



Westinghouse Electric Company  
Science and Technology Department  
302 Building  
1332 Beulah Road  
Pittsburgh, Pennsylvania 15235-5081  
USA

*NWSB 2*

May 24, 2006

STD-IH-06-16

U. S. Nuclear Regulatory Commission, Region I  
Division of Nuclear Materials Safety  
475 Allendale Road  
King of Prussia, PA 19406-1415

Attention: Jim Dwyer  
Chief, Commercial/Industrial Branch

Dear Mr. Dwyer:

Subject: Submittal Application for License Amendment for  
License Number SNM-1460 (Docket Number 70-01503)

2006 MAY 26 PM 1:35

RECEIVED  
REGION 1

The Westinghouse Electric Company hereby submits this application for an amendment to License Number SNM-1460 to update the position description of RSO. I will retire from Westinghouse Electric Company LLC in July of this year, but I will continue to fulfill the responsibilities of RSO for the SNM-1460 license beginning in August as a consultant, employed through Hudson Global Resources. I will continue to occupy an office at the Science & Technology Department location.

I have attached the revised pages to the license application, which reflect the requested changes. Your timely consideration of this application would be appreciated in order that this transfer of oversight may occur.

Sincerely,

John R. Lehnhardt, RSO  
Manager, Industrial Hygiene, Safety  
& Environmental Compliance  
Westinghouse Science & Technology Department

Attachments  
cc: A. J. Nardi

**WESTINGHOUSE ELECTRIC COMPANY LLC  
SCIENCE AND TECHNOLOGY DEPARTMENT  
PITTSBURGH, PA**

**APPLICATION FOR RENEWAL  
US NRC LICENSE NUMBER SNM-1460  
DOCKET NUMBER 70-1503**

**REVISION 9 – May 22, 2006, 2005**

## TABLE OF CONTENTS

<u>Title</u>	<u>Page</u>
1. License Information.....	1-1
2. Applicants Name and Mailing Address.....	2-1
3. Location of Use.....	3-1
4. Person to be Contacted About Application.....	4-1
5. Radioactive Material to be Possessed.....	5-1
6. Purpose for Which Licensed Material Will be Used.....	6-1
7. Individuals Responsible for Radiation Safety Program and Their Training and Experience.....	7-1
8. Training for Individuals Working In or Frequenting Restricted Areas.....	8-1
9. Facilities and Equipment.....	9-1
10. Radiation Safety Program.....	10-1
11. Waste Management.....	11-1

## REVISION RECORD

<u>Revision Number</u>	<u>Pages Revised</u>	<u>Revision Record</u>
0	All	Complete revision to update organization and operations. Application rewritten in format of draft Regulatory Guide DG-0005.
1	All	Complete revision to combine the two current site licenses (SNM-47 and SNM-1460) into a single license, to update the company name and address, and to respond to an NRC request for additional information.
2	9-25	Revised description of high level cell door control.
3	3-1 and 9-6 7-1 to 7-4	Revised locations of use to reflect decommissioning effort. Updated RSC Chairman and Organization Chart.
4	5-3	Added Th-229 to Radioactive Material Possession Limits Table
5	All	Complete revision to update organizational names, to reduce controlled area of site and to remove the depleted uranium rotor. Operations have ceased in Building 401-Room 4X57 and that room has also been deleted from the authorized areas of use. Finally, the environmental monitoring program has been modified.
6	6-4 and 6-5	Added "SNM other than <sup>235</sup> U" to table of materials authorized for use at temporary job site locations.
7	3-1, 9-1 and 9-6	Added Building 301 Room 1A5 to licensed areas. Use will be limited to <sup>235</sup> U, up to license limit of 349 grams for development and

	7-9 to 7-12	calibration of Homeland Security SNM detection systems. Added Assistant RSO position and description
8	3-1, 9-1 and 9-6	Added Building 301 Room 1B11 to licensed areas. Use will be limited to $^{235}\text{U}$ , up to license limit of 349 grams for development and calibration of Homeland Security SNM detection systems.
	7-9 to 7-11	Removed Assistant RSO position and description
9	Item 7	Update RSO position description

## ITEM 7      **INDIVIDUALS RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE**

### 7.1      **Senior Management**

Overall responsibility for administration of this license rests with WSTD which is a department of Westinghouse Electric Company LLC. Figure 7.1 depicts the present organizational structure of WSTD.

The direct responsibility for operational oversight of activities conducted under the license rests with the local area managers, who report to the Director, WSTD. The Radiation Safety Officer (RSO) and the Radiation Safety staff also report to the Director, WSTD.

The Radiation Safety Committee (RSC) and Radiation Safety Officer (RSO) shall have sufficient authority, organizational freedom, and management prerogative to communicate with upper levels of management and provide direction to personnel regarding NRC regulations and license provisions.

Management responsible for activities conducted under this license shall have the prime responsibility for compliance with the terms and conditions of the license and the WSTD Radiation Safety Program. Management shall provide competent personnel and make certain that they have adequate facilities and equipment to accomplish assignments expeditiously, economically, safely and to maintain exposures as low as reasonably achievable. Each cognizant manager shall either personally or through other management personnel assure that proper reviews and approvals are made by the Radiation Safety Committee.

Senior management shall assure that annual audits of the program are conducted to ensure the safe operation and compliance with regulatory requirements. The audit program shall include mechanisms to correct and resolve problems in an expeditious manner. Such audits may be conducted by either the RSC or by an independent auditor.

All members of the Radiation Safety Staff are authorized by senior management to immediately stop any activity which poses an immediate hazard, may lead to excessive exposures, or cause a violation of a license provision.

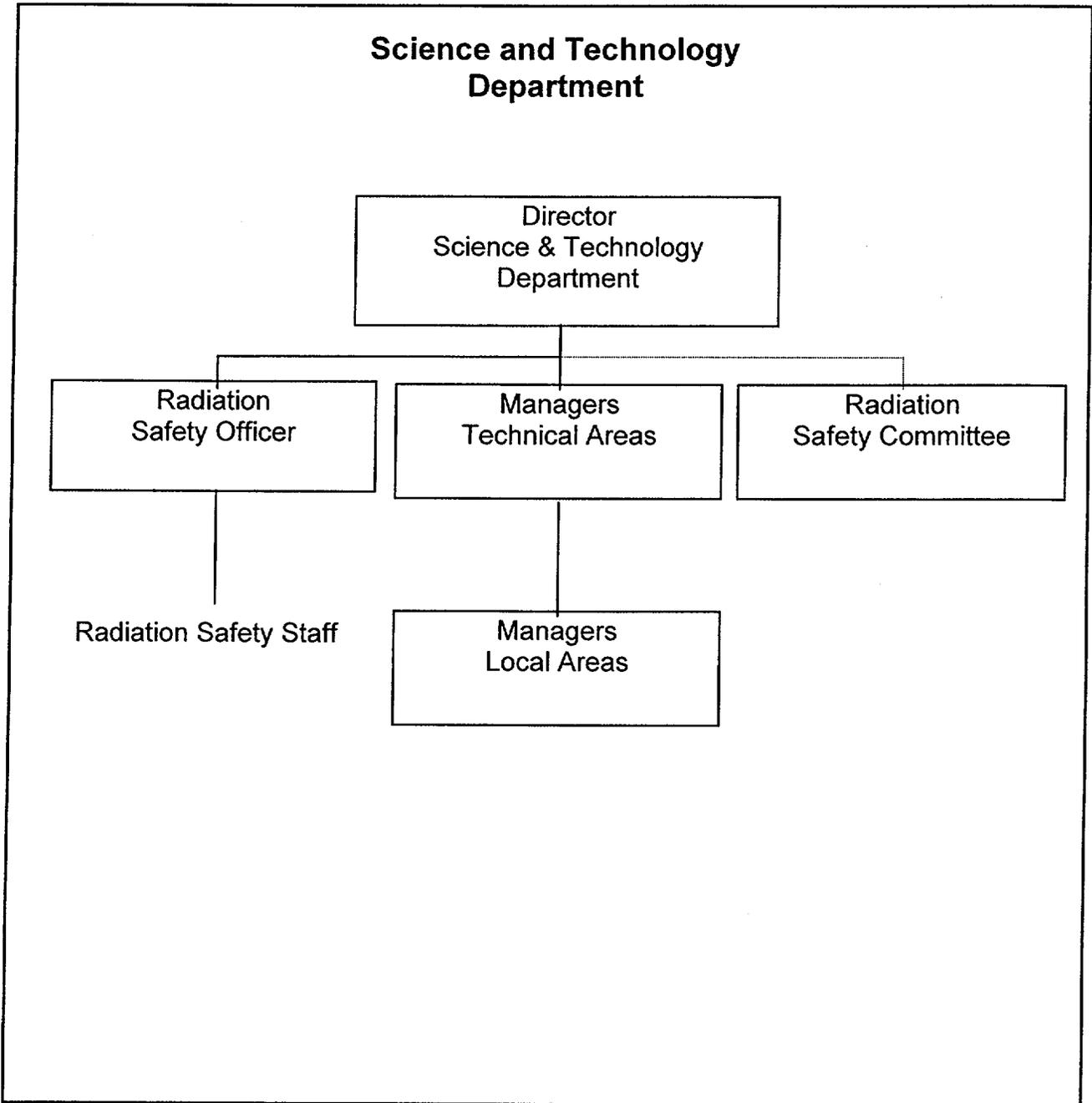


Figure 7.1-1 Organizational Chart for Science and Technology Department

## 7.2 Radiation Safety Committee

The Radiation Safety Committee (RSC) shall review and evaluate operational and safety performance. This shall be accomplished through discussions at scheduled meetings, audits, and by inspection of operating areas. Minutes of all Radiation Safety Committee meetings and audit reports shall be retained in accordance with regulatory requirements.

The Radiation Safety Committee (RSC) shall have a minimum of five members chosen to provide both administrative and technical competence. Members of this Committee shall be appointed by the Director, Science & Technology Department. The RSC shall consist of the RSO; at least one member of management; and persons representing the groups or activities that will use radioactive material. Each technical member of the RSC shall have a minimum of two years experience in the safe use of radioactive material. There shall be at least one additional technical member other than the RSO. Administrative members of the RSC are not required to have a background in radiation safety. The minimum number of members constituting a quorum is at least one-half of the Committee's membership including the Chairman (or authorized delegate) and RSO (or his designee).

It is the responsibility of the RSC to establish appropriate policies and procedures to ensure control of the procurement and use of byproduct, source, and special nuclear materials; completion of safety evaluations of proposed uses; and the overall development and implementation of the radiation safety program. The duties and responsibilities of the Radiation Safety Committee include but are not limited to the following:

- Conduct periodic reviews and audits of the radiation safety program,
- Conduct safety evaluations of proposed uses of licensed materials,
- Assure the development of procedures and criteria for training and testing radiation workers,
- Assure the development of radiation safety manuals, as necessary
- Specific approval of any facility or building for the use of any radioactive material which has not been previously approved.

The Committee shall meet on an as needed basis, but at least quarterly, and shall maintain a record of the minutes of each meeting. A copy of all Committee minutes shall be distributed to senior management having responsibilities for activities conducted under the license.

The Committee shall conduct an audit of activities conducted under this license at least annually with the period between audits not exceeding 15 months. Audit areas include but are not limited to facility reviews, waste collection and disposal, exposure and effluent trends, environmental surveillance, license compliance, and inventory of radioactive material. The results of such audits shall be documented. These reviews may be conducted by an independent auditor.

The current Chairman of the Radiation Safety Committee is Mr. John E. Goossen, Director, WSTD. Mr. Goossen began his career at Westinghouse in 1978 and has held positions in Reactor Equipment Design and Development, Strategic Marketing and Engineering Marketing. Prior to his current assignment, he was manager, Strategic Management, Nuclear Services Division.

### **7.3 Radiation Safety Officer**

The Radiation Safety Officer (RSO) is responsible for the establishment and guidance of programs in radiation protection. He also evaluates potential and/or actual radiation exposures, establishes appropriate control measures, approves written procedures, and assures compliance with pertinent policies and regulations. Under his direction, radiation safety personnel administer the established site policy, collect samples, perform analyses, take measurements, maintain records, and generally assist in performing the technical aspects of the radiation safety program.

~~The RSO is a full time employee within WSTD. The RSO will have specific training in health physics, and at least five years professional experience with radioactive material.~~

In general, the RSO will have the knowledge and ability necessary to respond effectively to the radiation safety needs of WSTD. The RSO will have a background of training and experience and a maturity of judgment sufficient to recognize the need for expert assistance at an early stage in the development of potential radiation safety problems involving disciplines outside of his or her area of expertise. Specifically the RSO will have or have access to individuals with the following skills and knowledge, as necessary to support the radiation safety program:

Docket: 70-1503      Date: 8/30/97      Rev. No.: 89      Date: 8/23/055/22/06

- Ability to communicate clearly, both verbally and in writing.
- Knowledge of mathematics, physics, chemistry, and biology sufficient to understand health protection standards, theories, and practices.
- Knowledge of current standards, guides, and reports published by various organizations (e.g., the International Commission on Radiological Protection; the National Council on Radiation Protection and Measurements; the United Nations Scientific Committee on the Effects of Atomic Radiation; the National Academy of Sciences, National Research Council Advisory Committee on the Biological Effects of Ionizing Radiation; and the American National Standards Institute) and the ability to understand, interpret, and effectively apply them.
- Knowledge of applicable NRC regulations, regulatory guides, and NUREG-series reports and ability to understand and effectively apply them.
- Knowledge and ability sufficient to operate instruments used in the program for measuring radiation and radioactive materials and to interpret the resulting measurements.
- Knowledge and ability sufficient to perform calibrations of instruments used in the program for measuring radiation and radioactive materials.
- Knowledge and ability sufficient to select radiation and radioactive materials measuring instruments appropriate to their proposed use in the program.
- Knowledge and ability sufficient to evaluate the need for shielding and to determine the types and amounts of shielding required.
- Knowledge and ability sufficient to calculate radioactive decay, buildup, and secular and transient equilibrium.
- Knowledge and ability sufficient to calculate internal and external radiation doses.

- Knowledge of personnel monitoring devices and the ability to select the proper device for a specific application.
- Knowledge and ability sufficient to manage or conduct a radiation safety training program for facility personnel.
- Knowledge and ability sufficient to recognize and anticipate existing and potential radiation safety problems.
- Knowledge and ability sufficient to recognize potential criticality problems and to take appropriate and timely action with respect to such problems.
- Knowledge of current radioactive effluent treatment methods, equipment, and procedures and ability to effectively use them.
- Knowledge and ability sufficient to recognize the potential for contamination associated with work with radioactive materials, to control contamination, and to decontaminate equipment, facilities, and personnel.
- Knowledge and ability sufficient to prepare a facility emergency plan and to conduct or manage the conduct of operations in accordance with the plan.
- Knowledge and ability sufficient to evaluate, select, and maintain and effectively use and supervise the use of respiratory protective equipment.
- Knowledge and ability sufficient to evaluate, select, and maintain and effectively use and supervise the use of protective clothing.
- Knowledge and ability sufficient to evaluate, design, test, maintain, and supervise the maintenance (from the radiation safety standpoint) of process control and confinement systems such as gloveboxes and hoods.
- Knowledge and ability sufficient to evaluate, select, design, maintain, and test sealed sources of radiation and devices in which the sources are to be used.

- Knowledge and ability sufficient to evaluate, select, and design and effectively use, maintain, and supervise the use and maintenance of radioactive waste collection, treatment, packaging, and disposal equipment and facilities and to prepare related radiation safety procedures.
- Working knowledge of transport regulations and requirements as they apply to the transport of radioactive materials.
- Knowledge and ability sufficient to implement a bioassay program.
- Knowledge and ability (including a maturity of judgment developed from appropriate radiation safety program experience in work situations similar to WSTD) sufficient to manage effectively the WSTD radiation safety program.

The RSO will be supported by adequate staff, facilities and equipment and will hold a position within the organizational structure providing direct access to senior management for matters pertaining to Radiation Safety.

The Radiation Safety Officer is currently Mr. John R. Lehnhardt. Mr. Lehnhardt has over ten twenty years of experience in health physics activities. Mr. Lehnhardt has experience in radiological engineering, personnel monitoring, respiratory protection, bioassay instrumentation, waste management, decommissioning, licensing, environmental surveillance, transportation of hazardous materials, and technical writing. Mr. Lehnhardt has a working knowledge of NRC, DOT, OSHA, and EPA regulations. Mr. Lehnhardt is a Certified Safety Professional (License #9934) in Comprehensive Practice and he is Registered with the National Registry of Radiation Protection Technologists (NRRPT). He has also successfully completed the 40 hour Radiation Safety Officer training program at Radiation Safety Associates in Hartford, CT, and the 5 week Applied Health Physics course at Oak Ridge Associated Universities in Oak Ridge, TN. Mr. Lehnhardt maintains membership in the Health Physics Society, and the American Society of Safety Engineers, and the Appalachian Compact Users of Radioactive Isotopes.

August 2006 - Hudson Global Resources  
4350 Northern Pike  
Monroeville, PA 15146  
RSO, Consultant for WSTD

Docket: 70-1503      Date: 8/30/97      Rev. No.: 89      Date: 8/23/05 5/22/06

Continue oversight of all industrial hygiene, safety and environmental compliance related activities including identification, evaluation and control of hazardous activities and materials, safety training and evaluation of employees and contractors, and submittal of required reports. Also provide continued oversight of the radiation safety program for WSTD as detailed below. Provide knowledge transfer to potential successor RSO.

1999 – Present July 2006 Westinghouse Electric Co. LLC

Science & Technology Department

Pittsburgh, PA

Manager, Industrial Hygiene, Safety & Environmental Compliance, RSO

Provide oversight of all industrial hygiene, safety and environmental compliance related activities including identification, evaluation and control of hazardous activities and materials, safety training and evaluation of employees and contractors, and submittal of required reports. Also provide continued oversight of the radiation safety program for WSTD as detailed below.

1992 - 1999 Westinghouse Electric Corporation

Science and Technology Center

Pittsburgh, PA

Radiation Safety Officer

Coordinated and assumed overall responsibility for the radiation safety program at the Science and Technology Center. Duties include surveillance of health physics activities, assuring compliance with all radiological and environmental licenses and procedures, consultation with plant management on radiation, safety and environmental issues, coordination of the radwaste program, training employees, control of radioactive material inventory, and interfacing with site personnel, customers, and regulatory agencies.

1985 - 1992 Westinghouse Electric Corporation

Science and Technology Center

Pittsburgh, PA

Assistant Radiation Safety Officer

Responsible for assisting the RSO in the day-to-day implementation of the Radiation Protection Program. Duties included all phases of radiation protection and health physics including procedure review and development, dosimetry,

instrumentation calibration and licensing. Additionally, provided consulting service for radiation protection programs involving byproduct, source and special nuclear material.

1970 - 1985 Westinghouse Electric Corporation  
Pittsburgh, PA  
Safety Supervisor

Responsible for technical developments, training, coordination, and operations related to a wide variety of safety services to a research division of about 400 employees. Extensive experience in industrial hygiene reviews, project safety reviews, computers and computer programming (DEC VAX), respirator fit testing and respiratory protection, environmental monitoring, and survey instrumentation calibration and repair.

1965 - 1970 Westinghouse Electric Corporation  
Research and Development Laboratories  
Laboratory Technician

#### **7.4 Radiation Safety Office Staff**

The RSO is supported by a staff of Safety Technicians who assist in the maintenance and control of the WSTD Radiation Safety Program.

The primary function of the Safety Technicians is to execute tasks as directed by the RSO in monitoring radiation exposures and the radiation levels of the related materials, work areas, and adjacent unrestricted areas.

The duties of the Safety Technicians include but are not limited to the following:

- Perform assigned tasks relative to surveying and monitoring indication and/or contamination according to approved procedures.
- Assess the hazards associated with the work to be done and prepare, issue, and terminate radiation work permits (RWP).

- Receive all shipments of radioactive materials, perform the required surveys, and prepare the required documentation.
- Perform the required measurements and surveys and assist in preparation of the shipping paperwork for all outgoing shipments of radioactive material.
- Provide or arrange for the calibration of radiation survey equipment and radioactivity measurement systems.
- Perform quality control tests on all radiological measurement systems including portable instrumentation.
- Perform periodic source leak tests.
- Inform workers in the controlled areas of the radiological conditions in their work area.
- Direct workers in the proper techniques to use to prevent loss of control of contamination or minimize radiation exposure.
- Record radiological survey data in legible form and in the appropriate units as defined by procedure.
- Procure radiation safety related supplies and maintain an adequate supply on hand for daily usage.
- Collect, maintain, and issue all respiratory survey devices.
- Maintain calibrations and repairs of pocket dosimeters.
- Collect environmental samples for analysis.
- Collect and analyze general area air samples and effluent stack samples.

- Maintain emergency response supplies and kits in good condition and in a state of readiness.

A Safety Technician is considered to be qualified in radiation safety procedures when that individual is capable of successfully accomplishing the following activities as required by federal regulations, license conditions, and facility procedures pertaining to radiation protection. This training is in addition to that described in Section 8 of this application.

- Conduct special and routine radiation, contamination and airborne radioactivity surveys and evaluate the results.
- Establish protective barriers and post appropriate radiological signs.
- Establish means of limiting exposure rates and accumulated radiation doses, including the use of protective clothing and respiratory protection equipment.
- Perform operability checks of radiation monitors and survey meters.
- Recommend appropriate immediate actions in the event of a radiological problem and perform necessary activities until the arrival of the RSO or a more senior Safety Technician.
- Conduct other routine radiological duties (e.g., surveillance items) as may be required.

The minimum educational requirement is two-year, post-high school technical institute graduate or equivalent. The individual must be able to perform basic mathematical calculations.

This is to acknowledge the receipt of your letter/application dated

5/24/2005, and to inform you that the initial processing which includes an administrative review has been performed.

AMEND. SNM-1460 There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

Please provide to this office within 30 days of your receipt of this card

---

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 138807.  
When calling to inquire about this action, please refer to this control number.  
You may call us on (610) 337-5398, or 337-5260.