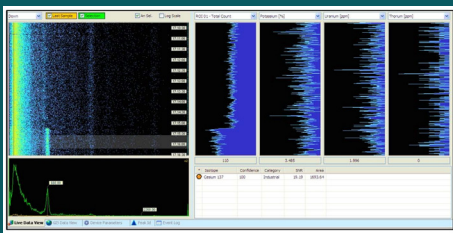




# CABRERA SERVICES

## CABRERA Large Area Scanning System (CLASS™)

### CLASS™ Data Output



CLASS™ Real-time 'Waterfall plot' Display

### CABRERA Contacts

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Equal Opportunity Employer (EOE)

The CABRERA Large Area Scanning System (CLASS™) is designed as a turn-key survey system to rapidly measure, spatially correlate, and map radioactivity concentrations in support of all phases of MARSSIM environmental investigations (Scoping, Characterization, and Final Status Survey). The CLASS™ is designed to be mounted on a variety of mobile survey platforms and is ruggedized to operate in a wide array of environmental field conditions.

The CLASS™ builds upon the Radiation Solutions, Inc. (RSI) RS-701 integrated controller and data acquisition system, with a digital multi-channel analyzer (MCA), and one to four RSX-256 4-liter (256 cubic inch) sodium-iodide (thallium activated) gamma scintillation detectors. The CLASS™ is capable of geo-referencing radiological survey data using either an integrated GPS unit (standard vehicle navigation) or with an external high resolution (sub-meter) GPS such as a Trimble Pro XRH (shown in photo below).



**A SBA-certified small disadvantaged business**  
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# We provide innovative solutions to complex remediation problems



## CLASS™ Features & Benefits

- Adaptable to a Variety of Survey Platforms – From ATV to Helicopter!
- Full 1024 –channel Gamma Spectrometer – collects and logs more data than traditional Gamma Walkover Surveys in the same amount of time
- Real-Time Operator Feedback – Operator sees results of surveys in real-time on either ‘Waterfall Plots’ or GIS Interface for immediate identification and response
- Nuclide Specific Programmability - User can pre-set up to 10 regions of interest (ROIs) to identify and track specific gamma radiation emissions.
- Automatic Gain Stabilization - Internal gain stabilization routines using primordial KUT nuclides to ensure consistent energy response
- Background Subtraction Capability – RSI-700 can be programmed with ROI-specific background values for subtraction to achieve net
- Post-Processing Capability - CABRERA proprietary data scripts capable of filtering very large data sets for fast GIS plotting and presentation

## Client Profiles

**US Army Pahakuloa Training Area, Hawaii** – CLASS™ used to perform aerial surveys over a total of 936 acres on an active firing range with UXO and other worker hazards (lava fields). Hazardous conditions prevented performance of traditional walkover surveys. Targets were depleted uranium, Davy Crockett Spotter Rounds (DCSR), and debris from the weapons system. By focusing on the range of the weapon (1 to 2 km), CABRERA was able to narrow the survey area. A laser rangefinder was used to control flight elevation to maintain consistent system detection limits and aerial surveys provided confidence that only a small portion of range was impacted by DCSR usage.



*CLASS™ Mounted on a Hughes 500 Helicopter for UXO Range Surveys*

**US Air Force BOMARC Site, McGuire AFB, NJ** – CLASS™ used to survey over 75 acres of a former defense missile site contaminated with weapons-grade plutonium (WGP) due to missile fire in 1960s. CLASS™ was configured to target 241Am gamma emissions from WGP hot particles. Over 500 discrete particles located and removed during CABRERA’s field work. CLASS™ system used for both MARSSIM Characterization and Final Status Surveys, achieving radiological permit termination for BOMARC Site.