99.0</u>	MSA Interval, ft. : <u>0.5</u>	Log Speed, ft/min.: <u>n/a</u>

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Analysis Information

Analyst : P.D. HenwoodData Processing Reference : Data Analysis Manual Ver. 1Analysis Date : 8/28/1995**Analysis Notes :**

Borehole 41-01-11 was drilled in 1974 with a single steel casing 0.3125 in. thick. There was no report of grout being placed in the borehole. The casing correction used for all log data was 0.33 in., which causes the reported concentration to be slightly higher than actual.

Cs-137 was the only man-made radionuclide detected in the borehole. It was found predominantly from the surface to 19.5 ft, with a maximum concentration of about 17 pCi/g. Another interval of contamination at 46 to 55.5 ft is apparently unrelated to the surface contamination. The remainder of the borehole showed concentrations just above the MDA at sporadic locations.

Log Plot Notes:

Three log data plots are provided. The Cs-137 concentration is provided in a separate log plot to document the concentration and show the shape of the distribution. The error of the Cs-137 concentration is shown by error bars and represents the 95 percent confidence interval. The MDA is shown on this plot as open circles.

A plot of naturally occurring potassium (K-40), uranium (U-238), and thorium (Th-232) is provided to permit correlation of these data with geologic information. This plot also shows the error bars and MDA. On the Th-232 plot, the MDA value is shown as zero at some depth locations. This zero value was a result of an anomaly in the commercial spectrum analysis software which has been corrected by the vendor. Because the MDA calculation at these few points is not significant relative to the use of the plot, the data were not reprocessed and corrected. Therefore, these MDA data points on the plot should be ignored.

A combination plot of individual radionuclides is provided for correlation purposes. This plot contains the Cs-137 log, natural gamma logs, a log of the total gamma count rate calculated from the spectral data, and the WHC Tank Farms gross gamma ray data.