



**AEA Technology
QSA Inc.**
40 North Avenue
Burlington, MA 01803
Telephone (781) 272-2000
Telephone (800) 815-1383
Facsimile (781) 273-2216

6-May-02

Ms. Sheryl Villar
U.S. Nuclear Regulatory Commission
Region 1
475 Allendale Rd.
King of Prussia, PA 19406-1415

Dear Ms. Villar:

On behalf of AEA Technology QSA, 40 North Ave., Burlington, MA 01803, I would like to request reciprocity privileges in the State of Virginia.

Karl Anderson, a qualified technician, will be performing a Source Transfer and Service/Maintenance for Internet Corporation, Archer Creek Engineering, P.O. Box 24506, Lynchburg, VA 24506.

Internet Corporation has been added to the Service Contract List, which was sent to you in January, with our initial reciprocity request.

I have enclosed a current copy of our Massachusetts license for your files as well. Our files show this request will bring our Calendar Year 2002 total to three days used.

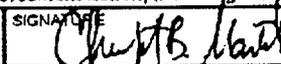
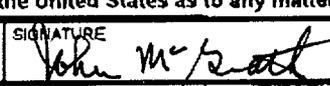
If you should have any questions concerning this request, please do not hesitate to contact me at (781) 272-2000 x 240.

Best Regards,

A handwritten signature in cursive script that reads "Kristine M. Fantasia".

Kristine M. Fantasia
Licensing Assistant

A handwritten signature in cursive script that reads "C. D. Mark" followed by the date "APR 6-May-02". Below the signature and date is the text "Regulatory Approval/Date".

| | | | | | | | |
|---|--|---|---------|---|--|--|--|
| NRC FORM 241 (7-1999) | | U.S. NUCLEAR REGULATORY COMMISSION | | APPROVED BY OMB: NO. 3160-0013 Estimated burden per response to comply with this mandatory collection request: 15 minutes. This notification is required so that NRC may schedule inspection of the activities to ensure that they are conducted in accordance with requirements for protection of the public health and safety. Send comments regarding burden estimate to the Records Management Branch (T-8 EB), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bje1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0013), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection. | | EXPIRES: 07/31/2002 | |
| REPORT OF PROPOSED ACTIVITIES IN NON-AGREEMENT STATES, AREAS OF EXCLUSIVE FEDERAL JURISDICTION, OR OFFSHORE WATERS (Please read the instructions before completing this form) | | | | | | | |
| 1. NAME OF LICENSEE (Person or firm proposing to conduct the activities described below) AEA TECHNOLOGY QSA INC. | | | | 2. TYPE OF REPORT <input type="checkbox"/> INITIAL <input type="checkbox"/> REVISION <input checked="" type="checkbox"/> CLARIFICATION | | | |
| 3. ADDRESS OF LICENSEE (Mailing address or other location where licensee may be located) 40 North Ave Burlington, MA 01803 | | | | 4. LICENSEE CONTACT AND TITLE CHRIS MARTEL, RPO | | 5. TELEPHONE NUMBER (include Area Code) (781) 272-2000 x 298 | |
| | | | | 6. FACSIMILE NUMBER (include Page Code) (781) 359-9191 | | | |
| 7. ACTIVITIES TO BE CONDUCTED UNDER THE GENERAL LICENSE GIVEN IN 10 CFR 150.20 <input type="checkbox"/> WELL LOGGING <input type="checkbox"/> LEAK TESTING AND/OR CALIBRATIONS <input type="checkbox"/> TELE THERAPY/IRRADIATOR SERVICE <input type="checkbox"/> PORTABLE GAUGES <input checked="" type="checkbox"/> OTHER (Specify) ⇒ INSPECTION / SOURCE TRANSFERS <input type="checkbox"/> RADIOGRAPHY ⇒ REGISTERED AS USER OF PACKAGING (CERTIFICATES OF COMPLIANCE NUMBERS) | | | | | | | |
| 8. CLIENT NAME, ADDRESS, CITY/COUNTY, STATE, ZIP CODE Internet Corp. Archer Creek ENGINEERING P.O. Box 11589 Lynchburg, VA 24506 | | | | 9. ACTUAL PHYSICAL ADDRESS OF WORK LOCATION (Street and Number or other location. Give as complete an address or directions as possible.) Internet Corp. Archer Creek ENGINEERING P.O. Box 11589 Lynchburg, VA 24506 | | | |
| | | 10. CLIENT TELEPHONE NUMBER (include Area Code) (434) 528-8294 | | 11. WORK LOCATION TELEPHONE NUMBER (include Area Code) (434) 528-8294 | | | |
| 12. DATES SCHEDULED FROM 14 May 02 TO 15 MAY 02 | | 13. NUMBER OF WORK DAYS 2 | 14. ADD | 15. DELETE | 16. LOCATION REFERENCE NUMBER 000699 | | |
| 17. LIST RADIOACTIVE MATERIAL, WHICH WILL BE POSSESSED, USED, INSTALLED, SERVICED, OR TESTED (include description of type and quantity of radioactive material, sealed sources, or devices to be used) Transferring source from old unit to new 680B. Returning old unit back to AEAT Burlington, MA. Inspection + Maintenance of new unit & controls. | | | | | | | |
| 18. AGREEMENT STATE SPECIFIC LICENSE WHICH AUTHORIZES THE UNDERSIGNED TO CONDUCT ACTIVITIES WHICH ARE THE SAME, EXCEPT FOR LOCATION OF USE, AS SPECIFIED IN ITEM 9, ABOVE. (Four copies of the specific license must accompany the initial NRC Form 241.) | | | | LICENSE NUMBER R-2361 | STATE MA | EXPIRATION DATE 31 May 2005 | |
| 19. CERTIFICATION (MUST BE COMPLETED BY APPLICANT) I, THE UNDERSIGNED, HEREBY CERTIFY THAT: | | | | | | | |
| a. All information in this report is true and complete. b. I have read and understand the provision of the general license 10 CFR 150.20 reprinted on the instructions of this form; and I understand that I am required to comply with these provisions as to all byproduct, source, or special nuclear material which I possess and use in non-Agreement States or offshore waters under the general license for which this report is filed with the U.S. Nuclear Regulatory Commission. c. I understand that activities, including storage, conducted in non-Agreement States under general license 10 CFR 150.20 are limited to a total of 180 days in calendar year. With the exception of work conducted in off-shore waters, which is authorized for an unlimited period of time in the calendar year. d. I understand that I may be inspected by NRC at the above listed work site locations and at the Licensee home office address for activities performed in non-Agreement States or offshore waters. e. I understand that conduct of any activities not described above, including conduct of activities on dates or locations different from those described above or without NRC authorization, may subject me to enforcement action, including civil or criminal penalties. | | | | | | | |
| CERTIFYING OFFICER - RSO or Management Representative (Name and Title) Christopher B. Martel, RPO | | | | SIGNATURE  | | DATE 6 May 02 | |
| WARNING: False statements in this certificate may be subject to civil and/or criminal penalties. NRC regulations require that submissions to the NRC be complete and accurate in all material respects. 18 U.S.C. Section 1001 makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction. | | | | | | | |
| FOR NRC USE ONLY | | REVIEWING OFFICIAL (Typed/Printed Name and Title) John M. [Signature] | | SIGNATURE  | | DATE 5/7/02 | |
| | | | | TOTAL USAGE - DAYS TO DATE 3 | | | |

5/6/02

**SERVICE CONTRACTS UNDER
U.S. NRC JURISDICTION**

Precision Components
Linden Avenue
York, PA 17404

Customer Contact: Jim Rowlands (717) 848-1126

Equipment:

- (4) Model 660A camera's each containing approximately 100 Ci of Ir-192
- (2) Model 680A camera's each containing approximately 100 Ci of Co-60
- (1) Model 773 camera containing approximately 165 mCi of Cs-137.

Date of Reciprocity: TBD **Technician:** Qualified Rad. Tech **Activity:** Service/Maintenance

GM Power Train Division
SGI – Advanced Development Lab
1629 N. Washington
Saginaw, MI 48605

Customer Contact: Bill Harper (517) 757-0541

Equipment:

- (1) Model 680BE camera containing approximately 100 Ci of Co-60

Date of Reciprocity: TBD **Technician:** Qualified Rad. Tech **Activity:** Service/Maintenance

Voith Hydro
East Berlin Road
York, PA 17405

Customer Contact: Dennis Schmuck (717) 792-7000

Equipment:

- (2) Model 660A camera's each containing approximately 100 Ci of Ir-192
- (1) Model 680A camera containing approximately 100 Ci of Co-60

Date of Reciprocity: TBD **Technician:** Qualified Rad. Tech **Activity:** Service/Maintenance

Intermet Corp. / Ironton Iron
2529 South Earl Street
Ironton, OH 45638

Customer Contact: Paul Ingram (740) 532-0009

Equipment:

- (2) Model 680A camera containing approximately 100 Ci of Co-60
- (1) Model 771 source changer containing approximately 100 Ci of Co-60

Date of Reciprocity: TBD **Technician:** Qualified Rad. Tech **Activity:** Source Transfer

Grede-Pryor Foundry
Hunt Street
Pryor, OK

Customer Contact: Leslie Scheer (918) 476-8321

Equipment:

- (1) Model 676B camera containing approximately 300 Ci of Co-60

Date of Reciprocity: TBD **Technician:** Qualified Rad. Tech **Activity:** Service/Maintenance

Carondelet Corporation
8600 Commercial Blvd
Pevely, MO 63070

Customer Contact: Darren LaRose (314) 479-4499

Equipment:

- (1) Model 660B camera containing less than 140 Ci of Ir-192
- (1) Model 680B camera containing approximately 100 Ci of Co-60
- (1) Model 771 source change containing approximately 100 Ci of Co-60

Date of Reciprocity: TBD **Technician:** Qualified Rad. Tech **Activity:** Service/Maintenance-Source Transfer

Portsmouth Naval Shipyard
Portsmouth, NH 03804

Customer Contact: Mark Rodgers (207) 438-1380

Equipment:

- (1) Model 680A camera containing approximately 50 Ci of Co-60

Date of Reciprocity: TBD **Technician:** Qualified Rad. Tech **Activity:** Service/Maintenance

Precision Calibration & Testing

3799 Concord Road

York, PA 17404

Customer Contact: Steve Miller

(717) 840-4994

Equipment:

(2) Model 660A's containing less than 120 Ci of Ir-192

(1) Model 680A containing less than 110 Ci of Co-60

Date of Reciprocity: TBD **Technician:** Qualified Rad. Tech **Activity:** Service/Maintenance

Intermet Corporation

Archer Creek Engineering

P.O. Box 11589

Lynchburg, Va 24506

Customer Contact: Steve Farmer

(434) 528-8294

Equipment:

(1) 680B containing less than 100 Ci of Co-60

000699

Date of Reciprocity: TBD **Technician:** Qualified Rad. Tech **Activity:** Service/Maintenance

MRCP-MAT-1

Page 1 of 14 pages



THE COMMONWEALTH OF MASSACHUSETTS
 DEPARTMENT OF PUBLIC HEALTH
 RADIATION CONTROL PROGRAM
 MATERIALS LICENSE

Pursuant to Massachusetts General Laws Chapter 111, Sections 3, 5M, 5N, 5O and 5P and Massachusetts Regulations for the Control of Radiation, Section 120.100, Licensing of Radioactive Material, and in reliance on statements and representation heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer radioactive materials designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations 105 CMR 120.000. This license shall be deemed to contain the conditions specified in 105 CMR 120.000 and is subjected to all applicable rules, regulations of the Department of Public Health, Commonwealth of Massachusetts, now or hereafter in effect and to any conditions specified below.

| | |
|--|---|
| <p>Licensee</p> <p>1. AEA Technology QSA, Inc.</p> <p>2. 40 North Avenue Burlington, Massachusetts 01803</p> | <p>3. License Number: 12-8361 is amended in its entirety, in accordance with letter dated March 19, 2002, to read as follows:</p> <p style="padding-left: 40px;">Amendment No: <u>28</u></p> <p>4. Expiration Date: May 31, 2005</p> <p>5. Docket No: 99-0014</p> |
|--|---|

| 6. Radioactive Material | 7. Chemical/Physical Form | 8. Maximum Possession Limit |
|-------------------------|--|-----------------------------|
| A. Gadolinium-153 | A. Sealed sources and/or neutron activated metal | A. 1,000 curies |
| B. Selenium-75 | B. Sealed sources and/or neutron activated metal | B. 5,000 curies |
| C. Ytterbium-169 | C. Sealed sources and/or neutron activated metal | C. 2,000 curies |
| D. Ytterbium-175 | D. Sealed sources and/or neutron activated metal | D. 400 curies |
| E. Iridium-192 | E. Any | E. 100,000 curies |
| F. Iridium-192 | F. Sealed sources and/or neutron activated metal | F. 150,000 curies |
| G. Iridium-194 | G. Any | G. 2000 curies |
| H. Iridium-194 | H. Sealed sources and/or neutron activated metal | H. 20,000 curies |

MRCP-MAT-1

Page 2 of 14 pages

| | |
|---|-------------------------|
| COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH RADIATION CONTROL PROGRAM MATERIALS LICENSE SUPPLEMENTARY SHEET | LICENSE NUMBER: 12-8361 |
| | DOCKET NUMBER: 99-0014 |
| | AMENDMENT NUMBER: 28 |

| 6. Radioactive Material | 7. Chemical/Physical Form | 8. Maximum Possession Limit |
|--|---------------------------|--|
| I. Americium-241 | I. Any | I. 1 millicurie |
| J. Polonium-210 | J. Any | J. 3 curies |
| K. Lead-210 | K. Any | K. 5 millicuries |
| L. Radium-226 | L. Any | L. 100 microcuries |
| M. Neptunium-237 | M. Any | M. 50 microcuries |
| N. Any non-alpha emitting radioactive material with a half-life less than or equal to 120 days | N. Any | N. 1 millicurie per radionuclide; total possession limit not to exceed 500 millicuries |
| O. Antimony-125 | O. Any | O. 500 microcuries |
| P. Iron-55 | P. Any | P. 20 curies |
| Q. Barium-133 | Q. Any | Q. 1 curie |
| R. Krypton-85 | R. Any | R. 400 curies |
| S. Cadmium-109 | S. Any | S. 10 curies |
| T. Manganese-54 | T. Any | T. 500 microcuries |
| U. Calcium-45 | U. Any | U. 500 microcuries |
| V. Nickel-63 | V. Any | V. 2 curies |
| W. Carbon-14 | W. Any | W. 50 curies |
| X. Platinum-193 | X. Any | X. 500 microcuries |
| Y. Cerium-139 | Y. Any | Y. 500 microcuries |

MRCP-MAT-1

Page 3 of 14 pages

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC HEALTH
RADIATION CONTROL PROGRAM

MATERIALS LICENSE
SUPPLEMENTARY SHEET

LICENSE NUMBER: 12-8361

DOCKET NUMBER: 99-0014

AMENDMENT NUMBER: 23

| 6. Radioactive Material | 7. Chemical/Physical Form | 8. Maximum Possession Limit |
|-------------------------|---------------------------|-----------------------------|
| Z. Promethium-147 | Z. Any | Z. 2 millicuries |
| AA. Cerium-144 | AA. Any | AA. 500 microcuries |
| AB. Gallium-67 | AB. Any | AB. 10 millicuries |
| AC. Cesium-134 | AC. Any | AC. 500 microcuries |
| AD. Silver-110m | AD. Any | AD. 500 microcuries |
| AE. Cesium-137 | AE. Any | AE. 1 curie |
| AF. Sodium-22 | AF. Any | AF. 1 curie |
| AG. Chlorine-36 | AG. Any | AG. 500 microcuries |
| AH. Strontium-90 | AH. Any | AH. 600 microcuries |
| AI. Hydrogen-3 | AI. Any | AI. 100 curies |
| AJ. Technetium-99 | AJ. Any | AJ. 500 microcuries |
| AK. Cobalt-60 | AK. Any | AK. 10 millicuries |
| AL. Thallium-204 | AL. Any | AL. 500 microcuries |
| AM. Europium-152 | AM. Any | AM. 500 microcuries |
| AN. Thulium-170 | AN. Any | AN. 500 microcuries |
| AO. Iodine-129 | AO. Any | AO. 500 microcuries |
| AP. Zinc-65 | AP. Any | AP. 500 microcuries |
| AQ. Iridium-192m | AQ. Any | AQ. 500 microcuries |

MRCP-MAT-1

Page 4 of 14 pages

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC HEALTH
RADIATION CONTROL PROGRAM

MATERIALS LICENSE
SUPPLEMENTARY SHEET

LICENSE NUMBER: 12-8361

DOCKET NUMBER: 99-0014

AMENDMENT NUMBER: 28

| 6. Radioactive Material | 7. Chemical/Physical Form | 8. Maximum Possession Limit |
|-------------------------|--|-----------------------------|
| AR. Iridium-194m | AR. Any | AR. 500 microcuries |
| AS. Cobalt-57 | AS. Any | AS. 5 curies |
| AT. Bismuth-207 | AT. Any | AT. 2 millicuries |
| AU. Cobalt-60 | AU. Sealed sources and/or neutron activated metal | AU. 20,000 curies |
| AV. Strontium-90 | AV. Sealed sources and/or neutron activated metal | AV. 50 curies |
| AW. Cesium-137 | AW. Sealed sources and/or neutron activated metal | AW. 2000 Curies |
| AX. Promethium-147 | AX. Sealed sources and/or neutron activated metal | AX. 200 curies |
| AY. Radium-226 | AY. Sealed sources and/or neutron activated metal | AY. 2 curies |
| AZ. Americium-241 | AZ. Sealed sources and/or neutron activated metal | AZ. 1000 curies |
| BA. Curium-242 | BA. Sealed sources and/or neutron activated metal | BA. 100 millicuries |
| BB. Californium-252 | BB. Sealed sources and/or neutron activated metal | BB. 2 curies |
| BC. Protactinium-233 | BC. Any | BC. 2 millicuries |
| BD. Tin-119 | BD. Sealed sources and/or neutron activated metal | BD. 1 curie |

MRCP-MAT-1

Page 5 of 14 pages

| | |
|---|-----------------------------|
| COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH RADIATION CONTROL PROGRAM MATERIALS LICENSE SUPPLEMENTARY SHEET | LICENSE NUMBER: 12-8361 |
| | DOCKET NUMBER: 99-0014 |
| | AMENDMENT NUMBER: <u>28</u> |

| 6. Radioactive Material | 7. Chemical/Physical Form | 8. Maximum Possession Limit |
|-------------------------|--|-----------------------------|
| BE. Samarium-151 | BE. Any | BE. 1 curie |
| BF. Tantalum-182 | BF. Sealed sources and/or neutron activated metal | BF. 1 curie |
| BG. Curium-242 | BG. Any | BG. 100 millicuries |
| BH. Polonium-209 | BH. Any | BH. 50 microcuries |
| BI. Niobium-93m | BI. Any | BI. 200 microcuries |
| BJ. Californium-252 | BJ. Any | BJ. 50 microcuries |
| BK. Protactinium-231 | BK. Any | BK. 50 microcuries |
| BL. Polonium-208 | BL. Any | BL. 50 microcuries |
| BM. Indium-111 | BM. Any | BM. 10 millicuries |
| BN. Phosphorus-32 | BN. Any | BN. 5 millicuries |
| BO. Strontium-89 | BO. Any | BO. 10 millicuries |
| BP. Thallium-201 | BP. Any | BP. 10 millicuries |
| BQ. Xenon-133 | BQ. Any | BQ. 100 millicuries |
| BR. Actinium-227 | BR. Any | BR. 10 millicuries |
| BS. Neptunium-237 | BS. Sealed sources and/or neutron activated metal | BS. 20 millicuries |
| BT. Curium-244 | BT. Sealed sources and/or neutron activated metal | BT. 10 curies |

MRCP-MAT-1

Page 6 of 14 pages

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC HEALTH
RADIATION CONTROL PROGRAM

MATERIALS LICENSE
SUPPLEMENTARY SHEET

LICENSE NUMBER: 12-8361

DOCKET NUMBER: 99-0014

AMENDMENT NUMBER: 28

| 6. Radioactive Material | 7. Chemical/Physical Form | 8. Maximum Possession Limit |
|-------------------------|---------------------------|-----------------------------|
| BU. Uranium-233 | BU. Any | BU. 100 microcuries |
| BV. Uranium-235 | BV. Any | BV. 250 microcuries |
| BW. Plutonium-236 | BW. Any | BW. 100 millicuries |
| BX. Plutonium-238 | BX. Any | BX. 3 millicuries |
| BY. Plutonium-239 | BY. Any | BY. 2 millicuries |
| BZ. Plutonium-240 | BZ. Any | BZ. 2 millicuries |
| CA. Plutonium-241 | CA. Any | CA. 100 millicuries |
| CB. Plutonium-242 | CB. Any | CB. 3 millicuries |
| CC. Americium-243 | CC. Any | CC. 8 millicuries |
| CD. Curium-244 | CN. Any | CN. 50 microcuries |
| CE. Radon-222 | CO. Any | CO. 10 microcuries |
| CF. Germanium-68 | CF. Any | CF. 300 millicuries |
| CG. Iodine-125 | CG. Any | CG. 1 millicurie |
| CH. Ruthenium-106 | CH. Any | CH. 1 millicurie |
| CI. Gadolinium-153 | CI. Any | CI. 500 microcuries |
| CJ. Palladium-111 | CJ. Any | CJ. 100 curies |
| CK. Palladium-103 | CK. Any | CK. 10 curies |
| CL. Silver-111 | CL. Any | CL. 10 curies |

MRCP-MAT-1

Page 7 of 14 pages

| | |
|---|-------------------------|
| COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH RADIATION CONTROL PROGRAM MATERIALS LICENSE SUPPLEMENTARY SHEET | LICENSE NUMBER: 12-8361 |
| | DOCKET NUMBER: 99-0014 |
| | AMENDMENT NUMBER: 28 |

| 6. Radioactive Material | 7. Chemical/Physical Form | 8. Maximum Possession Limit |
|-------------------------|---|-----------------------------|
| CM. Silver-110m | CM. Any | CM. 500 millicuries |
| CN. Scandium-46 | CN. Sealed sources and/or neutron activated metal | CN. 5000 curies |

9. Authorized use:

B. through H., AU and CN. Possession incident to sealed source fabrication.

A. through CI., and CN. Commercial processing; manufacturing; fabrication of products; repackaging and storage of sources into devices/containers.

A. through CI., and CN. Possession, storage and handling incident to distribution to persons authorized to receive the license material pursuant to the terms and conditions of a specific license issued by the Agency, the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State.

A. through CI. Determination of the effectiveness of shielding.

A. through CI., and CN. Demonstration of sources and devices.

A. through CI., and CN. Possession incident to servicing, maintenance, repair and/or evaluation of sources/devices containing radioactive material.

A. through CI., and CN. Leak testing of sources and devices as a customer service.

A. through CI., and CN. Source changing for radioisotopic equipment/devices and isotope handling equipment.

A. through CI. Instrument calibration as a customer service.

A. through H., AU. through BR., and CN. Emergency source retrieval operations.

MRCP-MAT-1

Page 8 of 14 pages

| | |
|---|-----------------------------|
| COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH RADIATION CONTROL PROGRAM MATERIALS LICENSE SUPPLEMENTARY SHEET | LICENSE NUMBER: 12-8361 |
| | DOCKET NUMBER: 99-0014 |
| | AMENDMENT NUMBER: <u>28</u> |

A. through CI., and CN. Student training and instruction.

A. through CN. Research and development as defined in 105 CMR 120.005.

CONDITIONS

10. Radioactive materials shall be used at the licensee's facilities located at 40 North Avenue, Burlington, Massachusetts, except that the licensee may demonstrate the following at temporary job sites of the licensee anywhere in the Commonwealth of Massachusetts except areas under exclusive Federal jurisdiction:

Items A. through CI., and CN., may be used at temporary jobs sites of the licensee for the following:

1. Possession, storage, and handling incident to distribution to persons authorized to receive the licensed material pursuant to the terms and conditions of a specific license issued by the Agency, the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State.
2. Determination of shielding effectiveness.
3. Demonstration of sources/devices.
4. Possession incident to servicing, maintenance, repair and/or evaluation of sources/devices containing radioactive material.
5. Leak testing of sources/devices as a customer service.
6. Source changing for radioisotopic equipment/devices and isotope handling equipment.
7. Instrument calibration as a customer service.
8. Student training and instruction.
9. Research and Development as defined in 105 CMR 120.005.

Items A. through D., F., H., AU. through BB., BD, BF.,BS., BT., and CN. may be used at temporary jobs sites of the licensee for emergency source retrieval operations.

11. This license is subject to an annual fee as determined by the Executive Office for Administration and Finance.

MRCP-MAT-1

Page 9 of 14 pages

| | |
|---|-------------------------|
| COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH RADIATION CONTROL PROGRAM | LICENSE NUMBER: 12-8361 |
| MATERIALS LICENSE SUPPLEMENTARY SHEET | DOCKET NUMBER: 99-0014 |
| | AMENDMENT NUMBER: 28 |

12. A. Licensed material shall be used by, or under the supervision of, individuals designated in writing by the Radiation Safety Committee.
- B. Installation, removal or servicing of the Amersham Model NI.1 Small Animal Neutron Irradiator shall only be conducted by personnel trained in these procedures by the Radiation Safety Officer or the Regulatory Affairs Manager. The license shall maintain records of individuals authorized to perform these procedures.
- C. The Radiation Safety Officer for this license is Christopher B. Martel, CHP.
13. A. Sealed sources and detector cells containing licensed material shall be tested for leakage and/or contamination at intervals not to exceed six months or at such other intervals as are specified by the certificate of registration referred to in 10 CFR 32.210, not to exceed three years.
- B. Notwithstanding Paragraph A of this Condition, sealed sources designed to emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed three months.
- C. In the absence of a certificate from a transferor indicating that a leak test has been made within six months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.
- D. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.
- E. Sealed sources and detector cells need not be leak tested if:
- (i) they contain only hydrogen-3; or
 - (ii) they contain only a radioactive gas; or
 - (iii) the half-life of the isotope is 30 days or less; or

MRCP-MAT-1

Page 10 of 14 pages

| | |
|---|-------------------------|
| COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH RADIATION CONTROL PROGRAM | LICENSE NUMBER: 12-8361 |
| MATERIALS LICENSE SUPPLEMENTARY SHEET | DOCKET NUMBER: 99-0014 |
| | AMENDMENT NUMBER: 28 |

- (iv) they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material; or
 - (v) they are not designed to emit alpha particles, are in storage, and are not being used. However, when they are removed from storage for use or transfer to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source or detector cell shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- F. The test shall be capable of detecting the presence of 185 Bq (0.005 microcurie) of radioactive material on the test sample. If the test reveals the presence of 185 Bq (0.005 microcurie) or more of removable contamination, a report shall be filed with the Agency and the source or detector cell shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Agency regulations. The report shall be filed within five days of the date the leak test result is known with the Massachusetts Department of Public Health, ATTN: Director, Radiation Control Program, 174 Portland Street, 5th Floor, Boston, Massachusetts 02114. The report shall specify the source or detector cell involved, the test results, and corrective action taken.
- G. The licensee is authorized to collect leak test samples for analysis by the licensee. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Agency, the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
14. The licensee shall conduct a physical inventory every six months to account for all sealed sources and devices containing licensed material received and possessed under the license.
15. The licensee is authorized to hold radioactive material with a physical half-life of less than or equal to 75 days for decay-in-storage before disposal in ordinary trash, provided:
- A. Before disposal as ordinary trash, the waste shall be surveyed at the container surface with the appropriate survey instrument set on its most sensitive scale and with no interposed shielding to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.

MRCP-MAT-1

Page 11 of 14 pages

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC HEALTH
RADIATION CONTROL PROGRAM

MATERIALS LICENSE
SUPPLEMENTARY SHEET

LICENSE NUMBER: 12-8361

DOCKET NUMBER: 99-0014

AMENDMENT NUMBER: 28

- B. A record of each such disposal permitted under this License Condition shall be retained for three years. The record must include the date of disposal, the date on which the radioactive material was placed in storage, the radionuclides disposed, the survey instrument used, the background dose rate, the dose rate measured at the surface of each waste container, and the name of the individual who performed the disposal.
16. Pursuant to 105 CMR 120.146, the licensee is not required to submit an emergency plan for responding to a release of radioactive material provided that the licensee limits the amount of unsealed iridium in the hot cell at one time to no more than 6,000 curies.
17. The licensee shall only transport radioactive material or deliver radioactive material to a carrier for transport in accordance with the provisions of 49 CFR Parts 170 through 189, 10 CFR Part 71, and 105 CMR 120.770 "Transportation of Radioactive Material."
18. A. The licensee shall only distribute those sealed sources and/or devices for which a Sealed Source and Device (SS&D) Evaluation Sheet has been issued by the Agency, the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State. Sealed sources and/or devices must be manufactured and/or distributed in accordance with all statements and representations, including the description of the quality assurance program that provided the basis for issuance of the SS&D Evaluation Sheet. Prior to distribution, any changes in the design, production process, specifications of a product, sealed source or device shall be approved by the Agency.
- B. The licensee shall maintain an active and valid (SS&D) Evaluation Sheet for each product, sealed source, or device which it distributes. The licensee may repair, maintain and service products, sealed sources, sealed sources or devices previously distributed which are part of an inactive SS&D evaluation issued to the licensee. However, the licensee may not continue to manufacture or distribute such products, sealed sources or devices if they are inactive.

MRCP-MAT-1

Page 12 of 14 pages

| | |
|---|-----------------------------|
| COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH RADIATION CONTROL PROGRAM MATERIALS LICENSE SUPPLEMENTARY SHEET | LICENSE NUMBER: 12-8361 |
| | DOCKET NUMBER: 99-0014 |
| | AMENDMENT NUMBER: <u>28</u> |

C. These requirements shall not apply to the following:

(i) Calibration and reference sources not exceeding:

- a. For beta/gamma emitting material, 100 microcuries or ten times the quantity specified in 105 CMR 120.196: Appendix B, Table I, whichever is greater; or
- b. For alpha emitting materials, 10 microcuries.

(ii) Sealed sources and devices distributed to specific licensees of broad scope.

(iii) Sealed sources and devices distributed to licensees authorized for "research and development" as defined in 105 CMR 120.005 provided the licensee is authorized for the radionuclide and quantity in an unsealed or unshielded form.

D. Sealed sources and devices as described in C(2) and (3) above shall not be subsequently transferred to other licensees, except to licensed waste brokers or licensed disposal facilities.

19. Shipments of radioactive materials in excess of possession limits may be received for the sole purpose of being transferred off-site within 24 hours of receipt. These radioactive materials must contain only isotopes allowed under Item 6 of this license. Said radioactive materials stored on-site for more than 24 hours must be included in licensed inventory.

20. Except as specifically provided otherwise by this license, the licensee shall conduct its program in accordance with statements, representations and procedures contained in the documents, including any enclosures listed below. The Massachusetts Regulations for the Control of Radiation, 105 CMR 120.000, shall govern, unless statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.

- A. U.S. Nuclear Regulatory Commission License Number 20-12836-01, transferred to the Agency on March 21, 1997
- B. Telefaxed letter May 13, 1997
- C. Letter dated May 16, 1997

MRCP-MAT-1

Page 13 of 14 pages

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC HEALTH
RADIATION CONTROL PROGRAM

LICENSE NUMBER: 12-8361

MATERIALS LICENSE
SUPPLEMENTARY SHEET

DOCKET NUMBER: 99-0014

AMENDMENT NUMBER: 28

- D. Telefaxed letter dated May 16, 1997
- E. Letter dated July 8, 1997
- F. Telefaxed letter dated August 13, 1997
- G. Telefaxed letter dated January 27, 1998
- H. Telefaxed letter dated March 12, 1998
- I. Letter dated May 6, 1998
- J. Letter dated May 7, 1998
- K. Letter dated June 18, 1998
- L. Letter dated June 30, 1998
- M. Letter dated July 27, 1998
- N. Letter dated August 7, 1998
- O. Letter dated August 13, 1998
- P. Letter dated September 21, 1998
- Q. Letter dated December 18, 1998
- R. Letter dated December 23, 1998
- S. Letter dated December 16, 1999
- T. Letter dated January 27, 2000
- U. Letter dated April 7, 2000
- V. Letter dated May 24, 2000
- W. Letter dated August 18, 2000
- X. Letter dated August 22, 2000
- Y. Letter dated May 23, 2001
- Z. Facsimile dated June 7, 2001
- AA. Letter dated March 19, 2002

MRCP-MAT-1

Page 14 of 14 pages

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC HEALTH
RADIATION CONTROL PROGRAM

LICENSE NUMBER: 12-8361

MATERIALS LICENSE
SUPPLEMENTARY SHEET

DOCKET NUMBER: 99-0014

AMENDMENT NUMBER: 28

FOR THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC HEALTH
RADIATION CONTROL PROGRAM

Date 4-10-02

By Robert M. Hallisey
Robert M. Hallisey, Director

