



**JAWORSKI
GEOTECH, INC.**

MS-16
Q-Ø
SERVICES

- Geotechnical
- Environmental
- Construction
- Underground Tank
- Materials Testing

OFFICES

- Manchester, N.H.
- White River Jct., VT.
- Mansfield, MA.

March 2, 1993

Mr. John McGrath
Licensing Assistant Section
Nuclear Materials Safety Branch
U.S. Nuclear Regulatory Commission, Region I
475 Allendale Road
King of Prussia, PA 19406-1415

Dear Mr. McGrath:

Following your recent telephone discussion with our office, this letter is intended to answer specific questions which were not included in our recent Application for Material License.

Question 1: Campbell Pacific Nuclear Gauge Model No. for inclusion in Item #6:

Answer: Model No. MC-3 Porta Probe ; Serial No. M39058882

Question 2: Additional information relative to conditions of storage facility in the Vermont Office for inclusion in Item #9:

Answer: The storage closet shown on the office sketch is drawn to plan scale and is six feet tall. The closet is locked and the key will be held by Mr. Cliff Lyons of the Vermont Office. In fact, most of the work performed in Northern New England will, most likely, be staffed from the Manchester, New Hampshire office. Although the Vermont office has been provided with a gauge storage area, the contingency for it use is not immediately anticipated.

Question 3: Leak Test Kit Part Numbers

Answer: Leak tests will be performed by representatives of JGI and sent to the respective manufacturers for analyses. Leak Test Kits are provided by the respective manufacturers as follows:

Troxler Part No. 102868
CPN Part No. 401197
Seamans Part No. QT-1

Mr. John McGrath

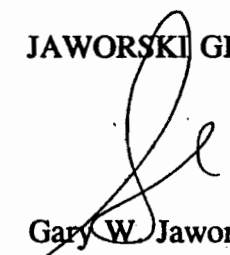
Page 2

March 2, 1993

We trust that the contents herein are satisfactory to answer the requirements of your request and complete our Application for Material License. Should you have any questions, please do not hesitate to contact me.

Very truly yours,

JAWORSKI GEOTECH, INC.



Gary W. Jaworski, P.E., Ph.D.
Nuclear Safety Officer

SHS#35/etc

APPLICATION FOR MATERIAL LICENSE

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 3.25 HOURS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MN88 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0120), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND,
MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA,
RHODE ISLAND, OR VERMONT, SEND APPLICATIONS TO:

LICENSING ASSISTANT SECTION
NUCLEAR MATERIALS SAFETY BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA,
PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR
WEST VIRGINIA, SEND APPLICATIONS TO:

NUCLEAR MATERIALS SAFETY SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION II
101 MARIETTA STREET, NW, SUITE 2900
ATLANTA, GA 30323

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR
WISCONSIN, SEND APPLICATIONS TO:

MATERIALS LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, IL 60137

ARKANSAS, COLORADO, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA,
NEW MEXICO, NORTH DAKOTA, OKLAHOMA, SOUTH DAKOTA, TEXAS, UTAH,
OR WYOMING, SEND APPLICATIONS TO:

MATERIAL RADIATION PROTECTION SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-8064

ALASKA, ARIZONA, CALIFORNIA, HAWAII, NEVADA, OREGON, WASHINGTON,
AND U.S. TERRITORIES AND POSSESSIONS IN THE PACIFIC, SEND APPLICATIONS
TO:

NUCLEAR MATERIALS SAFETY SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION V
1450 MARIA LANE
WALNUT CREEK, CA 94596-5368

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

1. THIS IS AN APPLICATION FOR (Check appropriate item)

- ☒ A. NEW LICENSE
☐ B. AMENDMENT TO LICENSE NUMBER _____
☐ C. RENEWAL OF LICENSE NUMBER _____

2. NAME AND MAILING ADDRESS OF APPLICANT (Includes Zip Code)

Jaworski Geotech, Inc.
150 Zachary Road
Manchester, NH 03109

3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED. Licensed material will be stored at the address listed in item 2 and at the following addresses: Jaworski Geotech, Inc., 44 Wood Ave. Unit 2, Mansfield, MA 02048; Jaworski Geotech, Inc., The Junction Marketplace, Suite 16, White River Junction, VT 05001, and used at temporary job sites in MA, VT, ME, CT and RI.

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Gary W. Jaworski, P.E., Ph.D.

TELEPHONE NUMBER

603-647-9700

SUBMIT ITEMS 5 THROUGH 11 ON 8 1/2 x 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL

a. Element and mass number, b. chemical and/or physical form, and c. maximum amount which will be possessed at any one time.

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSEE FEES (See 10 CFR 170 and Section 170.31)

FEE CATEGORY

3P

AMOUNT

ENCLOSED

\$ 540.00

13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, AND 40 AND THAT ALL INFORMATION CONTAINED HEREIN, IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948, 62 STAT. 749 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.

SIGNATURE - CERTIFYING OFFICER

TYPED/PRINTED NAME

TITLE

DATE

Gary W. Jaworski

Principal

1/28/93

FOR NRC USE ONLY

TYPE OF FEE

FEE LOG

FEE CATEGORY

COMMENTS

APP

766

3P

AMOUNT RECEIVED

CHECK NUMBER

\$540

5637

APPROVED BY

DATE

2/12/93

ATTACHMENT

JAWORSKI GEOTECH, INC.
150 Zachary Road
Manchester, NH 03109

603-647-9700

Item 5: Radioactive Material

<u>Radioisotope</u>	<u>Form</u>	<u>Drawing#</u>	<u>Maximum Amount</u>
A. Cesium 137	Special form	A102112	Not to exceed 9 mCi per source
B. Americium 241: Beryllium	Special form	A102451	Not to exceed 44 mCi per source
C. Cesium 137	Special form	CPN131	Not to exceed 10 mCi per source
D. Americium 241: Beryllium	Special form	CPN131	Not to exceed 50 mCi per source
E. Cesium 137	Special form	GT-GHP Gammatron	Not to exceed 8 mCi per source
F. Americium 241: Beryllium	Special form	AN-HP Gammatron	Not to exceed 40 mCi per source

Item 6: Material Use

A. and B. For use in a Troxler Electronics Model 3400 series portable measuring gauge.

C. and D. For use in Campbell Pacific Nuclear Model CPN131 portable measuring gauge.

E. and F. For use in Seaman Nuclear Corporation Model C-200 portable measuring gauge.

Item 7: Radiation Safety Officer

Dr. Gary W. Jaworski PE, PhD has been designated as the company Radiation Safety officer. A copy of his Training Certificate is attached for your review. The duties of the Radiation Safety officer are specified in Item 10.

Item 8: Training Gauge Users

Each individual that will operate the nuclear gauge(s) will complete the appropriate training course(s); read and understand our radiation safety procedures; and be approved by our Radiation Safety Officer - copies of each individual's training certificate(s) will be maintained on file. Copies of training certificates for the following individuals are attached for your review.

Denis Boisvert
Timothy Carney
Thomas Eldridge
Christopher Ellis
Maurice Harpin
Fredric Lausier
Kevin Martin
Lawrence Provost
Stephen Schribner
Richard Verrier

Item 9: Facilities and Equipment

Facilities: I have attached a sketch of the area where gauges will be stored when not in use.

Equipment:

Survey Instruments: None

Personal Monitoring Devices:

Landauer, Inc.
2 Science Road
Glenwood, Illinois 60425-1586

Type B-1: whole body, X-ray, gamma, beta, and fast neutron measurement.

Exchange frequency: monthly exchange.

Item 10: Radiation Safety Program

JAWORSKI GEOTECH, INC.
150 Zachary Road
Manchester, New Hampshire

603-647-9700

1. Radiation Safety Officer

A. Dr. Gary W. Jaworski PE, PhD has been designated as the company Radiation Safety Officer and will assume the duties and responsibilities that include the following:

1. To ensure that all terms and conditions of the license are being met and that the information contained in the license is up-to-date.
2. To ensure that all equipment has been leak tested every six months and that the leak test is performed in the manner prescribed by the equipment manufacturer.
3. To ensure that the use of the equipment is only by individuals that have been authorized by the Radiation safety Officer and that all users wear personnel monitoring badges when utilizing the equipment. Personnel monitoring equipment will consist of monitoring badges supplied by Landauer, Inc. on a monthly exchange period.
4. to maintain the records as required by the Nuclear Regulatory Commission. These records shall include personnel monthly exposure records, leak test records, and training certificates for all operators.
5. To insure that the equipment is properly secured against unauthorized removal at all times, especially when it is not in use.
6. To observe as a point of contact and give assistance in case of an emergency such as damaged equipment or theft. At that point, the NRC and the manufacturer will be notified.
7. To insure that all users have read and understand the radiation safety operating and emergency procedures as directed by the Radiation Safety Officer and the manufacturer.

8. To post "Caution Radioactive Material" on the storage location.
9. To conduct a written six month inventory of all nuclear gauges, and keep on file for inspection.

2. Operation Procedures

A. Transportation of Equipment

1. All possible means shall be provided to ensure that the equipment is fully secured in the transporting vehicle and when transporting in an enclosed vehicle, keep the gauge in the trunk of rear compartment area so to limit the exposure. The vehicle will also be locked at all times. When transporting in an open bed vehicle, the gauge should be securely fastened and locked to the truck bed.
2. The gauge will be transported in the provided transportation case. The US DOT requires that the gauge be transported in a properly labelled carrying case. A copy of the US DOT transport package certification will be kept with the transporter.
3. At all times during transport, the transporter (operator) will have a properly completed Bill of Lading for each gauge, Source Certificate, Personal ID, and a copy of the Transport Package Certification.

B. Utilization Procedures

1. A utilization log book will be used to control the gauge's whereabouts at all times - signing it out and back in when returning from the field.
2. When the gauge is in the field, we will maintain control over the gauge at all times. The gauge will never be left unattended, as this type of negligence has led to stolen or damaged equipment.
3. When not making measurements, the gauge will be placed in the transportation case and returned to its permanent storage area as soon as possible. The gauge will be properly used as directed by the manufacturer. This will maintain any radiation exposure below the acceptable limits. When recharging the gauge, it will be kept in the locked storage room.

4. When using the equipment, the operator will wear the film badge that has been assigned to the specific operator. These badges will monitor both gamma and neutron radiation with monthly exchange frequency and reports examined for unusually high dosages. Proper measures will be taken to correct this type of situation. When not using the equipment, the monitoring device will be stored in the radiation free area that has been designated in the office.

C. Maintenance and Leak Test Procedures

1. Periodic maintenance will include cleaning the gauge, at which point film badges will be worn. Accepted cleaning and lubrication procedures developed by the manufacturer will be allowed.
2. No maintenance will be performed in which the radioactive source is removed from the gauge. The manufacturer will conduct source removal procedures only.
3. Leak tests will be done every six months using the appropriate Leak Test kits, following the instructions as outlined within the kit. Film badges will be worn.

3. Emergency Procedures

- A. In the event of physical damage to a gauge, the following will be performed:
 1. Immediately cordon off an area around the gauge of at least 15 feet.
 2. if a vehicle is involved, it will be stopped until the extent of contamination, if any, can be established.
 3. a visual inspection of the gauge will be made to determine if the source housing and/or shielding has been damaged.
 4. At the earliest possible time, when the situation is under control, we will contact our Radiation Safety Officer, Dr. Gary W. Jaworski P.E., Ph.D., at (603) 647-9700. We will describe the present conditions and follow his instructions.
- B. In the event that the gauge is lost or stolen, we will immediately notify our Radiation Safety Officer, who in turn will contact the Nuclear Regulatory Commission.

A COPY OF THIS RADIATION SAFETY PROGRAM WILL BE KEPT WITH THE GAUGE AT ALL TIMES FOR REFERENCE WHEN NEEDED.

Item 11: Waste Management

Disposition of the gauge will be by transfer to either another licensee specifically licensed to possess the radioactive material or to a licensed disposal facility. The manufacturer will assist in locating a properly licensed disposal facility.



JAWORSKI
GEOTECH, INC.

(603) 647-9700 • FAX 647-4432

150 Zachary Road
Manchester, NH 03109

Project NRC-Item 9 Project No. _____

Sheet No. _____ Of _____

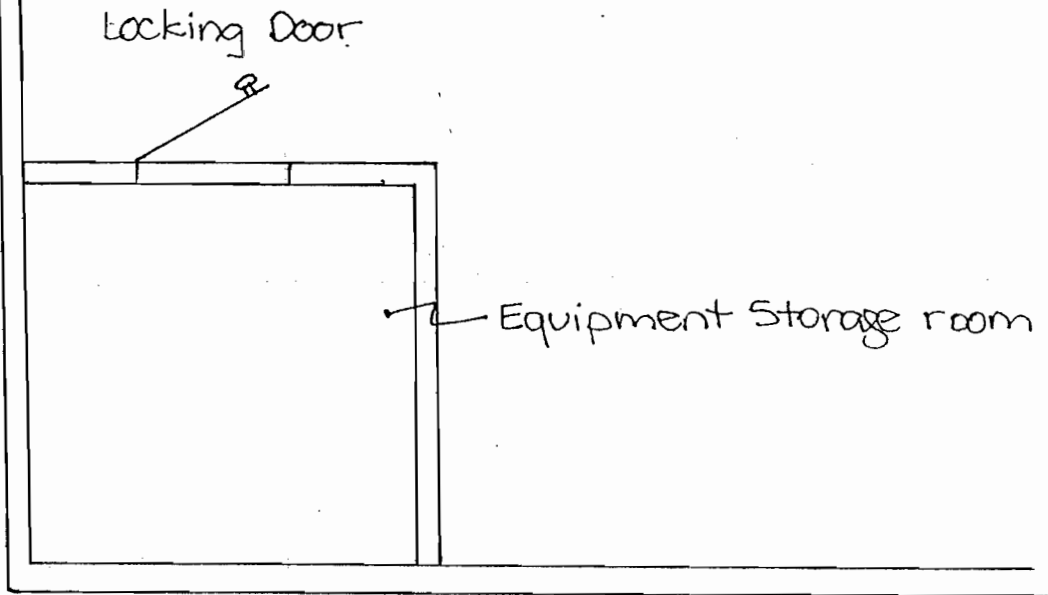
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Checked By _____ Date _____

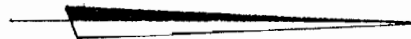
Subject Mansfield Office - Basement Scale _____

Basement is unoccupied

Distance to nearest occupied area is approximately
8 feet (minimum).



1" = 5'





**JAWORSKI
GEOTECH, INC.**

(603) 647-9700 • FAX 647-4432

150 Zachary Road
Manchester, NH 03109

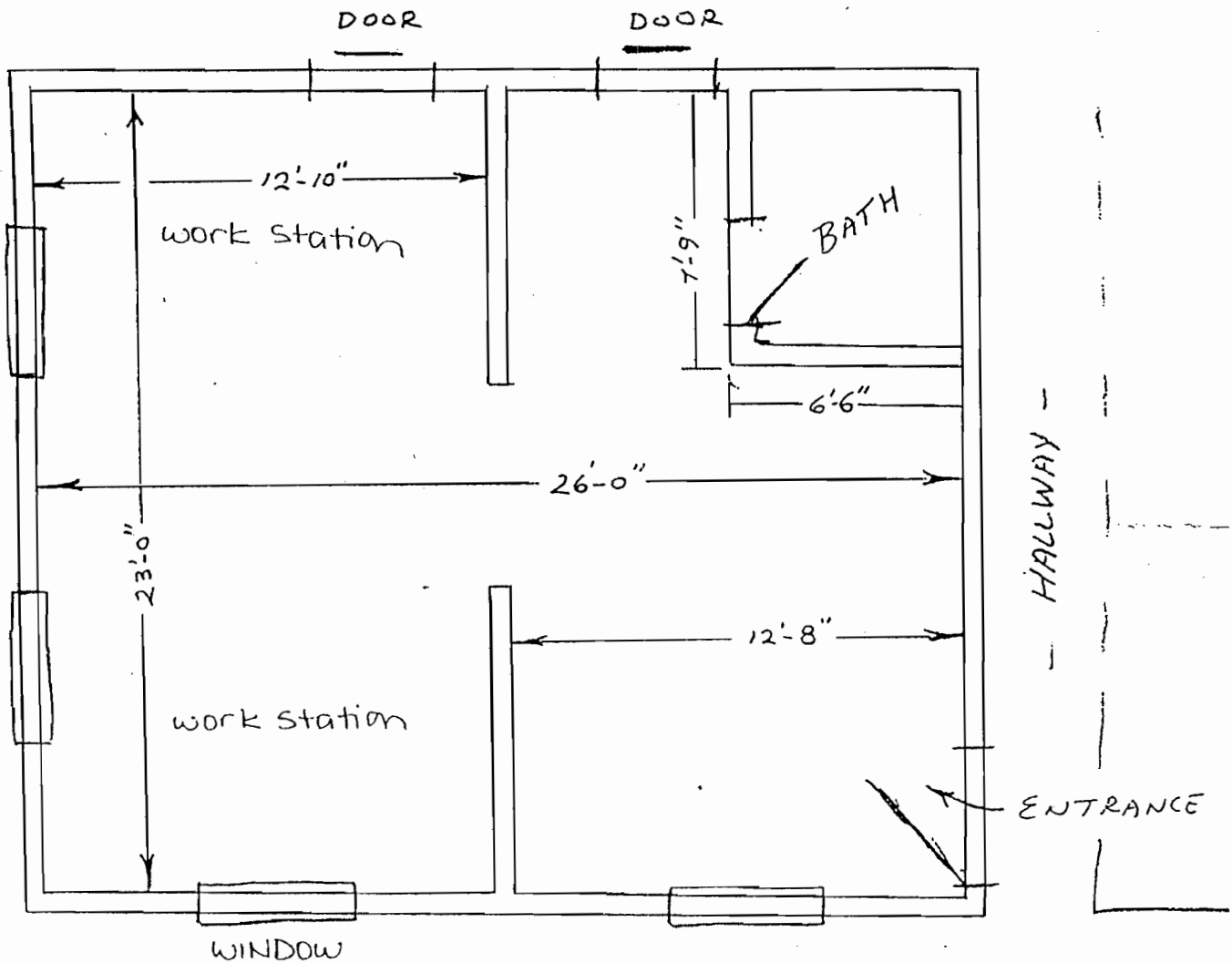
Project NRC - Item 9 Project No. _____

Sheet No. _____ Of _____

Calculated By _____ Date _____

Checked By _____ Date _____

Subject Mansfield Office - First Floor Scale _____



1" = 5'



**JAWORSKI
GEOTECH, INC.**

(603) 647-9700 • FAX 647-4432

150 Zachary Road
Manchester, NH 03109

Project NRC-Item 9 Project No. _____

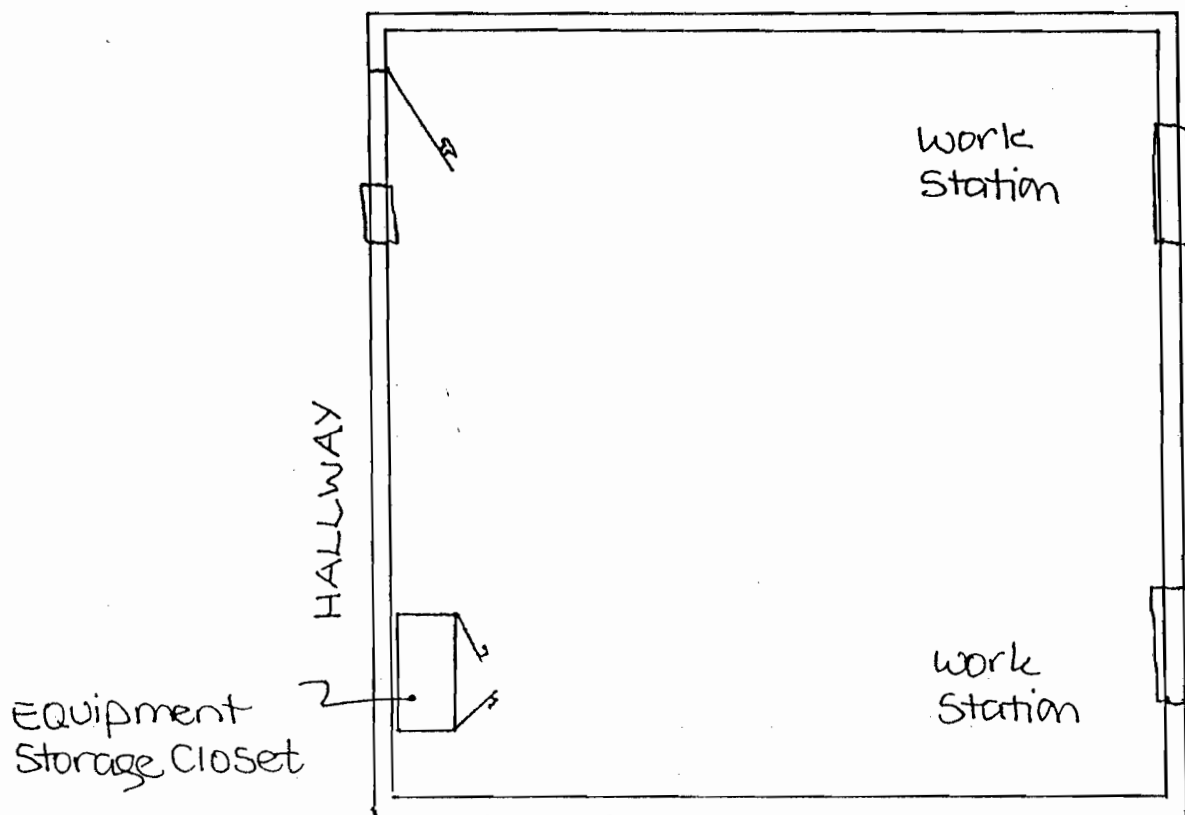
Sheet No. _____ Of _____

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Checked By _____ Date _____

Subject White River Junction Office Scale _____

Distance to nearest occupied area is approximately
10 feet (minimum).



1" = 5'

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

KEVIN MARTIN

of

JAWORSKI GEOTECH, INC.

HAS SUCCESSFULLY COMPLETED THE TROXLER ELECTRONIC LABORATORIES, INC.
TRAINING COURSE FOR THE USE OF NUCLEAR TESTING EQUIPMENT.

SUBJECTS INCLUDED IN THIS COURSE WERE AS FOLLOWS:

Radiological Safety

- | | |
|--|---|
| 1. Principles and practices of radiation protection. | 5. Radioactivity measurement standardization and monitoring techniques and instruments. |
| 2. Leak testing procedures. | 6. Accident and incident procedures. |
| 3. Mathematics and calculations basic to the use and measurement of radioactivity. | 7. Procedures for nuclear gauge storage and transportation. |
| 4. Biological effects of radiation. | 8. General safety precautions. |

Gauge Operation

- | | |
|-------------------------|----------------------|
| 1. Instrument theory | 4. Field application |
| 2. Operating procedures | 5. Gauge calibration |
| 3. Maintenance | |

Frank D. Jones
INSTRUCTOR

07/25/91
DATE

WILLIAM F. TROXLER
PRESIDENT

Nº 40549

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

LAWRENCE PROWST
of

JAWORSKI GEOTECH INC

HAS SUCCESSFULLY COMPLETED THE TROXLER ELECTRONIC LABORATORIES, INC.
TRAINING COURSE FOR THE USE OF NUCLEAR TESTING EQUIPMENT.

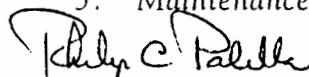
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Gauge Operation

- | | |
|-------------------------|----------------------|
| 1. Instrument theory | 4. Field application |
| 2. Operating procedures | 5. Gauge calibration |
| 3. Maintenance | |


PHILIP PALILLA
INSTRUCTOR

CERTIFICATE #: 050140

9/06/91
DATE

WILLIAM F. TROXLER
PRESIDENT

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

GARY JAWORSKI

of

MILLER ENGINEERING & TESTING, INC.

HAS SUCCESSFULLY COMPLETED THE TROXLER ELECTRONIC LABORATORIES, INC.
TRAINING COURSE FOR THE USE OF NUCLEAR TESTING EQUIPMENT.

SUBJECTS INCLUDED IN THIS COURSE WERE AS FOLLOWS:

Radiological Safety

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|--|---|
| 1. Principles and practices of radiation protection. | 5. Radioactivity measurement standardization and monitoring techniques and instruments. |
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Gauge Operation

- | | |
|-------------------------|----------------------|
| 1. Instrument theory | 4. Field application |
| 2. Operating procedures | 5. Gauge calibration |
| 3. Maintenance | |


INSTRUCTOR

2/16/84

DATE

W.F. TROXLER

PRESIDENT

No 6257

Nº 18620

Certificate Of Completion

This is to certify that STEPHEN H. SCRIBNER *has completed the*
basic training course on Radiation Safety and Use of Nuclear Gauges,
held this 23rd *day of* May *19* 91 *, held in the*
City of MARLBORO *State of* MASSACHUSETTS *by CPN Company.*

Stanley Kelly
INSTRUCTOR

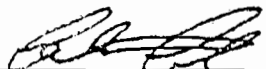

COMPANY
2830 Howe Road
Martinez, California USA 94553

Willard De Groot
RADIATION SAFETY OFFICER

No 13338

Certificate Of Completion

This is to certify that RICHARD G. VERRIER, JR. *has completed the*
basic training course on Radiation Safety and Use of Nuclear Soil Gauges,
held this 13TH *day of* MARCH 19 89, *held at* JAWORSKI GEOTECH, INC.
City of MANCHESTER *State of* NEW HAMPSHIRE *by* CPN Corporation.



INSTRUCTOR

COLIN FLETCHER



2830 Howe Road
Martinez, California USA 94553



RADIATION SAFETY OFFICER

WILLIE CLINE

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

FREDERIC LAUSIER

of

JAWORSKI GEOTECH INC.

HAS SUCCESSFULLY COMPLETED THE TROXLER ELECTRONIC LABORATORIES, INC.
TRAINING COURSE FOR THE USE OF NUCLEAR TESTING EQUIPMENT.

SUBJECTS INCLUDED IN THIS COURSE WERE AS FOLLOWS:

Radiological Safety

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|--|---|
| 1. Principles and practices of radiation protection. | 5. Radioactivity measurement standardization and monitoring techniques and instruments. |
| 2. Leak testing procedures. | 6. Accident and incident procedures. |
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Gauge Operation

- | | |
|-------------------------|----------------------|
| 1. Instrument theory | 4. Field application |
| 2. Operating procedures | 5. Gauge calibration |
| 3. Maintenance | |

Philip Palilla
PHILIP PALILLA
INSTRUCTOR

CERTIFICATE NUMBER: 55356

5/22/92
DATE

WILLIAM F. TROXLER
PRESIDENT

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

CHRISTOPHER ELLIS

of

JAWORSKI GEOTHCH INC.

HAS SUCCESSFULLY COMPLETED THE TROXLER ELECTRONIC LABORATORIES, INC.
TRAINING COURSE FOR THE USE OF NUCLEAR TESTING EQUIPMENT.

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Radiological Safety

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Gauge Operation

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|-------------------------|----------------------|
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| 3. Maintenance | |

CERTIFICATE NUMBER: 53516

Philip Palilla
PHILIP PALILLA
INSTRUCTOR

5/22/92
DATE

WILLIAM F. TROXLER
PRESIDENT

Certificate of Completion

This is to certify that DENIS M. BOISVERT has completed the basic training
course on Radiation Safety and Use of Nuclear Soil Gauges, held
this 25th day of August 19 77, held at Holiday Inn City of E. Hartford

State of Conneticut by Campbell Pacific Nuclear Corporation.

PATRICK J. CAMPBELL

Patrick J. Campbell
INSTRUCTOR

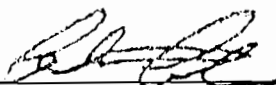
PATRICK J. CAMPBELL

Patrick J. Campbell
RADIATION SAFETY OFFICER

No 13337

Certificate Of Completion

This is to certify that TOM ELDRIDGE *has completed the*
basic training course on Radiation Safety and Use of Nuclear Soil Gauges,
held this 13TH *day of* MARCH 19 89, *held at* JAWORSKI GEOTECHM INC.
City of MANCHESTER *State of* NEW HAMPSHIRE *by* CPN Corporation.


INSTRUCTOR

COLIN FLETCHER


CORPORATION

2830 Howe Road
Martinez, California USA 94553


RADIATION SAFETY OFFICER

WILLIE CLINE

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

MAURICE HARPIN
of

JAWORSKI GEOTECH INC

HAS SUCCESSFULLY COMPLETED THE TROXLER ELECTRONIC LABORATORIES, INC.
TRAINING COURSE FOR THE USE OF NUCLEAR TESTING EQUIPMENT.

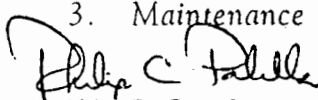
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Gauge Operation

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| 3. Maintenance | |


PHILIP PALILLA
INSTRUCTOR

CERTIFICATE #: 050136

9/08/91
DATE

WILLIAM F. TROXLER
PRESIDENT

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

TIMOTHY CARNEY

of

JAWORSKI GEOTECH INC.

HAS SUCCESSFULLY COMPLETED THE TROXLER ELECTRONIC LABORATORIES, INC.
TRAINING COURSE FOR THE USE OF NUCLEAR TESTING EQUIPMENT.

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| 1. Principles and practices of radiation protection. | 5. Radioactivity measurement standardization and monitoring techniques and instruments. |
| 2. Leak testing procedures. | 6. Accident and incident procedures. |
| 3. Mathematics and calculations basic to the use and measurement of radioactivity. | 7. Procedures for nuclear gauge storage and transportation. |
| 4. Biological effects of radiation. | 8. General safety precautions. |

Gauge Operation

- | | |
|-------------------------|----------------------|
| 1. Instrument theory | 4. Field application |
| 2. Operating procedures | 5. Gauge calibration |
| 3. Maintenance | |

CERTIFICATE NUMBER: 53512

Philip Palilla
PHILIP PALILLA
INSTRUCTOR

5/22/92
DATE

WILLIAM F. TROXLER
PRESIDENT

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

DEBRA A. NUNES

of

UNIVERSAL TESTING SERVICES

HAS SUCCESSFULLY COMPLETED THE TROXLER ELECTRONIC LABORATORIES, INC.
TRAINING COURSE FOR THE USE OF NUCLEAR TESTING EQUIPMENT.

SUBJECTS INCLUDED IN THIS COURSE WERE AS FOLLOWS:

Radiological Safety

1. Principles and practices of radiation protection.
2. Leak testing procedures.
3. Mathematics and calculations basic to the use and measurement of radioactivity.
4. Biological effects of radiation.
5. Radioactivity measurement standardization and monitoring techniques and instruments.
6. Accident and incident procedures.
7. Procedures for nuclear gauge storage and transportation.
8. General safety precautions.

Gauge Operation

1. Instrument theory
2. Operating procedures
3. Maintenance
4. Field application
5. Gauge calibration

Philip C. Della
INSTRUCTOR

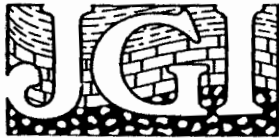
February 1, 1990

DATE

William F. Troxler

PRESIDENT

No 31234



JAWORSKI
GEOTECH, INC.

SUE ELMORE

647-9700

2/5/93

The enclosed check was inadvertently
omitted from our application for
Material License:

Gary W. Jaworski
JAWORSKI GEOTECH, INC.
150 ZACHARY ROAD
MANCHESTER, NH 03109

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