



Severn Trent Laboratories  
200 Monroe Turnpike  
Monroe CT 06468  
Tel: (203) 261-4458  
Fax: (203) 268-5346

Wednesday, September 09, 1998

Richard Gibson  
US Nuclear Regulatory Commission  
Licensing Assistance Section  
Region 1  
King of Prussia, PA 19406

030-33496

Dear Richard:

Severn Trent would like to amend its current Materials License #06-30139-01 as follows:

In reference to Item 1 of the license, the name of the licensee should read as Severn Trent Laboratories.

In reference to Items 6, 7 and 8 of the license, please amend the allowable usage of isotopes as follows:

6. *Byproduct, Source and/or Special Nuclear Material*

7. *Chemical/Physical Form*

8. *Possession Limit*

A. Hydrogen 3

Any

100 millicuries total; Not to exceed 25 millicuries at the Monroe CT site.

B. Any radioactive material with atomic number between 3 and 83

Any

200 millicuries total; No single isotope to exceed 10 millicuries at each site; not to exceed 20 millicurie total at the Monroe CT site

C. Polonium 208, 209 and 210

Any

200 microcuries at the Whippany, NJ site only.

D. Lead 210

Any

200 microcuries at the Whippany, NJ site only.

1 2 6 0 8 1

**Other Laboratory Locations:**

- 149 Rangeway Road, North Billerica MA 01862
- 16203 Park Row, Suite 110, Houston TX 77084
- 120 Southcenter Court, Suite 300, Morrisville NC 27560

- 315 Fullerton Avenue, Newburgh NY 12550
- 11 East Olive Road, Pensacola FL 32514
- Westfield Executive Park, 53 Southampton Road, Westfield MA 01085
- 628 Route 10, Whippany NJ 07981

a part of  
Severn Trent Services Inc

SEP 11 1998



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|   |     |  |
|---|-----|--|
| E. Radium 226 & 228                               | Any | 600 microcuries at the Whippany, NJ site only. |
| F. Thorium 227, 228, 229, 230, 232, and 234       | Any | 600 microcuries at the Whippany, NJ site only. |
| G. Uranium 232, 233, 234, 235, 236, and 238       | Any | 600 microcuries at the Whippany, NJ site only. |
| H. Plutonium 236, 238, 239, 240, 241, 242 and 244 | Any | 600 microcuries at the Whippany, NJ site only. |
| I. Americium 241, 242 and 243                     | Any | 600 microcuries at the Whippany, NJ site only. |
| J. Neptunium 236, 237, and 239                    | Any | 600 microcuries at the Whippany, NJ site only. |
| K. Curium 242, 243, 244, 245, 246, 247 and 248    | Any | 600 microcuries at the Whippany, NJ site only. |
| L. Actinium 227 & 228                             | Any | 600 microcuries at the Whippany, NJ site only. |
| M. Protactinium 231 and 233                       | Any | 600 microcuries at the Whippany, NJ site only. |
| N. Any Special Nuclear Material                   | Any | 10 microcuries at the Monroe, CT site only.    |
| O. Any Source Material                            | Any | 10 millicuries total.                          |

In reference to Items 9, authorized use for A through O shall be for laboratory analysis of environmental samples as a service for others.

Condition 11 of the license should read:

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1A. Licensed material shall be used by, or under the supervision of Erik C. Nielsen.

11B. The Radiation Safety Officer for this license is Erik C. Nielsen.

A copy of Mr. Nielsen's resume has been attached for you use.

If you have any questions regarding this amendment request, please call me at 203-452-3253. Your help in expediting this matter is greatly appreciated.

Sincerely

Michael V. Bonomo  
General Manager

cc. Keith Wheatstone

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Severn Trent Services Inc

ERIK C. NIELSEN

## GOALS

Positions of increasing responsibility investigating radionuclides in the environment. Supervise and perform analysis of environmental samples for radioactivity. Design and implement environmental monitoring programs. Direct and supervise field work associated with site assessment, radiation safety, remedial action and risk assessment. Interpret laboratory results to assess human and environmental risks.

## EXPERIENCE

4/97 - Current Quanterra Inc., Radiochemistry Group Leader

As a working supervisor, responsible for operations of the radiochemistry section (9 FTE, 15,000 analysis/yr) in a mixed waste laboratory. Initiated, justified and executed equipment purchases to improve productivity. Documented and implemented new analytical methods that reduced secondary waste production and improved data quality. Trained analysts and technicians on methods and techniques that increased productivity. As the resident "radiation expert" provided technical guidance on testing requirements and data interpretation for customers, project managers and regional sales staff. Identified and developed new markets for Quanterra's analytical services.

11/92 - 3/97 Heritage Environmental Services (LAB), Radiochemistry Group Supervisor

Initiated and supervised a radiochemistry section in an existing environmental laboratory. Developed and implemented a radiation safety plan to meet the training, safety and accountability requirements of the radioactive material license. Installed, customized and operated radiation measurement equipment (Gamma Spectroscopy System, Gas Proportional counter, Alpha Spectroscopy, Liquid Scintillation counter and Alpha Liquid Scintillation Detectors). Supervised and performed radiochemical analysis on a wide variety of matrices. Developed and documented radiochemical procedures. Developed and implemented the QA/QC program for radiochemical data. Served as Radiation Safety Officer, responsible for all radioactive material license provisions. Developed a customer base and marketing program. Assisted customers in determining their radiological testing requirements and in interpreting the results of those tests.

11/91 -10/92 Illinois Department of Nuclear Safety, Radiochemistry, Nuclear Safety Scientist I

Performed radiochemical analysis on environmental samples. Developed procedures to process nonstandard media (fish, soil, vegetation, milk, sediment, sludge) for low level counting of gamma emitters, carbon-14 and tritium in these matrices. Served as a sounding board and troubleshooter for fellow scientists. Assisted in writing a laboratory chemical hygiene plan.

1/88 - 10/91 Illinois Department of Nuclear Safety, Radioecology, Nuclear Safety Associate III

Developed sampling strategy and collected environmental samples at various radiological licensee facilities. Operated radiation detection equipment. Researched, developed and implemented sampling protocols for different sample matrices (water, soil, air and biota). Utilize desktop and microcomputers to analyze and interpret laboratory results for regulatory compliance and trend analysis. Prepare reports, graphs and charts of environmental monitoring results. Operate sampling, analytical, and monitoring equipment. Participate as member of the Radiological and Chemical Emergency Response Team.

9/90 - 7/91 U.S. Army Reserve, Commander, 379th Chemical Company (SG)

1/88 - 8/90 U.S. Army Reserve, Commander, 378th Chemical Company (SG)

Prepared unit for possible activation for operation Desert Shield. Supervised, trained and counseled supervisors and individual soldiers (110 military and civilian personnel), emphasizing deployment readiness, teamwork and individual development. Responsible for the maintenance and accountability of equipment and supplies valued at \$2.5 million. Researched, wrote and implemented unit standard operating procedures.

## Erik C. Nielsen - Page 2

1/86 - 6/87 U.S. Army, Operations Officer/Chemical Officer, 84th Ordnance Battalion

Coordinated staff functions, responsibilities and reports during military operations and exercises. Developed, coordinated, implemented and monitored a training program on Nuclear, Biological and Chemical (NBC) warfare defense for 300 individuals and supervisors. Prepared NBC equipment and supplies budget forecast and justification for 11 subordinate units (\$150,000/year) and monitored budget execution. Researched, prepared and conducted a training/licensing program for supervisors on a chemical agent alarm system licensed by the Nuclear Regulatory Commission.

8/84 - 1/86 U.S. Army, Executive Officer/Platoon Leader, 10th Chemical Company (Decontamination)

Supervised a platoon (30 soldiers) in the conduct of NBC decontamination operations. Instituted an aggressive individual training program by developing a skill verification test to evaluate training effectiveness and to sharpen individual test taking skills. Trained and supervised instructors that provided NBC instruction throughout Germany.

## EDUCATION

|              |  |
|--------------|--|
| Formal       | Graduate Certificate in Public Management Practices (Environmental Risk Assessment), Sangamon State University, Springfield, IL, 1993.   |
|              | 44 Graduate hours toward a M.A., in Environmental Studies, Sangamon State University, Springfield, IL, 1989-92   |
|              | BS Agricultural Science, Western Illinois University, Macomb, IL, 1982   |
| Professional | 43rd Annual Bioassay, Analytical and Environmental Radiochemistry Conference, Attendee, 40 hr., Charleston, SC, November 1997  |
|              | Heritage Environmental Services, <u>8 - Hour Refresher Training for Hazardous Waste Site Personnel (29 CFR 1919.120)</u> , (8 hr.), Current Annual Refresher Training, Romeoville, IL, January 1997. |
|              | Canberra Industries, <u>Quality Assurance for the Genie Spectroscopy System</u> , 8 hr. Haines City, FL, April 10, 1995  |
|              | Canberra Industries, <u>Genie Algorithms</u> , 8 hr. Haines City, FL, April 11, 1995   |
|              | Canberra Industries, <u>Annual Users Group Conference</u> , Haines City, FL, April 12-14, 1995   |
|              | 40th Annual Bioassay, Analytical and Environmental Radiochemistry Conference, Attendee, 40 hr., Cincinnati, OH, November 1994  |
|              | 39th Annual Bioassay, Analytical and Environmental Radiochemistry Conference, Attendee, 40 hr., Colorado Springs, CO, November 1993  |
|              | Illinois Department of Central Management Services, <u>Interview Training Seminar</u> , (8 hr.), Springfield, IL, July 1992.   |
|              | Oak Ridge Associated Universities, <u>Environmental Monitoring for Radioactivity</u> (40 hr.), Oak Ridge, TN, August 1989.   |
|              | U.S. Environmental Protection Agency, <u>Hazardous Materials Incident Response Operations</u> (40 hr.), Cincinnati, OH, August 1989.   |