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OFFICE OF RADIATION SAFETY

May 22, 2006

Kathy Modes
United States Nuclear Regulatory Commission, Region I
Commercial and R&D Branch
Division of Nuclear Materials Safety
475 Allendale Road
King of Prussia, PA 19406-1415

P-3

Docket Nos.: 030-09049 & 030-19445
License Nos.: 08-00216-22 & 08-00216-23
Control Nos.: 138805 & 138804

RE: Additional Information regarding proposed Radiation Safety Officer – Gregory D. Smith, CHP

Dear Ms. Modes,

As per your e-mail dated 5/10/2005, attached is additional information regarding my training and experience with regards to my serving as the George Washington University Radiation Safety Officer for the 08-00216-22 Academic broad-scope license and the 08-00216-23 self-shielded irradiator license.

The information is provided to meet the guidance in NUREG-1556, Volume 11 Section 8.7.3 and NUREG-1556, Volume 5 Section 8.7.1.

Please feel free to contact me on 202-994-3149 if you have any questions or if you need further information.

Sincerely,

Gregory D. Smith, CHP
RSO, Inc.

Attachment – Training and Experience for Gregory D. Smith

cc: Astra Bain-Dowell, MPA
Gregory D. Smith, RSO

138805/138804
NMSS/RONI MATERIALS-002

Gregory D. Smith, CHP

Certification from the American Board of Health Physics

TRAINING AND EXPERIENCE

For the 08-00216-22 Academic Type A Broad-Scope license

Experience:

1. RSO, Inc.

Health Physicist and Certified Health Physicist for RSO, Inc. (since 1986).

As an employee of RSO, Inc. performs radiation surveys to determine compliance with dose limits (occupational and public dose limits), reviewed the results of personnel dosimetry records such as those provided by Landauer and Global Dosimetry, collected leak tests of sealed source devices, reviews results of wipe test and leak test analysis, recommends selection of survey meters, recommends radioactive waste disposal practices and procedures, prepares radioactive material license applications, license amendments, decommissioning funding plans, facility audits, license termination plans and facility decommissioning.

The clients and customers that are provided services and consultation, include NRC and Agreement State licensees (broad scope, limited scope and General License), x-ray machine registrants and others). They are involved in biotechnology research and development (open bench top use of radioactive material), use of small to relatively large sealed sources, usually in devices such as portable and fixed gauges/devices, and use of large shelf shielded irradiators.

This work includes use of hand-held survey meters, liquid scintillation counters, automatic gamma counters, implementation (selection of dosimeter types) and use of personnel dosimetry programs (e.g.: Landauer “luxel” and TLD), review of dosimetry results, investigation of reported dose above “investigation” levels and reconciliation of non-normal dosimetry results.

Also serves as “Emergency Response” coordinator. Investigates radioactive material detected in scrap metal and municipal waste. Using hand-held survey meters/gamma spectroscopy isolate, identify and arrange disposal. Respond to incidents with portable gauges (e.g.: damaged or lost moisture/density gauges used at temporary jobsites).

Manager, Radiation Safety Services Department; and Health Physicist, RSO, Inc., Laurel, MD (from February 1987 through 1992).

Manager of service department which performs radiation safety surveys and audits for clients working with radioactive material such as government and private biomedical research institutions and various other industries.

The RSS Department also performs portable survey meter calibrations and repairs, radioactive analysis of health physics operational samples, liquid waste samples and environmental samples, and provides dosimetry services to clients including external and internal dosimetry.

Supervised projects including several major facility decontamination and decommissioning efforts and high activity sealed source disposals. Experience with providing D&D health physics support services at the Northeast Ohio Regional Sewer District in Cleveland, OH.

Project Manager for contract health physics support services to the US Army Aberdeen Proving Ground Combat Systems Test Activity (CSTA), now know as Aberdeen Test Center – ATC. Contract included full time on-site health physics technicians (1 to 2), laboratory analysis of radioactive samples, and performance of an environmental monitoring program. Also was back-up site health physics technician for the above referenced contract work. The HP technician was responsible for conducting radiation surveys for contamination, collection of work place and environmental air samples, observation of work place radiation safety, custodian for respirators, first entry into test facility chambers, operation of real time air samplers at, with coordination with CSTA/ATC Test Director, machine crew, Gun crew and at depleted uranium test facilities operated by ATC.

Project Manager for contract health physics support services to the National Institute on Drug Abuse (NIDA). Contract includes a full time on-site health physics technician, laboratory analysis of radioactive samples, radioactive waste disposal, and providing materials and equipment.

Project Manager for several smaller contracts for health physics support services which include full time on-site health physics technicians.

2. Selected Experience

SAIC-Frederick/NCI Contract

Performed audits of Principal Investigator (PI) Radiation Use Programs and of the Radiation Safety Office at SAIC-Frederick/NCI (National Cancer Institute) facilities at Ft. Detrick, MD and provided direct consultation on radiation safety issues to the SAIC-Frederick Radiation Safety Officer. Audits have been performed by Mr. Smith since

Training and Experience GWU Radiation Safety Officer – Gregory D. Smith

1999. Typically 3 days per calendar quarter, auditing an average of 10 programs per quarter.

The audits are of approximately 80 separate programs (quantity changes as programs are added and others discontinued). Programs are for use of radionuclides used in biotechnology R&D. These include ^3H , ^{14}C , ^{35}S , ^{32}P , ^{33}P , ^{125}I , ^{111}In , and other less common radionuclides (e.g.: ^{51}Cr , ^{45}Ca).

Use of these radionuclides by researchers is in standard biotechnology R&D laboratories as well as animal and Biological Safety Laboratories. The laboratories are in several buildings at a large campus in Frederick Maryland.

PI Radiation (Isotope) Program Audits include the following:

- Monitoring and surveying areas for radioactive contamination and radiation levels (using hand-held survey meter and collecting wipe tests)
- Reviewing the authorized personnel and their records, comparison of use vs. authorizations
- Interviewing either the Principal Investigator or the Area Radiation Supervisor
- Reviewing the authorized rooms (comparing rooms used with those listed as authorized for use)
- Inspecting for standard room markings, use of warning signs and labels
- Reviewing need for bioassays and personnel external monitoring
- Reviewing inventory (stock vials of radioactive material), use and disposal records, check (random) physical inventory
- Reviewing contamination surveys conducted by the radioactive material users for frequency, recording data, analysis of wipe test samples and response to contamination (if found)
- Reviewing records of radiation safety training
- Inspecting for compliance with security procedures (security of radioactive material)
- Review PI Radiation Program authorizations for adequate training and experience.

Radiation Safety Office - Program Audits include the following:

The SAIC Frederick/NCI Radiation Safety Office operates under several programs and standard operating procedures. These are audited along with the PI Radiation Program Audits and include the following:

- Review calibration of hand-held survey meters, review selection of survey meter types, use of calibration methods, radioactive standards, electronic testing, and reporting.
- Review radioactive waste collection, packaging and disposal.
- Review radioactive package receipt, procedures, and inventory.

Training:

Continuing Education-Training

See Attached listing of Continuing Education and Training

GWU Specific Training (completed)

Received Orientation and review of the GWU Radiation Safety Program

Read GWU Radiation Safety Manual

Read GWU Broad Scope License Application

Reviewed GWU latest annual review (audit) of the radiation safety program

Reviewed GWU monthly radiation safety surveys for the month of April

Reviewed and inventoried with previous Radiation Safety Officer sealed source inventory

Attended Radiation Safety Committee meeting on May 10, 2006

TRAINING AND EXPERIENCE

For the 08-00216-~~23~~ Self-Shielded Irradiator NRC License
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Experience:

1. RSO, Inc.

Health Physicist and Certified Health Physicist for RSO, Inc. (since 1986).

1. Sanaria, Inc. – June thru December 2005 - Drafted License application for Sanaria for J.L. Shepherd Model 484 12,000 Ci 60Co self-shielded irradiator which was subsequently submitted and license issued, provided Decommissioning Funding Plan information, provided radiation safety training to users (6 users), performed area radiation surveys and leak tests. Attended and received training from Manufacturer (JL Shepherd). Attended and assisted with delivery, receipt and installation of irradiator in November 2005.

2. Lockheed Martin-Manassas – April and May 2005 - Performed area radiation surveys and leak tests for J.L. Shepherd Model 484 6,000 Ci 60Co self-shielded irradiator. Attended and received training from Manufacturer (JL Shepherd).

3. Lockheed Martin-Manassas – January and July 1999 thru present - Performed area radiation surveys and leak tests for J.L. Shepherd Model 109 Ci 60Co self-shielded irradiator.

4. SAIC-Frederick/NCI – 1999 thru present - Performed safety program audits for J.L. Shepherd Model Mark I and AECL (Nordion) self-shielded irradiators.

PI Radiation (Irradiator) Program Audits include the following:

Interviewing either the Principal Investigator or the Area Radiation Supervisor
Reviewing the authorized personnel and their records
Reviewing use log vs. authorized users
Insuring leak tests and inventory were conducted.
Reviewing the authorized rooms (comparing rooms used with those listed as authorized for use)
Inspecting for standard room markings, use of warning signs and labels
Reviewing records of radiation safety training
Inspecting for compliance with security procedures

Training:

GWU Specific Training

Received Orientation and review of the GWU Radiation Safety Program
Read GWU Radiation Safety Manual
Read GWU Irradiator License Application
Read JLS Irradiator Operating Procedure
Reviewed Irradiator Operations with Approved Irradiator User
Reviewed GWU Quarterly irradiator inspections and latest Service Provider Preventive Maintenance Report
Read and Review GWU Irradiator Security

Irradiator Training

1. Lockheed Martin-Manassas – April 2005 - J.L. Shepherd Model 484 6,000 Ci 60Co self-shielded irradiator. Attended and received training from Manufacturer (JL Shepherd).
2. Sanaria, Inc. – November 2005 - J.L. Shepherd Model 484 12,000 Ci 60Co self-shielded irradiator. Attended and received training from Manufacturer (JL Shepherd).
3. Sanaria, Inc. – Several dates in 2nd half 2005 -. Provided radiation safety training including use and emergency response for the J.L. Shepherd Model 484 12,000 Ci 60Co self-shielded irradiator.