RUST GEOTECH INC.

Spectral Gamma-Ray Borehole
Log Data Report

Borehole 22-01-03

Log Event A

Borehole Information

Farm : BY	**Tank :** BY-101	**Site Number :** 299-E33-245
N-Coord : 45,900	**W-Coord :** 53,202	**TOC Elevation :** 650.00
Water Level, ft :	**Date Drilled :** 5/31/1974	

Casing Record

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

Borehole Notes:
According to the driller's records, this borehole was not perforated or grouted.

Equipment Information

Logging System : 2	**Detector Type :** HPGe	**Detector Efficiency:** 35.0 %
Calibration Date : 03/1995	**Calibration Reference :** GJPO-HAN-1	**Logging Procedure :** P-GJPO-1783

Log Run Information

Log Run Number : 1	**Log Run Date :** 7/31/1995	**Logging Engineer:** Bob Spatz
Start Depth, ft.: 0.0	**Counting Time, sec.:** 100	**L/R :** L **Shield :** N
Finish Depth, ft. : 48.0	**MSA Interval, ft. :** 0.5	**Log Speed, ft/min.:** n/a

Log Run Number : 2	**Log Run Date :** 8/1/1995	**Logging Engineer:** Dave Traub
Start Depth, ft.: 97.5	**Counting Time, sec.:** 100	**L/R :** L **Shield :** N
Finish Depth, ft. : 46.5	**MSA Interval, ft. :** 0.5	**Log Speed, ft/min.:** n/a

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Analysis Information

Analyst : S.E. Kos

Data Processing Reference : Data Analysis Manual Ver. 1 Analysis Date : 12/20/1995

Analysis Notes :

This borehole was logged in two log runs. The pre- and post-field verification spectra indicated that the logging system was operating properly during data collection. The energy/channel drift observed during the logging runs was minimal, and multiple energy calibrations were not required to process the data.

The casing thickness is 5/16 (0.3125) in. The casing correction used to process the data was for 0.33-in. casing; therefore, a slight over-estimation in radionuclide concentration was calculated.

Cs-137 was the only man-made radionuclide detected. Cs-137 concentrations occurred from ground surface to a depth of about 20.5 ft and at intermittent locations throughout the borehole.

Data overlaps between logging runs confirmed excellent repeatability, and the measurement values were well within the limits of the statistical uncertainty of the measurements.

Details regarding the interpretation of the data for this borehole are presented in the Tank Summary Data Report for tank BY-101.

Log Plot Notes:

Separate log plots show the man-made (e.g., Cs-137) and the naturally occurring radionuclides (K-40, U-238, and Th-232). The natural radionuclides can be used for lithology interpretations. The headings of the plots identify the specific gamma rays used to calculate the concentrations.

A combination plot includes both the man-made and natural radionuclides, in addition to the total gamma derived from the spectral data and the Westinghouse Hanford Company (WHC) Tank Farms gross gamma log. The gross gamma plot displays the latest available digital data from WHC with no attempt to adjust the depths to coincide with the SGLS data.

Uncertainty bars on the plots show the statistical uncertainties for the measurements as 95-percent confidence intervals. Open circles on the plots give the minimum detection level (MDL). The MDL of a radionuclide represents the lowest concentration at which positive identification of a gamma-ray peak is statistically defensible.