



ENVIRONMENTAL LABORATORY
29 Research Drive
Westborough, MA 01581-3913

RECEIVED
REGION 1

2002 MAR 19 AM 11: 08

978 568-2512
Fax 978 568-2520

March 18, 2002
EL 048/02

Regional Administrator
Division of Nuclear Material Safety
ATTN: Reciprocity Request
Nuclear Material Safety Branch
U.S. Nuclear Regulatory Commission, Region 1
457 Allendale Road
King of Prussia, PA 19406-1415

Subject: Initial filing of NRC Form 241-Report of Proposed Activities in Non-Agreement States, Jurisdiction, or Offshore Waters

A completed NRC 241 (and attached supplemental data sheets), a copy of Massachusetts Material License (Number 14-5971), and a check for \$1,400 are contain in this initial package. Any questions please call my office at (978) 568-2545.

Sincerely,

A handwritten signature in black ink that reads 'James E. Rohrbacher'.

James E. Rohrbacher
Radiation Safety Officer
Environmental Laboratory

APPROVED BY OMB: NO. 3150-0013 EXPIRES: 07/31/2002
 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-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@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.

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)
 Duke Engineering and Services

2. TYPE OF REPORT
 INITIAL REVISION CLARIFICATION

3. ADDRESS OF LICENSEE (Mailing address or other location where licensee may be located)
 Environmental Laboratory
 29 Research Drive
 Westborough, MA 01581

4. LICENSEE CONTACT AND TITLE
 James E. Rohrbacher
 Radiation Safety Officer

5. TELEPHONE NUMBER (Include Area Code)
 (978) 568-2545

6. FACSIMILE NUMBER (Include Area Code)
 (978) 568-2520

7. ACTIVITIES TO BE CONDUCTED UNDER THE GENERAL LICENSE GIVEN IN 10 CFR 150.20

- WELL LOGGING LEAK TESTING AND/OR CALIBRATIONS TELETHERAPY/IRRADIATOR SERVICE
- PORTABLE GAUGES OTHER (Specify) ⇒ See Attached
- RADIOGRAPHY ⇒ REGISTERED AS USER OF PACKAGING (CERTIFICATES OF COMPLIANCE NUMBERS)

8. CLIENT NAME, ADDRESS, CITY/COUNTY, STATE, ZIP CODE
 See Attached

9. ACTUAL PHYSICAL ADDRESS OF WORK LOCATION (Street and Number or other location. Give as complete an address or directions as possible.)
 See Attached

10. CLIENT TELEPHONE NUMBER (Include Area Code)
 See Attached

11. WORK LOCATION TELEPHONE NUMBER (Include Area Code)
 See Attached

12. DATES SCHEDULED		13. NUMBER OF WORK DAYS	14. ADD	15. DELETE	16. LOCATION REFERENCE NUMBER
FROM	TO				
See Attached	See Attached	0			NUMBER TO BE ASSIGNED BY NRC <u>000511</u>

LIST ADDITIONAL WORK SITES ON SEPARATE SHEET(S) TO INCLUDE ALL INFORMATION CONTAINED IN ITEMS 9-16 ABOVE.

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.)
 See Attached

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	STATE	EXPIRATION DATE
	14-5971	MA	Sept. 30, 2004

19. CERTIFICATION (MUST BE COMPLETED BY APPLICANT)

I, THE UNDERSIGNED, HEREBY CERTIFY THAT:

- All information in this report is true and complete.
- 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.
- 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.
- 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.
- 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)	SIGNATURE	DATE
James E. Rohrbacher, RSO	<i>James E. Rohrbacher</i>	03-04-2002

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)	SIGNATURE	DATE	TOTAL USAGE -- DAYS TO DATE
		<i>John M. Paruth</i>	3/20/02	0

② 3/19/02

SUPPLEMENTAL SHEET TO
NRC FORM 241
INITIAL REPORT

Date: March 4, 2002

Licensee: Duke Engineering and Services

License: Commonwealth of Massachusetts Materials License 14-5971

Item 7:

The licensee has the ability and may be required to perform the following activities in non-agreement states:

1. Provide portable whole body counting
2. Supplement emergency response demands
 - a. perform field measurements
 - b. supply and process dosimetry
 - c. supplement contamination surveys of material or people
3. Provide calibration and quality assurance for whole body counting equipment
4. Perform field (in-situ) measurements

Item 8:

Vermont Yankee
P.O. Box 157
Governor Hunt Rd.
Vernon, VT 05354

Item 9:

The work locations will be faxed to Region 1 using a clarification report prior to any work taking place. It should be noted that most work would be performed in the client-controlled locations stated above. However, off site work may be performed and an exact location and time may not be available at the time of filing.

Item 10, 11:

The client and work location telephone numbers will be sent via the clarification report. It should be noted that some work will be performed out in the field (under the direction of the client(s) stated above) and a phone (land/cellular) may not be operating or available.

Items 12, 13, 14, and 15:

These items are governed by the client and/or the situation and will be specified on a clarification report.

Item 17:

The radioactive material to be used by the licensee will consist of whole body counting organs and equipment check sources. The maximum nuclides and activities are listed below:

Am-241	5.0 uCi
Ce-144	5.0 uCi
Co-60	10 uCi
Cs-134	5.0 uCi
Cs-137	10.0 uCi
Eu-152	5.0 uCi
I-131	5.0 uCi

The specific radionuclides and activities will be sent via the clarification report prior to the actual work being performed.

The licensee has a pool of personnel that may be used to perform the work. These individuals have all received training and have been approved the licensee's radiation safety committee. The following is a list of personnel authorized to perform the stated work activities (a specific list will be sent via sent clarification report):

Jim Giard	Brian Gilmartin	Haro Der Hagopian
Luke Hovestadt	Ed Maher	Ed Moreno
Nick Panzarino	Jeff Raimondi	Jim Rohrbacher
Milt Thisell		



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 style="text-align: center;">Licensee</p> <p>1. Duke Engineering and Services</p> <p>2. 400 Donald Lynch Blvd Marlborough, MA 01752</p>	<p>3. License Number: 14-5971 is amended in its entirety in accordance with letter dated June 5, 2001, to read as follows:</p> <p style="padding-left: 40px;">Amendment No: 04</p> <hr/> <p>4. Expiration Date: September 30, 2004</p> <hr/> <p>5. Docket No: 99-0463</p>
---	---

6. Radioactive Material	7. Chemical/Physical Form	8. Maximum Possession Limit
A. Any radioactive material with atomic number 1 through 83	A. Any	A. Not to exceed 100 millicuries per radionuclide and 1 curie total
B. Any radioactive material with atomic number 84 through 98	B. Any	B. Not to exceed 1 millicurie per radionuclide and 10 millicuries total
C. Chlorine-36	C. Any	C. 20 millicuries
D. Strontium-90	D. Any	D. 30 millicuries
E. Technetium-99	E. Any	E. 20 millicuries
F. Xenon-133	F. Any	F. 50 millicuries
G. Promethium-147	G. Any	G. 20 millicuries
H. Thallium-204	H. Any	H. 20 millicuries
I. Cobalt-60	I. Sealed sources	I. 500 millicuries

COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH RADIATION CONTROL PROGRAM MATERIALS LICENSE SUPPLEMENTARY SHEET	LICENSE NUMBER: 14-5971
	DOCKET NUMBER: 99-0463
	AMENDMENT NUMBER: 04

6. Radioactive Material	7. Chemical/Physical Form	8. Maximum Possession Limit
J. Cesium-137	J. Sealed sources	J. 500 millicuries
K. Cesium-137	K. Sealed source (3M Company Model 4F6H)	K. 1500 millicuries
L. Cesium-137	L. Sealed source (Amersham Model CDC 3822)	L. 2000 millicuries
M. Cesium-137	M. Sealed source (ORNL)	M. 50 curies
N. Americium-241	N. Sealed sources (Amersham Model AMC.16)	N. 250 millicuries
O. Depleted Uranium	O. Solid	O. Not to exceed 25 pounds
P. Radium-226	P. Sealed Sources	P. 1 millicurie

9. Authorized use:

- A. through H. For laboratory measurements, tracer studies, preparation and distribution of calibration standards, and instrument and dosimetry device calibrations.
- I. through K. and N. through P. Calibration and testing of instruments and dosimetry devices.
- L. Calibration and testing of dosimetry devices.
- M. For use in a Technical Operations Model 682 calibrator.

COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH RADIATION CONTROL PROGRAM	LICENSE NUMBER: 14-5971
MATERIALS LICENSE SUPPLEMENTARY SHEET	DOCKET NUMBER: 99-0463
	AMENDMENT NUMBER: <u>04</u>

CONDITIONS

10. A. Licensed materials listed in 6.A. through 6.H. and 6.O. through 6.P. may be used only at the licensee's facilities located at 29 Research Drive, Westborough, Massachusetts and at temporary job sites of the licensee anywhere in the Commonwealth of Massachusetts.
- B. Licensed material listed in 6.I. through 6.N. may be used at the licensee's facilities located at 29 Research Drive, Westborough, Massachusetts.
11. This license is subject to an annual fee as determined by the Executive Office for Administration and Finance.
12. The Radiation Safety Officer for the activities authorized by this license is James E. Rohrbacher.
13. Licensed material listed in Item 6 above is only authorized for use by, or under the supervision of, individuals designated in writing by the Radiation Safety Committee, Melvin W. Gmyrek, Chairperson.
14. Licensed material shall not be used in or on human beings.
15. 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 105 CMR 120.128 (N) or equivalent regulations of the U.S. Nuclear Regulatory Commission or any Agreement State, 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.

COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH RADIATION CONTROL PROGRAM MATERIALS LICENSE SUPPLEMENTARY SHEET	LICENSE NUMBER: 14-5971
	DOCKET NUMBER: 99-0463
	AMENDMENT NUMBER: <u>04</u>

- 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
 - (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 μ Ci) of radioactive material on the test sample. If the test reveals the presence of 185 Bq (0.005 μ Ci) or more of removable contamination, the source shall be removed from service and decontaminated, repaired or disposed of. A report of this shall be filed with the Director of the Radiation Control Program within five (5) days of the date the leak test result is known. The report shall specify the source or detector cell involved, the test results, and corrective action taken. Records of leak test results shall be kept in units of becquerel or microcurie and shall be maintained for inspection by the Agency.
- 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 Commission or an Agreement State to perform such services.

COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH RADIATION CONTROL PROGRAM	LICENSE NUMBER: 14-5971
MATERIALS LICENSE SUPPLEMENTARY SHEET	DOCKET NUMBER: 99-0463
	AMENDMENT NUMBER: 04

16. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
17. The licensee shall not acquire licensed material in a sealed source or device unless the source or device has been registered with the U.S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or equivalent regulations of an Agreement State.
18. 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.
19. The licensee shall not use licensed material in field applications where activity is released except as provided otherwise by specific condition of this license.
20. 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."
21. 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 No. 20-14597-01 transferred to Massachusetts on March 21, 1997
 - B. Letter dated November 21, 1997
 - C. Letter dated June 9, 1999
 - D. Letter dated January 25, 2000
 - E. Letter dated June 5, 2001

COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH RADIATION CONTROL PROGRAM MATERIALS LICENSE SUPPLEMENTARY SHEET	LICENSE NUMBER: 14-5971
	DOCKET NUMBER: 99-0463
	AMENDMENT NUMBER: 04

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

Date 7/10/2001

By *R. Hallisey*
for Robert M. Hallisey, Director

