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Agency of Human Services

September 12, 2014

James R. Cassata, Ph.D., CHP
Licensing Assistance Team
Division of Nuclear Material Safety
U.S. Nuclear Regulatory Commission, Region 1
2100 Renaissance Boulevard, Suite 100
King Of Prussia, Pa 19406-2713

J-7

MS-16

Dear Dr. Cassata,

Re: Renewal of NRC License Number: 44-11382-01
Mail Control No. 584634
License Expiration Date: October 31, 2014

03006501

This is in response to your e-mail of September 9, 2014. Enclosed please find the revised information requested for Items 5 through 11 of NRC Form 313.

Please contact myself, George Mills, or Cecylia M. Karch, if there are any questions or concerns about our completed application.

Sincerely,

Mary Celotti
Laboratory Director



584634
NMSS/RGN1 MATERIALS-002

Information Requested in Items 5 through 11 of NRC Form 313

Item No.	Response	Yes	Description Attached
5.	RADIOACTIVE MATERIAL		
	Unsealed and/or Sealed Sources		
	Any byproduct material with atomic numbers 1 through 96. Any chemical and/or physical form. 1 milliCurie for use and 5 milliCuries for waste and storage purposes. No more than 1 milliCurie will be used at one time.	*	[]
	We will restrict the possession of environmental samples and standards containing H-3 and I-131 acquired exclusively in bound form (non-volatile) to the quantities specified in Appendix B to CFR Part 30 (1000 microCuries for H-3 and 1 microCurie for I-131). We shall restrict the possession of NRC licensed byproduct material acquired exclusively in bound form (non-volatile) to 1000 times the quantity specified in Appendix B to 10 CFR Part 30 not to exceed 10 milliCuries total for all nuclides possessed (in use and in storage). When a combination of isotopes is involved we will restrict the possession of NRC licensed material as described in the Note of Appendix B to 10 CFR Part 30. We will further restrict the possession of licensed byproduct material to quantities below the minimum limit specified in 10 CFR 30.35(d), 40.36(b) and 70.25(d) for establishing decommissioning financial assurance.	*	[]
	• Provide an Emergency Plan (if required).	N/A	
	Financial Assurance and Recordkeeping for Decommissioning		
	No response is needed from most applicants. If F/A or a DFP is required, submit the required documents as described in Regulatory Guide 3.66.	N/A	[]
6.	PURPOSE FOR WHICH LICENSED MATERIAL WILL BE USED		
	Licensed material will be used for laboratory analysis of environmental samples and calibration of analytical instruments. No license material will be used in or on human beings, in animal studies or tracer studies.	*	[]
7.	INDIVIDUALS RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE		
	RSO		
	The Radiation Safety Officer for this license is Cecylia M. Karch. Radiation Safety Officer certificate was awarded in March 2002 to Cecylia M. Karch recognizing completion of 40 hours of specialized instruction at a CSI- Radiation Safety Academy. In addition, Cecylia Karch has 22 years of hands-on experience in working with the radioactive material at the Laboratory.	*	[]
	AUs		
	Licensed material shall be used by, or under the supervision of, William George Mills, Public Health Program Chief, Cecylia M. Karch Chemist V or Jessica M. Eisenhauer Chemist III who finished RSO training at the Harvard School of Public Health in June 2013. In addition, Jessica Eisenhauer has 3 years of hands-on experience in working with the radioactive material at the	*	[]

	Laboratory. George Mills has been employed over 30 years at the Vermont Department of Health Laboratory and is supervising the Radiochemistry program.		
8.	TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS (Occupationally Exposed Individuals and Ancillary Personnel)		
	<p>Employees performing work with radioactive materials and an ancillary personnel (custodians), will be provided site specific radiation safety and on the job training in the use of radioactive materials before assuming duties in the radiochemistry area and whenever there is a significant change in duties, regulation or the terms of the license.</p> <p>Each individual working with radioactive material and custodians will receive annually refresher training, which is provided once a year at the Laboratory by RSO</p> <p>Topics of initial training and refreshers may include: Principles of radiation and radioactivity; Principles and practices of radiation protection (using safety equipment and PPE); Fundamentals of radiation safety (radiation vs. contamination, internal vs. external exposure, biological effects of radiation, ALARA concept, use of time/distance/shielding to minimize exposure); Safe handling of radioactive material; Minimalization of contamination; Procedures for spills.</p> <p>Competency of persons allowed to work individually will be determined by the Radiation Safety Officer or delegated to an AU. Competency evaluation may include: Direct observation; Oral examination/discussion; Written tests: Initial and periodical quality control; Proficiency sample testing or other method data evaluation. Ancillary personnel (custodians) will be supervised by RSO or AU when performing duties. Documentation of training records will be maintained.</p>	*	[]
9.	FACILITIES AND EQUIPMENT		
	<p>A floor plan of the radiochemistry laboratory facilities is attached.</p> <p>Radioactive materials shall be handled in Rooms 113, 114, 115 and 116 and analyzed in Room 118. Room 117 is an office area. Sealed samples and standards will be transported through Room 117 from the preparation areas to the analysis Room 118.</p> <p>Waste and radioactive materials shall be stored in Radioactive material cabinet and in Rooms 113, 114 and 115 only.</p> <p>Radiochemistry section of the laboratory is a restricted area and is secured via coded key card access (Rooms 113, 114 and 116). Radioactive materials cabinet in Room 115 shall be kept locked at all times when not in use.</p> <p>Available safety equipment includes lab coats, gloves (Nitrile and latex), Nuke suits and boots, lead apron, pro-pipettes, tongs, forceps, spill control pillows and kits, disposable aprons, lab bench absorbent paper, broken glass container, RadCon surface and hand cleaner, first aid kit, hearing protector, dust and mist respirators, goggles, safety shower and an eyewash and a fume hood.</p>	*	[x]
10.	RADIATION SAFETY PROGRAM		
	Audit Program		
	The applicant is not required to, and should not, submit its audit program to the NRC for review during the licensing phase.	N/A	N/A
	Radiation Monitoring Instruments		
	We will use instruments that meet the radiation monitoring instrument	*	[]

	specifications published in Appendix M to NUREG - 1556, Vol. 7, 'Program-Specific Guidance About Academic, Research and Development, and Other Licenses of Limited Scope,' dated December 1999. Additionally, we will implement the model survey meter calibration program published in Appendix M to NUREG - 1556, Vol. 7, 'Program - Specific Guidance About Academic, Research and Development, and Other Licenses of Limited Scope,' dated December 1999. We reserve the right to upgrade our survey instruments as necessary." Instrumentation: Ludlum Model 3 Survey Meter 44-9, Ludlum Model 14C Survey Meters 44-9, Thermo Scientific RadEye B20-ER Survey Meter, ReGe detectors Canberra GR-2520- 7500, Alpha/Beta proportional counters - Tennelec/Canberra Model LB4100 and Model 5XLB, Liquid Scintillation Analyzers – Perkin-Elmer Model Tri-Carb 2910TR.		
	Material Receipt and Accountability		
	The Vermont Department of Health Laboratory has developed and maintains procedures for ensuring material accountability. Physical inventories will be conducted at intervals not to exceed 6 months, to account for all sealed sources and devices received and possessed under the license.	*	[]
	Occupational Dose		
	We have done a prospective evaluation and determined that unmonitored individuals are not likely to receive, in one year, a radiation dose in excess of 10% of the allowable limits in 10 CFR Part 20.	*	[]
	Public Dose		
	No response is required from the applicant in a license application.	N/A	N/A
	Safe Use of Radionuclides and Emergency Procedures		
	Procedures for safe use, including security of materials, and emergencies have been developed and maintained.	*	[]
	If an emergency response plan is needed, submit it as a separate part of the application.	N/A	N/A
	Survey		
	We will survey our facility and maintain contamination levels in accordance with the survey frequencies and contamination levels published in Appendix Q to NUREG - 1556, Vol. 7, 'Program-Specific Guidance About Academic, Research and Development, and Other Licenses of Limited Scope,' dated December 1999. The Vermont Department of Health Laboratory does not possess sealed sources and devices that require leak testing under this licence..	*	[]
	Transportation		
	No response is needed from applicants during the licensing phase.	N/A	N/A
	Minimization of Contamination	N/A	N/A
11.	WASTE MANAGEMENT		
	We will use the model waste procedures published in Appendix T to NUREG - 1556, Vol. 7, 'Program-Specific Guidance About Academic, Research and Development, and Other Licenses of Limited Scope,' dated December 1999."	*	[]