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RSO, Inc.

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# Capabilities Statement

RSO, Inc. (RSO) provides radiation safety services and products to support universities, hospitals, other health industry, biotechnology research/development, portable and fixed radioactive gauge/device users and manufactures, and other industrial users of radioactive materials and radiation sources. RSO has provided these services for over twenty-seven years. RSO's offices and facilities are in Laurel, Maryland at 5204/5206 Minnick, Road. RSO provides a comprehensive approach to the radiation safety needs of clients that includes license applications, radiation safety program development, health physics support services, radioactive sample analysis, survey meter calibration, radioactive waste management, and sales of products for radiation safety.

RSO is an affiliate member of the Baltimore-Washington Chapter of the Health Physics Society, the National Chapter of the Health Physics Society, and the Conference of Radiation Control Program Directors (CRCPD). RSO believes involvement with these organizations is extremely valuable in staying current with pending regulations and industry standards.

## **Radiation Safety Services**

RSO provides a wide variety of services to support radiation safety programs from large institutions to small research facilities. Services include on-site collection of leak tests of sealed sources, surveys of radioactive materials use laboratories, survey meter calibrations, medical health physics: including nuclear medicine, x-ray machine compliance surveys, mammography inspections, and industrial x-ray machine surveys. RSO also provides staff augmentation by providing full and part-time health physics technicians to help our customers implement their radiation safety programs.

- NRC and Agreement State Radioactive Materials License Applications
- Audits of Radiation Protection Programs
- Health Physics Surveys
- License Decommissioning Services including Decontamination and Final Surveys
- Surveys, Disposal, and Consultation for Naturally Occurring Radioactive Material
- Personnel Dosimetry Service
- Leak Testing Services for Sealed Radioactive Sources
- Medical Health Physics Services for Diagnostic Radiology, and Nuclear Medicine
- Environmental Assessment and Surveillance Programs
- Emergency Planning and Emergency Response Activities
- Calibration/Repair of Survey Meters and other Radiation Detection Instruments
- Radioanalytical Laboratory Services

## **Radioactive Material Services**

RSO performs storage and transportation services to assist our customers in handling, transferring, shipping and temporary storage of radioactive materials.

## **Product Sales, Supplies, and Equipment**

RSO sells standard and customized signs and labels, contamination swipes, and other supplies and equipment for radiation safety. Survey meters, dosimeters, x-ray test stands, anti-contamination tyvek clothing, warning tape, containers for radioactive materials.

## **Radioactive Waste Management**

RSO provides management services for the disposal of radioactive and mixed chemical/radioactive waste. RSO is licensed by the State of Maryland to handle, package, temporarily store, and ship radioactive wastes. The license also authorizes decay-in-storage of short half-life radioactive waste (half-life less than 88 days). RSO can manage a wide variety customers' needs including large scale, long term waste management contracts as well as providing for smaller single pickup services. RSO can also work at customer's facilities helping to implement decay or radioactive waste programs.

RSO maintains a fleet of permitted vehicles ranging from vans to large trucks to provide for the transportation needs of our customers. Special pickups can be arranged for exclusive-use loads. RSO has the ability to ship to all LLRW burial sites and waste processors currently open to waste generators.

## **Personnel**

RSO's staff includes Health Physicists and Health Physics Technicians, Laboratory Technicians and Instrument Calibration/Repair Technicians. Our senior staff includes a Certified Health Physicist and a senior Medical Health Physicists. RSO, Inc.'s Radioactive Materials Services Department includes radioactive waste technicians with training to meet DOT and Maryland CHS driver training requirements. This group is primarily involved in the packaging, transporting and storage of radioactive material and radioactive waste. The average experience of our senior personnel is over 13 years and we have worked together to provide radiation safety for radiation producing machines and radioactive materials working together to provide service to our customers.

## **Maryland Radioactive Materials Licenses, etc.**

MD 33-021-01 Authorizes the laboratory use of radioactive materials, instrument calibration, sealed source leak testing/handling and radioanalytical services of industrial and environmental samples.

MD 33-021-02 Authorizes the pick up, receipt, temporary storage, decay-in-storage, and transportation of radioactive material and waste and the packaging of sealed sources for transportation and disposal.

EPA Generator Number MDD-06-927-9669

US DOT Hazardous Materials Certified Transporter

Maryland Controlled Hazardous Substances (CHS) Hauler Certification HWH 352

## **Radioactive Materials License Decommissioning**

RSO provides personnel and equipment for the decontamination and decommissioning of facilities in support of license termination or release from radiological controls. RSO's experience includes performing surveys as recommended in NUREG/CR 5849 and the new MARSSIM. RSO's radioanalytical laboratory routinely analyses samples in support of decommissioning efforts. Field instrumentation includes hand held survey meters, portable gamma spectrometers and cart mounted large area proportional detectors for monitoring floors. RSO's radioactive waste services can supply brokerage services, waste characterization, and transportation of radioactive waste generated by decommissioning operations.

## **Emergency Response**

RSO maintains a 24-hour emergency response service for its internal operations and for a wide variety of customers that ensures that a RSO emergency coordinator can be reached in the event of an emergency. Also, RSO subscribes to CHEMTREC, a nationwide service that provides emergency response for shipments of hazardous materials.

RSO has mobilized personnel, equipment and facilities to support emergency response activities for several years. Many of these responses have been to investigate radioactive material in municipal or medical waste streams. RSO's Decay-In-Storage Program and ability to store and broker radioactive low-level radioactive waste has provided a means of disposal for much of the material discovered in these responses.

## **Radioanalytical Laboratory**

RSO has a fully staffed and equipped radioanalytical laboratory capable of providing counting and analysis of various samples. RSO routinely analyzes wipe tests samples collected during surveys of biotech research laboratories, nuclear medicine laboratories, radio-pharmaceutical production laboratories and device manufacturing facilities. Environmental analysis of soil and vegetation samples for uranium and thorium is routinely accomplished. Available laboratory equipment includes: three liquid scintillation counters, two automatic gamma counters, a gas-flow proportional detector counting system, and a germanium detector gamma spectrum analysis system.

## **Instrument Calibration and Repair**

RSO has a licensed calibration laboratory in Laurel, Md. Instruments are calibrated using methods in accordance with ANSI N323-1997, US NRC Regulatory Guide 10.8, Rev 2, Appendix B, and as recommended by the instrument manufacturer. Sources used for calibration are traceable to the National Institute for Standards and Technology (NIST). RSO calibrates survey meters and bench top instruments from all manufactures (Ludlum, Bicon, Victoreen, Johnson, Eberline, SEI, and others). RSO also calibrates and performance checks fixed monitors and vehicle monitoring systems, in the field. All calibrations are performed under Maryland license MD 33-021-01. Normal calibration turn around time is five working days or less from the date received to the date shipped. RSO can perform emergency calibrations with a one-day turn-around time. The calibration laboratory can also repair instruments from most of the major manufacturers.

## **Quality Assurance**

RSO operates under a comprehensive Radiation Protection and Quality Assurance Program. These programs encompass various areas of technical performance including, conformance with regulatory requirements, worker health and safety and radioanalytical procedures.