

Underwater RIID Request for Multiple Jurisdictions in the National Capital Region

The National Capitol Region (NCR) is committed to preserving life and to promote health and safety through pre-hospital treatment and transportation, fire prevention, fire suppression and rescue, law enforcement, and attentiveness to homeland security threats. With that said we strive through training, purchasing state of the art equipment, and utilizing the latest technological innovations to protect the citizens and avoid unnecessarily placing our responders at risk. Our role as the fire and emergency medical services departments, and law enforcement agencies requires us to perform early detection of radiological hazards and request the necessary local, state, and federal resources to further investigate and mitigate the accidental or intentional release of radiological materials.

The NCR is requesting to purchase radiation isotope identification detectors (RIIDs) that will meet or exceed the specifications listed below in order to ensure we are meeting the steady state and enhanced steady state goals set forth by the Securing the Cities Initiative.

For more information on the STC program, please visit: <http://hsema.dc.gov/page/securing-cities-stc-program>

UNDERWATER RADIATION ISOTOPE IDENTIFICATION DETECTOR SPECIFICATIONS

Instruments must meet or exceed all specifications listed below:

Application	Isotope identification, spectral analysis, dose rate meter, source locator
Alarm	Audio through speaker and/or headphone jack and visual on screen
Alarm Types	Gamma dose rate; gamma dose; neutron counts
Batteries	Rechargeable (8hr minimum using factory default settings) and adapter for alkaline batteries
Gamma Detector: Scintillator	1.2 in. x 1.2 in. NaI or LaBr ₃ (or equivalent) scintillator
Gamma Detector: High Range Dose Rate Detector	10 mrem/h – 1 rem/h; GM tube or equivalent RIID must be able to display dose rate for the full dose rate range.
Gamma Scintillator Dose Rate Range	0 nrem/h – 50 mrem/h
Gamma Dose Range	0 nrem – 100 rem
Neutron Detector:	He ³ or alternative; must meet sensitivity and dimensional requirements of RIID; must be internal to RIID.
Neutron Sensitivity	2.5 cps/nv
Gamma Energy Range	20 keV to 3 MeV
Display Type	LCD high brightness color display with bright, backlit numbers/letters for easy readability.

Displayed Units	Units auto scale and are configurable between CPS, CPM, and dose rate.
Overload indication	Must have a visual alert such as "OVERLOAD" or "DANGER" on display screen during all modes of operation and/or distinct audible alert.
Searching	Must have a search mode easily enabled by operators, which provides a real time display of gamma radiation levels and accompanying audible tones which increase/decrease as radiation levels increase/decrease.
Inputs	Well-spaced key pad for simple one-handed use with protective gloves
Libraries	ANSI, ANSI+ Security, Medical, Industrial or User configurable
Outputs	Removable memory card and/or ability to connect USB drive directly to RIID to download saved spectral files without requiring software. USB 2.0; LEMO series K socket. Data format must be compliant with ANSI N42.42-2012.
Stability	Continuous - requiring no licensing of radiation source.
Operating temperature	-4° to +122°F
Weight	Not more than 6.0 lbs. (including batteries)
Dimensions (L x W x H)	Not to exceed 12.0 in. x 5.0 in. x 9.0 in.
Environmental protection	IP68 according to IEC 60529; 10 meters; 8 hours
Low battery warning	LCD and audible
Personnel Carrier	Each RIID must be accompanied with a shoulder strap and a carrying case.
Relative Humidity	< 100 %
Drop test on concrete floor	3 feet (Protective cover may be used to accomplish this, as long as RIID with cover conforms to dimensions requirement)
Resolution	<8% FWHM at 662keV at 68°F
Training	Training for RIIDs basic use and configuration, PC Software use and program administration developed per STC NCR provided curriculum to be completed and available online and/or as smart phone application (for iOS and Android, per STC NCR specifications) within 2 months of receipt of order. Vendor may be required to provide mechanism to record and report training completed online or by smart phone, per NCR regional specifications. The vendor must provide use of these training tools for the life of the RIIDs, with no additional cost to the region.
Other	Region may require that RIIDs be delivered with STC NCR region provided inventory control

	stickers adhered to the RIIDs and with a CD containing completed .csv file containing region specified data fields for use in inventory tracking for all RIIDs. Vendor may be required to create and produce customized label to complete the previous task, which includes bar or QR code information per regional tracking requirements.
Other	Vendor is responsible for ensuring that saved spectral files from the RIID can be uploaded to DNDO STC smart phone application can be transmitted into the DHS STC Information Sharing Environment or approved local server. Specifications will be provided after receipt of order. Vendor may be required to develop and maintain this smart phone application during the lifetime of the RIIDs; TBD.
Other	Vendor is responsible for providing regular maintenance and repair records to the region in a predetermined format compatible with the region's inventory and tracking systems. Data will requested at regular and recurring intervals by the region, TBD.
Other	Comprehensive warranty contract covering all aspects including required calibration and annual software/hardware updates of the device for 5 years from the date of accepted delivery by the end user.
Other	Includes Pelican™ (or equivalent) case that will store any battery adapters, power supply, USB memory card reader if applicable, spare memory card if applicable, communication cable, and all accessories specified above.