



9110-9D

DEPARTMENT OF HOMELAND SECURITY

Announcement of Requirements and Registration for the National Radiological and Nuclear Detection Challenge

AGENCY: Domestic Nuclear Detection Office, DHS.

ACTION: Notice.

SUMMARY: DNDO announces the National Radiological and Nuclear Detection (Rad/Nuc) Challenge, a participation challenge being conducted under the America Competes Reauthorization Act, for state, local, and tribal law enforcement, other first responders, public safety officials, and Civil Support Team members.

DATES: The Rad/Nuc Challenge will be held from August 20 through August 22, 2013.

ADDRESSES: The Rad/Nuc Challenge will be hosted at the I.G. Brown Air National Guard Training and Education Center, Alcoa, Tennessee, near Knoxville.

FOR FURTHER INFORMATION CONTACT: Timothy Smith, (202) 254-7297, Radnucchallenge@hq.dhs.gov. To register for and find additional information about the Rad/Nuc challenge, visit <http://www.radnucchallenge.org>.

SUPPLEMENTARY INFORMATION:

General

The Department of Homeland Security (DHS), Domestic Nuclear Detection Office (DNDO), announces the National Radiological and Nuclear Detection (Rad/Nuc)

Challenge, a participation challenge authorized under 15 U.S.C. 3719(c)(3), for state, local, and tribal law enforcement, other first responders, public safety officials, and Civil Support Team members. The purpose of the Rad/Nuc Challenge is to increase proficiency, improve Concepts of Operations, and promote proper use of Radiation and Nuclear Detection (RND) equipment by state and local agencies in support of the domestic RND mission to prevent the illicit use and/or movement of radioactive materials within the United States.

The Rad/Nuc Challenge will consist of a competitive RND search exercise held over a three-day period. The competition is designed to develop and recognize enhanced RND search skills, train on the use of various pieces of RND equipment, and influence vendors and developers to adapt and improve RND equipment capability and suitability for field use.

The event will be hosted at the I.G. Brown Air National Guard Training and Education Center located in Alcoa, Tennessee, near Knoxville. Equipment specific and RND search refresher training will be provided for all competitors on the first day of the event prior to the start of the competition.

I. Subject of Challenge Competition

The purpose of the Rad/Nuc Challenge is to further DNDO's vision of a Nation ready to detect and interdict terrorist radiological and/or nuclear threats by the effective and efficient integration of capabilities and resources of the Global Nuclear Detection Architecture (GNDA). Specifically, the Rad/Nuc Challenge will serve to coordinate implementation of the domestic portion of the GNDA, strengthen its operational

relationships, and improve detection capabilities across the GNDA. The Rad/Nuc Challenge will provide a mechanism to improve radiation detection capabilities of Federal, state, local, and tribal stakeholders through competitive exercise, increased awareness and cooperation, and first-hand interaction with RND equipment vendors and developers. The Rad/Nuc Challenge will exploit the proven success and cost-effectiveness of trade shows and challenge competitions to advance capabilities in the RND field.

The Rad/Nuc Challenge is an RND proficiency competition. Even though it is designed to incorporate specific RND job skills or tasks, it may be necessary to deviate from, or be innovative in the application of, certain existing protocols and procedures in order to obtain the best overall result and win the competition.

Two components, the Maze and the Container Search, make up the Rad/Nuc Challenge competitive exercise. This RND exercise will be organized in flights and heats of competitors. Flights will be composed of multiple heats. Each heat may include four or more competitors, with each competitor occupying one lane on the RND search course. Sources may be changed and/or repositioned between flights and/or heats to allow competitors to view the competition of other flights and heats. All competitors within a given flight will be sequestered and called to the course when their heat is ready to start. Advancing through each round of the competition will be based on a competitor's detection and identification accuracy and RND search course completion time. Time penalties may be incurred for radiation source detection and identification errors. Competitor times will be measured at least to the 0.1 of a second by an automated timing system.

Radiological sources employed for the Rad/Nuc Challenge will include isotopes common to typical detection instrument libraries, but may include isotopes that are not in some libraries. A list of actual sources that may be encountered during the event will be communicated to registered competitors prior to the competition. Source strengths will be sufficient such that most competitors should be able to detect and identify the sources using a typical personal radiation detector (PRD) and/or a radioisotope identification device (RIID).

All competitors will have the opportunity to participate in a practice round and the first elimination round. Competitor RND search completion times in each elimination round, including any time penalties incurred, will be used to determine which competitors advance. A maximum time limit will be set. Competitors who do not finish within the time limit will receive the maximum time plus applicable penalties.

Competitors will be required to use commercially available RND equipment to detect, localize, and identify radiation sources. Competitors may also be required to determine and indicate relative radiation source strengths. Competitors are encouraged to use their own RND equipment. However, a limited amount of RND equipment will be available for use by competitors at the event.

Time penalties will be assessed for radiation detection, localization, identification, and relative source strength inaccuracies. Competitors will be required to balance accuracy and speed to obtain the best possible time and win the competition.

Below we describe the Maze and Container Search components of the exercise in greater detail.

A. The Maze

The Maze requires locating radiation sources hidden among a number of identical tables. The tables in each lane will be arranged in identical patterns. A pre-determined number of radiological sources will be placed in boxes in each of the lanes. Each competitor or team will compete in their own lane. (See Figure 1 for a possible layout arrangement.)

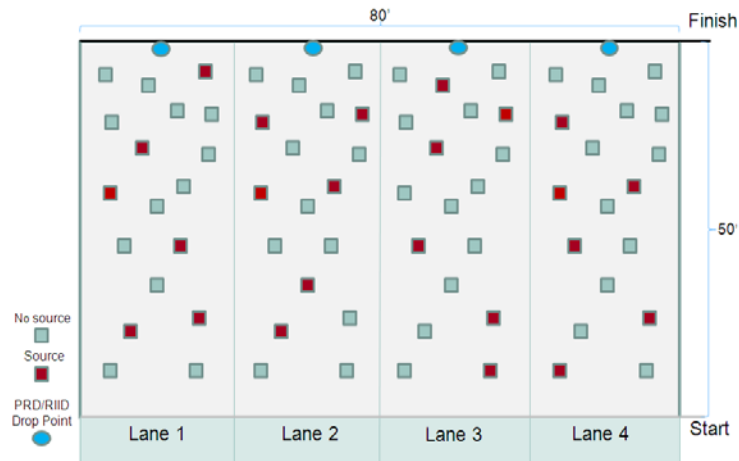


Figure 1 -- Maze Layout

The sources will vary in size and by isotope within a single lane, but only one primary isotope will be in any box. Each lane will have an identical mix of sources. Each competitor will have a marking mechanism to clearly identify the boxes containing sources. These markers will be clearly visible to the referees and spectators. Background measurements will be taken before the event to identify any Naturally Occurring Radioactive Materials (NORM) or spectators/participants with medical isotopes in the area which might affect the competition.

B. The Container Search

The Container Search requires each competitor to detect and locate sources hidden inside shipping containers. Single or multiple sources may be placed at various heights above the ground, but along the centerline of the containers. Each competitor will compete in their own lane on either side of the container row. (See Figure 2 for a possible layout arrangement.)

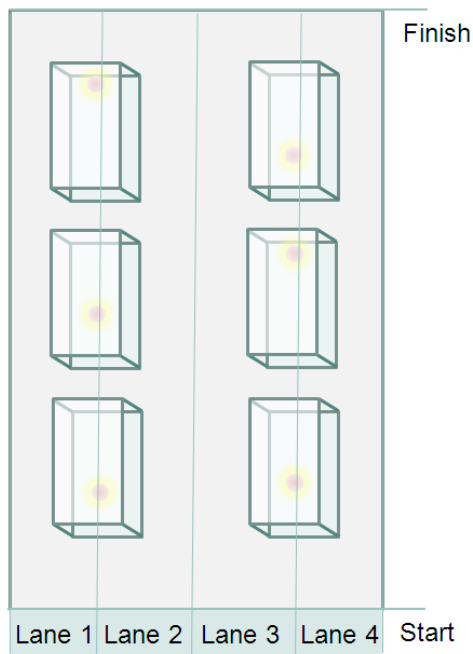


Figure 2 -- Container Layout Search

The containers will be placed in rows end-to-end, spaced so that access is possible between containers to allow entry for source placement and position changes. The side of each container will have a grid for competitors to use to indicate the source's location. Sources positioned at the centerline of containers will be of sufficient strength to be detected by most competitors using a typical PRD or RIID. Background measurements will be taken before the event to identify any NORM or spectators/participants with medical isotopes in the area which might affect the competition.

II. Eligibility to Participate in the Competition

Pursuant to 15 U.S.C. 3719, American COMPETES Reauthorization Act of 2010, Public Law 111-358, the Rad/Nuc Challenge is open only to (i) Individuals who are at least 18 years of age and citizens or permanent residents of the United States as of the time of entry, and (ii) teams of eligible individuals, where each team member meets the eligibility requirements for individual contestants.

The Rad/Nuc Challenge is also limited to Civil Support Team members, state, local and tribal law enforcement, other first responders, and public safety officials. Other individuals, including Federal employees or contractors whose work deals directly with radiological and nuclear detection or detection equipment, may be eligible to be non-competitive participants in the Rad/Nuc Challenge. This means that unless otherwise ineligible, such individuals may participate, but will not be eligible for an award, and will not compete directly against the registered state, local and tribal law enforcement, other first responders, public safety officials, and Civil Support Team competitors for non-monetary awards in the competitive exercise.

The following individuals and/or teams are not eligible, regardless of whether or not they meet the criteria set forth above: (i) the sponsoring agency, contractor, or other organization involved with the design, production, promotion, execution, or distribution of the competition (collectively “Promotion Entities”); all employees, representatives, and agents of such entities, and immediate family or household members of any such employee, representative, or agent; (ii) any individual and/or team involved with the design, production, promotion, execution, or distribution of the competition and each member of any such individual’s immediate family or household; (iii) any individual

and/or team that employs any judge or that otherwise has a material business relationship or affiliation with any judge; (iv) any Federal entity or Federal employee acting within the scope of their employment, or as may otherwise be prohibited by Federal law; and (v) any individual and/or team that used Federal facilities or consulted with Federal employees to develop their solution, unless the facilities and employees were made available to all participants on an equitable basis.

III. Registration for Competitors and Attendees

All Rad/Nuc Challenge competitors and attendees will be required to register at www.radnucchallenge.org. The Website will be open for registration on [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]. Competitors and attendees are encouraged to visit the website periodically for updates on the event and to register for other Rad/Nuc Challenge events such as training, technical briefings, and special exhibitions which may have limited space available. These events will be made available on a first-come, first-served basis.

In order to encourage broad participation and early registration, DNDO will offer a travel reimbursement for the first 250 registered state, local and tribal law enforcement, other first responders, public safety officials, and Civil Support Team competitors. To encourage broad agency participation, there will be a limit to the number of competitors from a single agency that will be eligible for travel reimbursement. Once travel obligations are made for the first 250 registered state, local and tribal law enforcement, other first responders, public safety officials, and Civil Support Team competitors, the

travel reimbursement will no longer be available and a notice will be posted on the Rad/Nuc Challenge website.

All Rad/Nuc Challenge non-competitor attendees, including exhibitors, briefers, and observers, will be required to register and may be required to pay a nominal fee.

Exhibitors may also be required to pay an additional fee to cover facility and other expenses related to the exhibition. The total number of attendees may be limited by the venue or exhibit area constraints so early registration is strongly encouraged.

IV. Basis on Which Winners Will Be Selected

Advancement beyond the first round of each event is based on the competitor's RND proficiency based on their overall score. A competitor's score will be determined by the RND search course completion time as measured by an automated timing system.

Penalties may be assessed by adding time to the competitor's raw completion time for not locating all sources, incorrectly identifying sources, reporting sources not present, inaccurately localizing sources, and failing to navigate the RND search course properly.

Competitors with the best overall score based on speed and accuracy will be declared the winners of each heat and, ultimately, through elimination rounds, winner of the Rad/Nuc Challenge.

V. Prize

Winner(s) of the Rad/Nuc Challenge will be recognized for RND performance excellence and expertise through non-monetary awards. The winners of each component of the competitive exercise and the overall winner will receive a trophy and certificate of

achievement. The winners' name, agency, equipment used, and winning score for each event will also be posted on the Rad/Nuc Challenge website.

VI. Additional Information

The Rad/Nuc Challenge will also provide access to exhibits featuring state of the art technologies supporting the RND mission, advanced technology demonstrations that showcase capability enhancing technologies under development, and an information exchange forum consisting of RND mission related briefings, panel discussions, and workshops. These forums will solicit user input on RND equipment operational requirements, and share RND mission best practices and lessons learned.

Exhibition space will be available to all Rad/Nuc Challenge participants, including vendors, academia, national laboratories, and government agencies to showcase advanced capabilities, RND and other mission related equipment, and innovations in the RND mission area. Availability is on a first come, first serve basis. User fees may apply.

For registration and other information, see the event website at www.radnucchallenge.org or contact Timothy Smith, DHS, DNDO, by email at radnucchallenge@hq.dhs.gov.

AUTHORITY: 15 U.S.C. 3719.

Rafael Borrás,

Under Secretary for Management