

# ORNL INSTRUMENT EVALUATION SUMMARY

## CM11 with DP68D Probe

**Description:** The Thermo Electron RMP CM11 with DP68D Probe (CM11D) is a contamination monitor with a large area scintillation probe.

**Ranges Tested:** N/A

**Report Date:** June 11, 2003

**General Comments:**

1. Confidence intervals used to ascertain whether results are conclusive or inconclusive are determined using the 0.95 quantile of the student's t distribution (95% confidence interval).

### RADIATION RESPONSE

**Probe Surface Sensitivity:** N/A

**Energy Response:** N/A

**Response Linearity:** N/A

### ELECTRONIC and MECHANICAL REQUIREMENTS and TESTS

**Line Noise:** N/A

**Power Line Variations:** N/A

**Conducted Radio Frequency:** N/A

### INTERFERING RESPONSES TEST RESULTS

**Radio Frequency/Microwave:** No susceptibilities were observed when exposed to an RF scan from 100 kHz to 1000 MHz at  $20 \pm 2$  volts/meter amplitude modulated with 1 kHz at 80%.

**Electric Fields:** Not performed.

**Magnetic Fields:** Susceptibilities were observed when exposed to a 10 Gauss DC field in both orientations relative to the magnetic field emission lines. Susceptibilities were also indicated when exposed to the 60 Hz (1.26 Gauss) AC field in two orientations. Specific results are available in the test report.

**Interfering Ionizing Radiations:** Not performed.

### ENVIRONMENTAL FACTORS

**Temperature:** Susceptibilities were observed over the temperature test range of -10 to 50 °C (+14 to +122 °F). Specific results are available in the test report.

**Temperature Shock:** Not performed.

**Humidity:** Susceptibilities were observed when exposed to a relative humidity level of 95% (non-condensing) for 24 hours. Specific results are available in the test report.

**Vibration:** Not performed.