

August 22, 2008

CLOSING DATE: September 12, 2008

Dear Prospective Offerors:

***REVISED* REQUEST FOR INFORMATION – SENSORS AVAILABLE FOR
DETECTION OF RADIOACTIVE MATERIALS AND/OR SPECIAL NUCLEAR
MATERIAL AT DEPARTMENT OF DEFENSE INSTALLATIONS**

Battelle Memorial Institute, Pacific Northwest Division (Battelle), operator of the Pacific Northwest National Laboratory (PNNL) for the United States Department of Energy (DOE) is seeking information from companies, educational institutions, research and development laboratories (public and private), or other sources about commercially or government available equipment, or near-commercial technologies that may be used for the detection of radioactive materials and/or special nuclear materials at Department of Defense (DoD) installations.

This request for information (RFI) is part of an overall strategy to identify the next generation of radiological interdiction equipment for fielding as soon as next fiscal year, which begins October 1, 2008. The information obtained by this RFI will be included in a market survey that will be coupled with a test campaign to determine what system or systems should be recommended to the client for fielding. The phasing of this strategy may include:

- Sources sought announcement
- Market study and preliminary testing (PNNL may test systems upon request of the vendors)
- Ranking and formal testing (top 2-5 systems based on ranking criteria may be tested by PNNL)
- Recommendation (top 1-3 systems) that may include one or more of the following:
 - Spectroscopic
 - Non-spectroscopic
 - Portable system
- Procurement action
- Acceptance testing

- Prototype fielding
- Unrestricted fielding
- Lifecycle maintenance and improvements

Interested organizations/companies/institutions may propose to have their equipment tested at PNNL or provide PNNL with the results of a screening test procedure as part of the aforementioned market survey. The screening procedure will be provided upon request. NOTE: equipment provided to PNNL for testing must be 'cord and plug' and should be National Recognized Testing Laboratory (e.g. Underwriters Laboratory) listed.

PNNL is interested in information on systems that would be usable for improved sensing of radioactive materials in commercial vehicles of all sizes and shapes, and personal vehicles of all sizes and shapes. Both high volume screening instruments, and detailed inspection instruments are of interest. Specifically, PNNL is looking for information regarding the expected technical capability and effectiveness of currently (or soon to be) available instrumentation with respect to expected threats given the speed, distance, shielding, etc. conditions that are typically found at vehicle crossings. Operational issues, specifically detection probabilities and false alarm probabilities for typical measurement conditions are of particular interest. Other issues that might impact operations, such as required facility modifications, reliability and robustness, training requirements (must not require extensive user training), and health and safety issues are also of interest.

Interest is in both spectroscopic and non-spectroscopic systems depending on potential deployment needs. Interest is also in both fixed and portable systems.

Of key interest is the ability to discriminate medical isotopes from threat and non-threat materials.

Fixed sensors are intended for deployment at the entry points to installations. Portable sensors may be deployed at entry points in a semi-permanent fashion or placed in temporary locations on a random basis. Portable sensors will be used to supplement or replace fixed sensors.

Technical requirements and criteria include:

- ANSI N.42 compliance
- National Recognized Testing Laboratory (e.g. Underwriters Laboratory) listed
- Deployed vs. developmental system
- Yearly maintenance and calibration requirements (type and frequency)
- Mean time between failure, mean time between repair
- Average system availability (lead time)
- Infrastructure needs for power, signal, and communication

- Networkability (how many systems can populate the same network)
- Database structure and storage capability
- Ability to discriminate Naturally Occurring Radioactive Material and Medical Isotopes from other sources of radiation
- The overall effectiveness of the instruments automated ability to detect and identify (spectral gamma-ray analysis) or discriminate between various sources of radiation is of particular interest
- Sensitivity in counts per second per micro-curie for the following isotopes (upper and lower thresholds):
 - Am-241
 - Co-60
 - Cs-137
 - Ba-133
 - Co-57
- Sensitivity for the following isotopes in counts per second per gram (upper and lower thresholds):
 - HEU
 - Weapons Grade Pu
 - Reactor Grade Pu
 - DU
- Support for external interfaces (traffic lights, extraction of data)
- Ability to correctly identify occupancy generating radiation profile (e.g. vehicle detection)
- Integral or interface for image capture of occupancy (up to 2 cameras)
- Sensitivity to neutrons (if applicable, note upper and lower thresholds)
- Response time (time to alarm)
- Alarm settings and modes available
- Ability to identify and quantify presence multiple isotopes simultaneously

Please note that this is a REQUEST FOR INFORMATION ONLY. This is NOT a request for proposal and there is no solicitation package available at this time. Participation does not imply any obligation by Battelle, PNNL, DOE or the United States Government or any agency thereof.

Proprietary information will be protected to the greatest extent provided by law. We will not pay for any information received in response to this request, nor will we compensate any respondent for any costs incurred in developing the information provided to us.

Interested organizations/companies/institutions are encouraged to respond to this notice by providing a short written summary (no longer than twenty pages) of their equipment capabilities. Summaries are due no later than 12 PM (Noon) Pacific Daylight Time, Friday, September 12, 2008. Summaries will be accepted via mail, fax, or email (preferred) to the following Contracts Specialist:

August 21, 2008

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Email: shannon.malisani@pnl.gov

For personal or overnight mail delivery, the address is:

Battelle Memorial Institute
Pacific Northwest Division
ETB 3200 Q Street
Richland, WA 99354
Attn: Shannon Malisani

Questions and/or comments will be accepted; however, they must be in writing. They will be accepted either via mail, fax or email (preferred) to the point of contact listed above. Questions and comments will not be accepted over the phone.

Sincerely,



Shannon C. Malisani
Contracts Specialist

Enclosure