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***Area Radiation Detector Revision of Training Summary
Report***

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Nonproliferation and National Security Department

Brookhaven National Laboratory

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AREA RADIATION DETECTOR REVISION OF TRAINING

SUMMARY REPORT

NONPROLIFERATION AND NATIONAL SECURITY DEPARTMENT

Stephen V. Musolino and Kathleen McIntyre

April 17, 2013

INTRODUCTION

The scope of work for Phases 4-8 were:

- Review existing training materials and develop outline for a concise radiation detection and response training for hospital staff.
- Develop materials and a pilot training module review by DOHMH.
- Conduct pilot trainings at two hospitals and revise training materials as needed. (Note: three hospitals were included in the original pilots SIUH North, SIUH South, and St. Johns Episcopal).
- Conduct radiation detection trainings at 15 additional hospitals for a total of 18 sites, listed in the Appendix.
- Revision and review of all training materials prior to distribution to all hospitals.

DEVELOPMENT OF COURSE CONTENT

The initial draft PowerPoint presentation was first piloted with some of the medical staff of the Occupational Medicine Clinic at the Brookhaven National Laboratory. As part of the initial material two brief videos were developed to demonstrate setup and checkout of the ratemeter, digital and analogue archetypes, and pancake GM probe. Subsequently the material and exercises were presented to a group of subject matters experts in DOHMH. After incorporation of comments DOHMH designated three hospitals, Staten Island North and South and St John's Episcopal, to conduct pilot classes with the user community.

The lecture was organized in two parts. Part-1 was aimed at all personnel, Security and Emergency Department Staff who operate the survey instrument to resolve an alarm. Part-2 was aimed at the personnel, who conduct radiation surveys and was deemed optional for Security. Part-1 could be delivered in approximately 10 minutes as a standalone module for Security.

Three performance-based exercises were incorporated to qualify the personnel who conduct radiation surveys:

1. Setup and checkout of the ratemeter and pancake GM probe.
2. Survey of an approximately 100 μCi gamma emitting source to demonstrate the concept of $1/r^2$.
3. Survey and documentation of a simulated contaminated patient using the Tyvek™ suits and thoriated gas mantles.

DELIVERABLES

Each hospital was provided a disk with the training materials:

1. PowerPoint presentation customized with local photographs of the Area Radiation Detector installation, and the ratemeter archetype(s) used by the trainees. If only one type was used the slides and video of the other was provided in a file labeled, Additional Information.

2. Word file with the Survey Sheet.
3. Word file with the Operator Air for the frisker.
4. One laminated Operator Aid to be included with the emergency instrument kit.
5. Word file with the Qualification-Competency Form
6. Word file with Read Me instructions on the training materials and pointers on delivery of the module.
7. Three Tyvek™ suits with four thoriated gas mantles attached to the back, seven additional suits, and 28 mantles.

DOHMH was provided:

1. PowerPoint files for all 18 sites,
2. Master PowerPoint and the Additional Information files.
3. Word file with the Survey Sheet.
4. Word file with the Operator Air for the frisker.
5. One laminated Operator Aid
6. Word file with the Qualification-Competency Form
7. Word file with Read Me instructions on the training materials and pointers on delivery of the module.

RESULTS

At the completion of the project, all 18 training sessions were delivered, and a total of 272 hospital staff participated. The course materials are to be posted on-line by DOHMH staff and hosted on the DOHMH web site.

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APPENDIX – LIST OF PARTICIPANTS AND NUMBER OF TRAINEES

Coney Island Hospital	18
Beth Israel Medical Center -Brooklyn Division	12
Beth Israel Medical Center - Milton and Carroll Petrie Division	12
Bronx-Lebanon Hospital Center - Fulton Pavilion	20
Elmhurst Hospital Center	20
Jacobi Medical Center	13
Lutheran Hospital	13
New York Downtown Hospital	14
New York Eye and Ear Infirmary	18
North Central Bronx Hospital	18
Richmond University Medical Center	14
Saint Barnabas Hospital	11
Staten Island University Hospital - North	18
Staten Island University Hospital - South	14
St. John's Episcopal Hospital - South Shore Division	14
St. Luke's Roosevelt Hospital Center - St. Luke's Hospital Division	13
St. Luke's Roosevelt Hospital Center - Roosevelt Hospital Division	15
Woodhull Medical and Mental Health Center	15