

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material 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 of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

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Licensee		
1. Soil Technology Associates, Inc.		3 License Number 06-30338-01
2. P.O. Box 106 Pomfret Center, Connecticut 06259-0106		4. Expiration Date October 31, 2001
		5. Docket or Reference No. 030-34238
6. Byproduct, Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum Amount that Licensee May Possess at Any One Time Under This License
A. Cesium 137	A. Sealed sources	A. 100 millicuries
B. Americium 241	B. Sealed neutron sources	B. 500 millicuries

9. Authorized use

A. and B. For possession and use in Troxler Electronic Laboratories, Inc., Campbell Pacific Nuclear Corp., Humboldt Scientific, Inc., Seaman Nuclear Corporation, or Soiltest, Incorporated devices which have been evaluated and approved for licensing purposes under a license issued by the U.S. Nuclear Regulatory Commission or any Agreement State.

CONDITIONS

10. Licensed material may be stored at the licensee's facilities located at 250 Killingly Road, Pomfret Center, Connecticut and may be used only at temporary job sites of the licensee anywhere in the United States where the U.S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material.
11. The licensee may not possess and use materials authorized in Items 6, 7, and 8, until: (1) the licensee has constructed the facilities and obtained the equipment described in the application and supporting documentation; and (2) the U.S. Nuclear Regulatory Commission, Region I, ATTN: Chief, Nuclear Materials Safety Branch, 475 Allendale Road, King of Prussia, Pennsylvania 19406 has been notified in writing that activities authorized by the license will be initiated.

In accordance with the requirements set forth in 10 CFR 30.36(b), 40.42(b), and 70.38(b), the licensee shall promptly notify the Nuclear Regulatory Commission, in writing, of a decision not to complete the facility, acquire equipment, or possess and use authorized material.

12. Licensed material shall only be used by, or under the supervision and in the physical presence of, individuals who have successfully completed the manufacturer's training program for gauge users, have been instructed in the licensee's routine and emergency operating procedures and who have been designated in writing by the Radiation Safety Officer.

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MATERIALS LICENSE
SUPPLEMENTARY SHEETLicense Number
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13. The Radiation Safety Officer for this license is Terrence P. Chambers.
14. 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
 - (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 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission and the source or detector cell shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within five days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region I, ATTN: Chief, Nuclear Materials Safety Branch, 475 Allendale Road, King of Prussia, Pennsylvania 19406. The report shall specify the source or detector cell involved, the test results, and corrective action taken.

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License Number 06-30338-01
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- G. The licensee is authorized to collect leak test samples for analysis by Campbell Pacific Nuclear, Inc. 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.
15. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
 16. 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.
 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. Each portable nuclear gauge shall have a lock or outer locked container designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. The gauge or its container must be locked when in transport, storage or when not under the direct surveillance of an authorized user.
 19. Any cleaning, maintenance, or repair of the gauge(s) that requires removal of the source rod shall be performed only by the manufacturer or by other persons specifically licensed by the Commission or an Agreement State to perform such services.
 20. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
 21. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
- A. Application dated September 3, 1996
B. Letter dated October 3, 1996.

For the U.S. Nuclear Regulatory Commission

Original Signed By:

By Eric H. Reber

Division of Nuclear Materials Safety
Region I
King of Prussia, Pennsylvania 19406

OCT 11 1996

Date _____

OCT 11 1996

License No. 06-30338-01
Docket No. 030-34238
Control No. 123661

Terence P. Chambers
President
Soil Technology Associates, Inc.
P.O. Box 106
Pomfret, CT 06259-0106

Dear Mr. Chambers:

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region I Office, Licensing Assistance Team, (610) 337-5093 or 5239, so that we can provide appropriate corrections and answers.

Please be advised that your license expires at the end of the day, in the month, and year stated in the license. Until your license is terminated, you must conduct your program involving byproduct materials in accordance with the conditions of your NRC license, representations made in your license application, and NRC regulations. In particular, note that you must:

1. Operate in accordance with NRC regulations 10 CFR Part 19, "Notices, Instructions and Reports to Workers; Inspections," 10 CFR Part 20, "Standards for Protection Against Radiation," and other applicable regulations.
2. Not possess and use materials authorized in Items 6, 7, and 8, on the license until:
 - a. you have constructed the facilities and obtained the equipment described in the license application and supporting documentation; and
 - b. you have notified the U.S. Nuclear Regulatory Commission, Region I, ATTN: Chief, Nuclear Materials Safety Branch, 475 Allendale Road, King of Prussia, Pennsylvania 19406 in writing, that activities authorized by the license will be initiated.
3. Notify NRC, in writing, within 30 days:
 - a. when an authorized user or Radiation Safety Officer, permanently discontinues performance of duties under the license or has a name change; or

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- b. when the mailing address on the license changes (no fee is required if the location of byproduct material remains the same).
- 4. In accordance with 10 CFR 30.36(b) and/or license condition, notify NRC, promptly, in writing, and request termination of the license:
 - a. when you decide to terminate all activities involving materials authorized under the license; or
 - b. if you decide not to complete the facility, acquire equipment, or possess and use authorized material.
- 5. Request and obtain a license amendment before you:
 - a. permit anyone to work as an authorized user under the license;
 - b. change Radiation Safety Officer;
 - c. order byproduct material in excess of the amount, or radionuclide, or form different than authorized on the license;
 - d. add or change the areas of use, or address or addresses of use identified in the license application or on the license; or
 - e. change ownership of your organization.
- 6. Submit a complete renewal application with proper fee or termination request at least 30 days before the expiration date of your license. You will receive a reminder notice approximately 90 days before the expiration date. Possession of byproduct material after your license expires is a violation of NRC regulations. A license will not normally be renewed, except on a case-by-case basis, in instances where licensed material has never been possessed or used.

In addition, please note that NRC Form 313 requires the applicant, by his/her signature, to verify that the applicant understands that all statements contained in the application are true and correct to the best of the applicant's knowledge. The signatory for the application should be the licensee or a certifying official of the licensee rather than the Radiation Safety Officer or a consultant.

You will be periodically inspected by the NRC. Failure to conduct your program in accordance with NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC will result in enforcement action against you. This could include issuance of a notice of violation, or imposition of a civil penalty, or an order suspending, modifying or revoking your license as specified in the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy), NUREG 1600.

T.P. Chambers
Soil Technology Associates, Inc.

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Since serious consequences to employees and the public can result from failure to comply with NRC requirements, prompt and vigorous enforcement action will be taken when dealing with licensees who do not achieve the necessary meticulous attention to detail and the high standard of compliance which NRC expects of its licensees.

Thank you for your cooperation.

Sincerely,

Original Signed By:
Eric H. Reber

Eric H. Reber
Nuclear Materials Safety Branch 3
Division of Nuclear Materials Safety

License No. 06-30338-01
Docket No. 030-34238
Control No. 123661

Enclosures:

1. License No. 06-30338-01
2. 10 CFR Parts 2, 19, 20, 30, and 170
3. NRC Forms 3 and 313

DOCUMENT NAME: R:\WPS\MLTR\L0630338.01

To receive a copy of this document, indicate in the box: "C" = Copy w/o attach/encl "E" = Copy w/ attach/encl "N" = No copy

OFFICE	DNMS/RI	N	DNMS/RI				
NAME	Reber/eh						
DATE	10/11/96	10/	/96	10/	/96	10/	/96

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SOIL TECHNOLOGY ASSOCIATES

250 Killingly Rd. P.O. Box 106, Pomfret Center, CT 06259 860-928-5020 Fax: 860-928-1924

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October 3, 1996

Eric H. Reber
U.S. Nuclear Regulatory Commission
Region 1
475 Allendale Road
King of Prussia, PA 19406-1415

RE: Docket #030-34238
Mail Control #123661

Dear Mr. Reber:

In reference to our application dated September 3, 1996, the following information is provided in accordance with your deficiency letter dated September 26, 1996. The responses given below is in accordance with the numbering system used in your letter.

1. Please see attached Annual Review of Radiation Protection Program.
2. The RSO duties will include the performance of annual audits.
3. The RSO duties will ensure that all incidents, accidents and personnel exposure to radiation in excess of ALARA or Part 20 limits are investigated and reported to the NRC and other authorities as appropriate within the required time limits.
4. The RSO duties will include ensuring that licensed material is transported within all applicable DOT requirements.
5. The RSO duties will include ensuring that the license is amended whenever there are changes in licensed activities, responsible individuals, or information or commitments provided to the NRC within the licensing process.
6. Each user will be designated in writing by the RSO.
7. The RSO will be responsible for maintaining records of annual refresher training.

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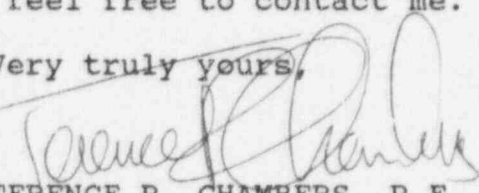
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8. The permanent storage location shall be kept locked at all times that the gauge is in storage.
9. All personnel using the gauge shall carry with them a personal dosimetry badge which will be supplied by Landauer, Inc. of Glenwood, IL, and it will be exchanged on a monthly basis.
10. The moisture/density gauge will be registered with the State of Connecticut, Department of Environmental Protection, Air Monitoring Bureau, Radiation Control Section, 79 Elm Street, Hartford, CT 06106 (24-hour hotline: 1-860-424-3333). In the event of an incident compromising the sealed source, the Radiation Control Section possesses survey meters and will immediately provide personnel to survey the gauge and/or area of said incident.
11. The RSO will be responsible to conduct an inventory at intervals not to exceed six (6) months to account for all sealed sources and devices received and possessed under this license. Records of such inventories shall be maintained for at least three (3) years from the date of such inventory and shall include the radionuclide and amount (in curies) of by-product material in each sealed source, as well as the manufacturers name, model number, and serial number of each device containing by-product material. In addition, the inventory shall include the location of each sealed source and device and date of said inventory.

Please note that as owner and direct supervisor of all activities associated with Soil Technology Associates, I take my role as Radiation Safety Officer very seriously. We are committed to the proper use, transportation, and record-keeping associated with nuclear gauge and we trust that the above information will complete our application for license to possess and use same.

Thank you for your attention to this matter. If you need additional information, please feel free to contact me.

Very truly yours,


TERENCE P. CHAMBERS, P.E.

TPC/el
Enc.

SOIL TECHNOLOGY ASSOCIATES

250 Killingly Rd. P.O. Box 106, Pomfret Center, CT 06259 860-928-5020 Fax: 860-928-1924

ANNUAL REVIEW OF RADIATION SAFETY PROGRAM

1. Is a physical inventory performed every six (6) months and a record maintained for inspection? (If multiple gauges are possessed.)
___ Yes ___ No. If No, corrective action taken: _____

2. Are leak-tests performed on all gauges, including rental gauges, at intervals not to exceed one year and certificates retained for inspection for a period of three (3) years or until inspected, whichever is longer? Is a current leak test certificate in every gauge shipping container?
___ Yes ___ No. If No, corrective action taken: _____

3. Are entries made in the check-out/check-in log prior to/following transport and use at temporary job sites?
___ Yes ___ No. If No, corrective action taken: _____

4. Are recipients licenses obtained to verify that possession is authorized, before transfer of gauges? Has a letter of receipt been obtained upon transfer of possession?
___ Yes ___ No. If No, corrective action taken: _____

5. If a survey meter is specified as a license condition, is it calibrated annually and are calibration records retained for inspection?
___ Yes ___ No. If No, corrective action taken: _____

6. Are gauges transported in compliance with 49 CFR (Title 49, Code of Federal Regulations), Transportation? This includes gauges tied down and locked, carrying a shipping paper, and Special Form and Type A Package Authorizations on file.
___ Yes ___ No. If No, corrective action taken: _____

SOIL TECHNOLOGY ASSOCIATES

250 Killingly Rd. P.O. Box 106, Pomfret Center, CT 06259 860-928-5020 Fax: 860-928-1924

030-34238

DATE: 9-16-96

FAX NUMBER: 610-337-5393

COVER SHEET**F**TO: Nuclear Regulatory Commission - Region I
Mail

FROM: Terence P Chambers Control # 123661

NUMBER of PAGES: 4 (Including This One)

A**MESSAGE:**

Certificate of Completion for

Carol Rogers

Tracy Bragg

Terence P Chambers

X**Please Call If You Did Not Receive All of The Pages**

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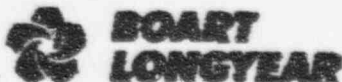
FAX REC'D

No 27397

Certificate Of Completion

This is to certify that CAROL ROGERS has completed the
basic CPN® training course on Radiation Safety and Use of Nuclear Gauges,
held this 13th day of September 19 96 in the
City of Pomfret Center State of CT by Boart Longyear Company.

Boart Longyear Company
2000 Howe Road
Martinez, California 94553 USA
Phone: (510) 228-0770
Fax: (510) 228-3182



Gregory R. Piller
Instructor
Eddie N. Hall
Quality Safety Officer

No 27398

Certificate Of Completion

This is to certify that TRACY BRAGG has completed the
basic CPN® training course on Radiation Safety and Use of Nuclear Gauges,
held this 13th day of September 19 96 in the
City of Pomfret Center State of CT by Boart Longyear Company.

Boart Longyear Company
2830 Howe Road
Marine, California 94553 USA
Phone: (510) 228-8770
Fax: (510) 228-3183



**BOART
LONGYEAR**

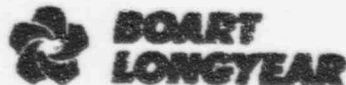
Gregory R. Piller
Eddie N. Hall
RADIATION SAFETY OFFICER

No 27396

Certificate Of Completion

This is to certify that TERENCE P. CHAMBERS has completed the
basic CPN® training course on Radiation Safety and Use of Nuclear Gauges,
held this 13th day of September 19 96 in the
City of Pomfret Center State of CT by Boart Longyear Company.

Boart Longyear Company
2630 Howe Road
Marina, California 94553 USA
Phone: (510) 228-6770
Fax: (510) 228-3183



Gregory R. Pellerin
Eddie N. Hall
INSTRUCTOR
RADIATION SAFETY OFFICER

SEP 26 1996

Docket No. 030-34238
Control No. 123661

Terence P. Chambers
President
Soil Technology Associates, Inc.
P.O. Box 106
Pomfret, CT 06259-0106

Dear Mr. Chambers:

This is in reference to your application dated September 3, 1996. In order to continue our review, we need the following additional information:

1. 10 CFR 20.1101(c) requires that the licensee review the radiation protection program content and implementation at least annually. Submit a description of your program for performing the required annual review and commit to keeping records of the review.
2. Please confirm that RSO duties will include the performance of annual audits.
3. Please confirm that the RSO will ensure that all incidents, accidents, and personnel exposures to radiation in excess of ALARA or Part 20 limits are investigated and reported to NRC and other authorities, as appropriate, within the required time limits.
4. Please confirm that RSO duties will include ensuring that licensed material is transported in accordance with all applicable DOT requirements.
5. Please confirm that RSO duties will include ensuring that the license is amended whenever there are changes in licensed activities, responsible individuals, or information or commitments provided to NRC in the licensing process.
6. Please confirm that each user will be designated in writing by the RSO.
7. Please confirm that you will maintain records of annual refresher training.
8. Please confirm that your permanent storage location will be locked when the gauge is in storage.
9. Please specify the type of personnel monitoring equipment you will be using. Please also specify the frequency of exchange and provide the name of your NVLAP-approved film badge supplier.

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T. P. Chambers
Soil Technology Associates, Inc.

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10. Please provide information regarding the availability of survey meters as specified in Item 10.2 of Draft Regulatory Guide DG-0008.
11. Please confirm that you will conduct inventories, at intervals not to exceed 6 months, to account for all sealed sources and devices received and possessed under the license. You should maintain records of the inventories for at least 3 years from the date of the inventory, and your inventory records should include the radionuclide and amount (in units of becquerels or curies) or byproduct material in each sealed source; the manufacturer's name, model number, and serial number (if appropriate) of each device containing byproduct material; the location of each sealed source and device; and the date of the inventory.

We will continue our review upon receipt of this information. Please reply in duplicate to my attention at the Region I Office and refer to Mail Control No. 123661. If you have any technical questions regarding this deficiency letter, please call me at (610) 337-5276.

If we do not receive a reply from you within 30 calendar days from the date of this letter, we shall assume that you do not wish to pursue your application.

Sincerely,

Original Signed By:

Eric H. Reber
Nuclear Materials Safety Branch 3
Division of Nuclear Materials Safety

Docket No. 030-34238
Control No. 123661

Enclosures:

1. 10 CFR 20
2. Draft Regulatory Guide DG-0008

DOCUMENT NAME: R:\WPS\DLTR\D3034238

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OFFICE	DNMS/RI	N	DNMS/RI				
NAME	Reber/ehr						
DATE	09/24/96		09/ /96		09/ /96		09/ /96

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(63)
10 CFR 30, 32, 33
34, 35, 36, 39 and 40

APPLICATION FOR MATERIAL LICENSE

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 9 HOURS. SUBMITTAL OF THE APPLICATION IS NECESSARY TO DETERMINE THAT THE APPLICANT IS QUALIFIED AND THAT ADEQUATE PROCEDURES EXIST TO PROTECT THE PUBLIC HEALTH AND SAFETY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, 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 MATERIALS SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001

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 LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION II
101 MARIETTA STREET, NW, SUITE 2900
ATLANTA, GA 30323-0199

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 60137-5927

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

NUCLEAR MATERIALS LICENSING 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:

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

LL 30338
030-34238
03121

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 (Include Zip code)

Soil Technology Associates, Inc.
P.O. Box 106
Pomfret Center, CT 06259-0106

3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

250 Killingly Road
Pomfret Center, CT 06259

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Terence P. Chambers

TELEPHONE NUMBER
(860) 928-5020

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 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 <u>3P</u> AMOUNT ENCLOSED \$ <u>550.00</u>
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, 36, 39 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.	

CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE

Terence P. Chambers, President

SIGNATURE

DATE

9/3/96

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			\$		
APPROVED BY				DATE	

123661

SEP - 9 1996

PRIVACY ACT STATEMENT

Pursuant to 5 U.S.C. 552a(e)(3), enacted into law by section 3 of the Privacy Act of 1974 (Public Law 93-579), the following statement is furnished to individuals who supply information to the Nuclear Regulatory Commission on NRC Form 313. This information is maintained in a system of records designated as NRC-3 and described at 40 Federal Register 45334 (October 1, 1975).

1. **AUTHORITY:** Sections 81 and 161(b) of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2111 and 2201(b)).
2. **PRINCIPAL PURPOSE(S):** The information is evaluated by the NRC staff pursuant to the criteria set forth in 10 CFR Parts 30, 32, 33, 34, 35 and 40 to determine whether the application meets the requirements of the Atomic Energy Act of 1954, as amended, and the Commission's regulations, for the issuance of a radioactive material license or amendment thereof.
3. **ROUTINE USES:** The information may be (a) provided to State health departments for their information and use; and (b) provided to Federal, State, and local health officials and other persons in the event of incident or exposure, for their information, investigation, and protection of the public health and safety. The information may also be disclosed to appropriate Federal, State, and local agencies in the event that the information indicates a violation or potential violation of law and in the course of an administrative or judicial proceeding. In addition, this information may be transferred to an appropriate Federal, State, or local agency to the extent relevant and necessary for an NRC decision or to an appropriate Federal agency to the extent relevant and necessary for that agency's decision about you.
4. **WHETHER DISCLOSURE IS MANDATORY OR VOLUNTARY AND EFFECT ON INDIVIDUAL OF NOT PROVIDING INFORMATION:** Disclosure of the requested information is voluntary. If the requested information is not furnished, however, the application for radioactive material license, or amendment thereof, will not be processed. A request that information be held from public inspection must be in accordance with the provisions of 10 CFR 2.790. Withholding from public inspection shall not affect the right, if any, of persons properly and directly concerned need to inspect the document.
5. **SYSTEM MANAGER(S) AND ADDRESS:** U.S. Nuclear Regulatory Commission
Director, Division of Fuel Cycle and Material Safety
Office of Nuclear Material Safety and Safeguards
Washington, D.C. 20555

Attachment to
Application for Material License

SOIL TECHNOLOGY ASSOCIATES, INC.
Pomfret Center, CT

Item #5

- | | | |
|----|-------------------------|--|
| a. | Element and Mass Number | Cesium 137
Americium 241/Be |
| b. | Form | Sealed source
(CPN Model CPN-131)

Sealed source
(CPN Model CPN-131) |
| c. | Maximum Amount | No single source to
exceed 10 millicuries

No single source to
exceed 50 millicuries |

Item #6

Purpose: For use in CPN Model MC series or 500 series moisture/density gauges to measure properties of construction and other materials.

Item #7

Terence P. Chambers, 8 hour Radiation Safety Course.
Training Pending.

Training to be held September 13, 1996.
Certifications will be faxed to NRC.

Item #8

All users shall be trained. The RSO shall retain for inspection, Certificates of Completion from a manufacturer's training class.

Item #9

See attached Permanent Storage Location, Radiation Safety Plan.

Item #10

See attached Radiation Safety Plan.

Item #11

The gauge(s) will only be returned to the manufacturer or transferred to an authorized licensee.

RADIATION SAFETY PLAN

10 CFR 20.1101(a). Each licensee shall develop, document, and implement a radiation protection program commensurate with the scope and extent of licensed activities.

General

This Radiation Safety Plan covers the procedures for the safe and proper use and possession of radioactive material as contained in portable moisture/density gauges used to measure soil and other materials. When handled in accordance with this plan, the radioactive materials present no hazard to the licensee's employees, customers, or the general public.

Radiation Safety Officer

All use and possession is under the direction and supervision of the Radiation Safety Officer (RSO). The RSO is a single point of accountability and responsibility between the Regulatory Agency and the Licensee. The RSO is responsible for all aspects of the Radiation Safety Plan, including the following specific duties:

1. To ensure that all terms and conditions of the license are being complied with and that the information contained is up-to-date and accurate.
2. To ensure that the equipment is leak tested at the required intervals.
3. To ensure that the equipment is only used by operators authorized by the RSO, and that they use the equipment in accordance with all relevant regulations. This will include wearing of a suitable personnel monitoring device.
4. To maintain records as required by the license and the regulations.
5. To ensure that all equipment is properly secured against unauthorized removal at all times.
6. To serve as a point of contact and give assistance in case of an emergency such as equipment damage in the field, theft, or fire and to notify the proper authorities in case of an emergency.
7. To ensure that all operators have read and understand this Radiation Safety Plan.
8. To arrange appropriate training for all operators.
9. To provide annual refresher training to all gauge operators on operating and emergency procedures, transportation requirements, changes in applicable regulations or license conditions, and correction of deficiencies identified by the RSO.
10. To post all required signs and notices at gauge storage location.

Post document RH-2364, Notice to Employees.

Label storage cabinet with "Caution, Radioactive Material" and international symbol.

Post notice of where a copy of the organization's license, safety plan, and copy of regulations are located.

Operation

1. The operator will exercise suitable control over the gauge at all times. At no time is it to be left unattended or in the possession of an unauthorized person.
2. When not being used for field measurements, the gauge will be locked and returned to its storage/transportation case.
3. When testing is complete, the gauge will be returned to its permanent place of storage as soon as possible.
4. When using the equipment, the operator will wear the personnel monitoring device assigned. When the operator is not using the equipment, the monitoring device will be kept in a radiation free, low heat area.
5. At all times operators will observe ALARA principles to minimize any dose received:

As Low As Reasonably Achievable

6. While the equipment is in the operators possession, the operator will have a:

- Copy of the License
- Copy of this Radiation Safety Plan with Emergency Procedures and
Telephone Call - Down List
- Copy of Letter/Card of Authorization from RSO
- Copy of the Gauge Operating Manual and
- Copy of the Current Leak Test Certificate.

Transportation

1. During transportation, the equipment shall be fully secured in the transporting vehicle and located away from personnel. When transported in a closed vehicle (car or van), the case will be locked and the vehicle will be locked when the operator is not with the vehicle. When transported in an open bed vehicle (pick-up truck), the case will be locked and the case securely fastened and locked to the truck bed when the operator is not with vehicle.
2. The equipment will only be transported in an approved DOT shipping container with all the required labels and markings.
3. During transportation the operator will have Shipping Papers on the seat adjacent to the driver or in a holder which is mounted to the inside of the door on the driver's side of the vehicle describing the radioactive material with the proper nomenclature. A sample Shipping Paper is attached.
4. When an open bed vehicle is parked overnight at a hotel or motel, the operator shall cover the case in the secured transport position or lock the case in the cab of the vehicle.
5. When shipping by common carrier, the package shall be in compliance with 49 CFR 170-179.

Maintenance

1. Periodic maintenance will include cleaning of the gauge. The operator will have received proper instruction on how to clean the gauge and will wear his assigned monitoring device.
2. No maintenance will be performed in which the radioactive source is removed from the gauge. The gauge will be returned to the manufacturer or an approved service center for this type of service.
3. A leak test will be performed annually (or at the interval specified in the license) using an approved leak test kit provided by CPN, and in accordance with the gauge manufacturer's instructions. The operator will have received proper instruction on how to leak test the gauge and will wear his assigned monitoring device.
4. The shipping case will be periodically checked for integrity, and to verify that all labels are present and readable.

Records

Records will consist of:

- Radioactive Material License
- Personnel Dosimetry Reports
- Leak Tests Certificates
- Training Certification
- Gauge Inventory
- Check-out/Check-in Log

A check-out log will be attached to storage cabinet. Information on log will include serial number of gauge, operator checking out gauge, date checked out, destination, estimated return date, and actual date of return.

Training

All operators will complete a manufacturer's Operator's Training Course. Operators will be given special training as required for their individual work assignments.

Other Commitments (specific to the Licensing Agency)

EMERGENCY PROCEDURES

Call Down List

See Appendix for Emergency Telephone Numbers

Physical Damage

1. If any moving equipment is involved, stop its movement, until the extent of contamination, if any, can be established.
2. Cordon off the area around the incident. An area with a radius of fifteen (15) feet will be sufficient.
3. Visually inspect the gauge to determine the extent of the damage to the source(s), source housing(s), and shielding. If the source(s), source housing(s) and shielding are intact and functional, the gauge can be removed from the site, returned to the shipping container, and shipped to the manufacturer for repair or replacement.
4. If the integrity or location of the source(s) cannot be positively identified, at the earliest possible time, when the situation is under control, contact the RSO. Describe the conditions and follow the instructions of the RSO. The RSO will immediately notify the appropriate regulatory agency.
5. The RSO shall follow the instructions of the regulatory agency.
6. If the source rod is bent and extended, or the shielding is damaged such that dose rates are likely to exceed those of an undamaged gauge, call the manufacturer for instructions before shipment.

Lodged or Lost Down-Hole Probe

1. Operating procedure to prevent a probe from becoming stuck or lost in a bore-hole:
 - a. All access holes for probes shall be lined with a continuous casing from the lowest depth to a minimum of six inches above the surface.
 - b. The cable connectors to both the probe and surface electronics shall be checked daily to assure they are tight.
 - c. For all access hole sites greater than 12 feet in depth, a dummy probe, whose stiffness, outside diameter and effective length are equal to that of the active probe, will be lowered to the bottom of the hole before deploying the radioactive source(s).
2. Emergency procedures if a probe becomes stuck in a bore-hole:

If a sealed source becomes lodged in a bore-hole and it becomes apparent that efforts to recover the sealed source will not be successful, the licensee shall:

 - a. Immediately secure the area around the hole.
 - b. Notify the licensing authority immediately by telephone of the circumstances that resulted in the inability to retrieve the source.
 - c. Follow the instructions of the licensing authority.

Theft or Loss

1. Immediately notify the RSO. The RSO will immediately notify the appropriate regulatory agency and the police.

Fire

1. Call the Fire Department.
2. Take action appropriate with a fire to protect personnel.
3. Notify the RSO.
4. Stand by to advise the fire fighters as to the nature, locations, and potential hazards of the radioactive materials. Supply them with an information packet consisting of the facility layout and a data sheet of the equipment including a photograph. Be sure to include any other important information. e.g. explosives, guard dogs, etc.

Melting Points:

	°F	°C
Stainless Steel	2550	1400
Carbide	2000	1090
Aluminum	1005	540
Lead	620	327
Polyethylene	257	125

Temperatures in an industrial fire will normally range from 500°F at floor level to a high at the ceiling of 1400 to 1800°F. The polyethylene and lead would melt in most fires, the aluminum only in a severe fire. The stainless steel capsule would not reach its melting point.

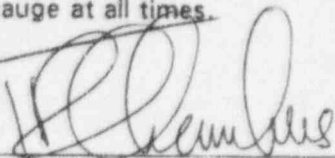
Disposal/Decommissioning

1. Disposal will only be performed by transferring to a properly licensed organization.
2. The regulatory agency will be notified 30 or more days in advance of any relocation of the storage area. Formal decommissioning will not be required, provided leak tests are current.

RADIATION SAFETY PLAN

This radiation safety plan will be implemented at all times. A copy of these procedures shall be maintained in the licensee's radioactive materials license file, and another copy in the shipping case of the nuclear gauge at all times.

SIGNED



DATE

06 SEPT 96

APPENDIX

Telephone Numbers

RSO: Work: _____
Home: _____

Police: Business: _____
Emergency: _____

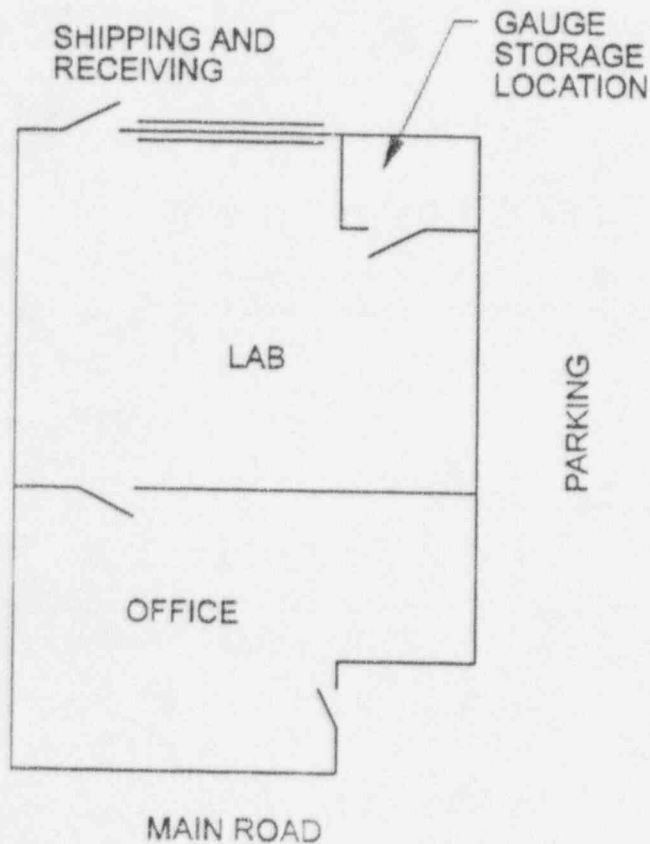
Radiologic Health: _____
24 hr.: _____

Fire: Business: _____
Emergency: _____

CPN: (510) 228-9770

STORAGE LOCATION

ABC Company
1234 Main Road
Our Town, ST 12345
(123) 456-7890



Metal or wood cabinet locked and posted. Storage cabinet 10 ft. from any people work stations. Cabinet includes circuitry for charging. Maximum storage, _____ gauges.

OR

Separate room locked and posted. Gauges 10 ft. from any people work stations. Room includes circuitry for charging. Maximum storage, _____ gauges.

Notice to Employees, Utilization Log, and location of License and Regulations posted.

The storage area is not in a residential zone.

(copy onto company or
organizational letterhead)

SHIPPING PAPER

One case, R.Q., RADIOACTIVE MATERIAL,
SPECIAL FORM, N.O.S., 7, UN2974

Cs-137, 10 mCi

Am-241/Be, 50 mCi

RADIOACTIVE YELLOW II Label

[CPN Model MC and 501 Series]

Transport Index 0.5

USA DOT 7A, TYPE A PACKAGE

24 hour emergency contact phone #: _____
Radiation Safety Officer

177.817(e) **Shipping paper accessibility - accident or inspection.** A driver of a motor vehicle containing hazardous material shall insure that the shipping paper required by this section is readily available to, and recognizable by, authorities in the event of an accident or an inspection. Specifically, the driver and the carrier shall:

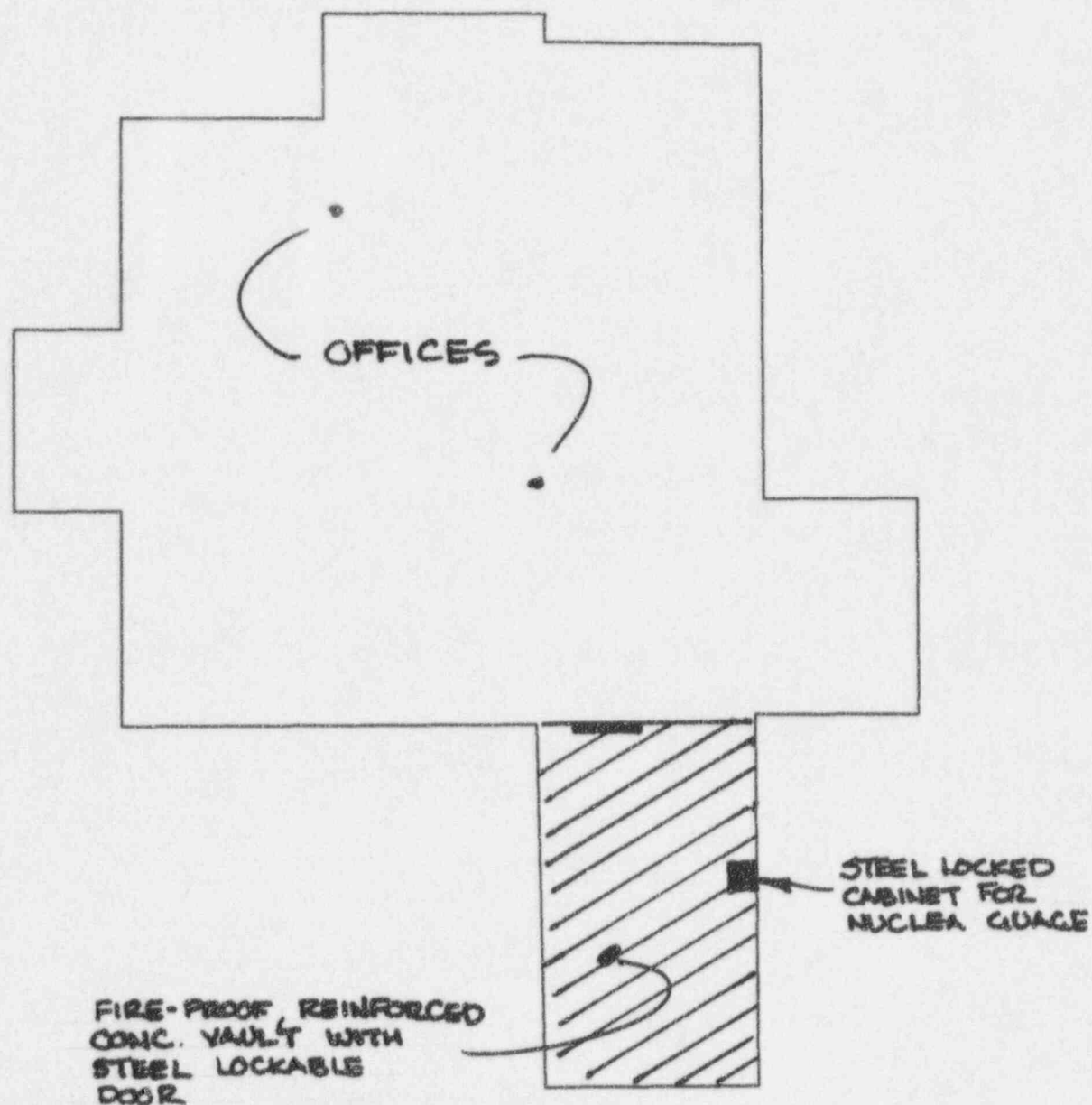
- (1) Clearly distinguish the shipping paper, if it is carried with other shipping papers or papers of any kind, by either distinctively tabbing it or having it appear first; and
- (2) Store the shipping paper as follows:
 - (i) When the driver is at the vehicle controls, the shipping paper shall be: (A) within his immediate reach while he is restrained by the lab belt; and (B) either readily visible to a person entering the driver's compartment or in a holder which is mounted to the inside of the door on the driver's side of the vehicle.
 - (ii) When the driver is not at the vehicle controls, the shipping paper shall be: (A) in a holder which is mounted to the inside of the door on the driver's side of the vehicle, or (B) on the driver's seat in the vehicle.

SOIL TECHNOLOGY ASSOC.

OFFICE LAYOUT AND STORAGE AREA

1" = 10'

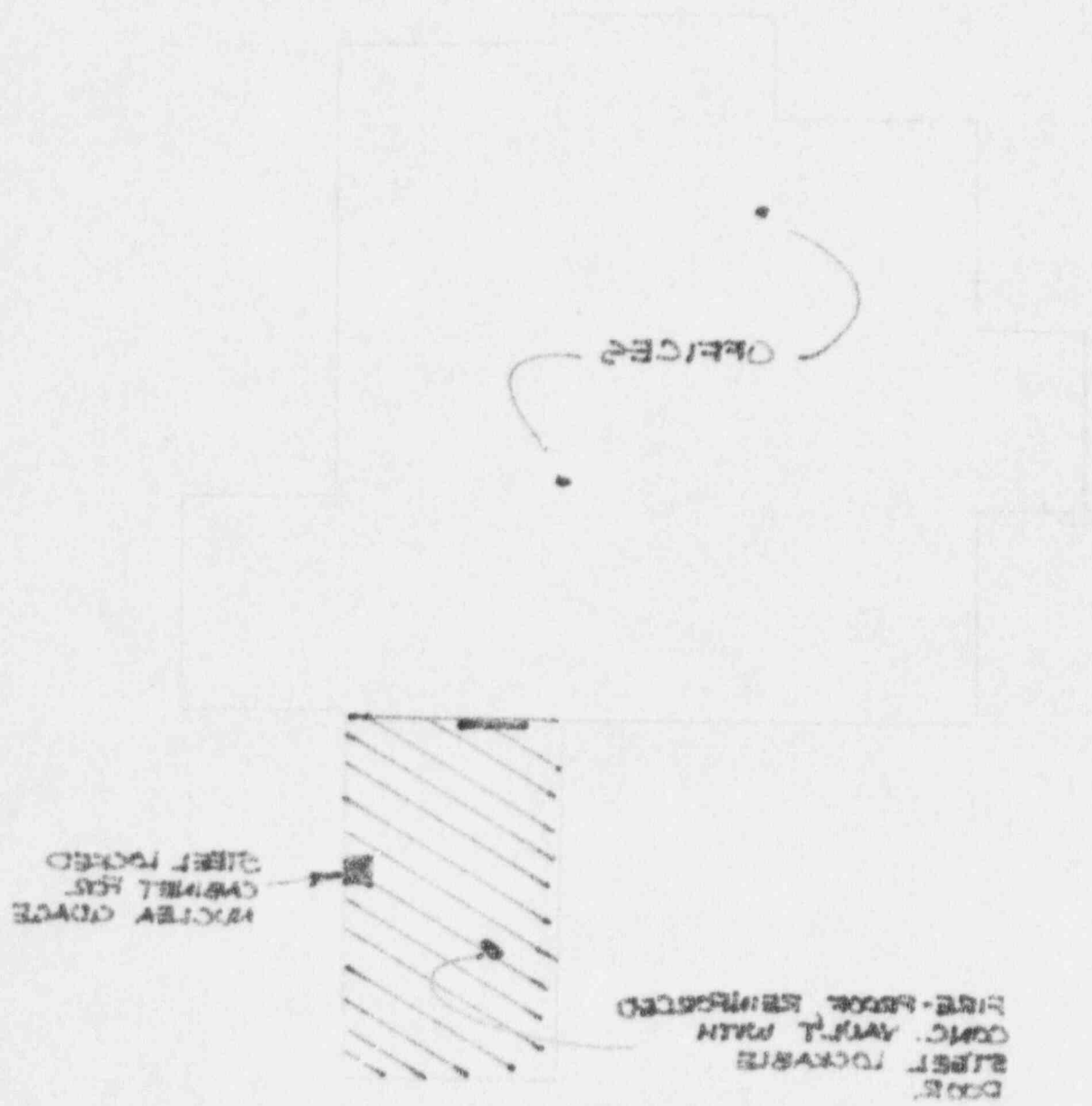
ROAD



SOIL TECHNOLOGY ASSOC.

OFFICE LAYOUT AND STORAGE AREA

1" = 10'



LICENSE FEE MANAGEMENT BRANCH, ARM
AND
REGIONAL LICENSING SECTIONS

DECOM FIN ASSUR REQD:

A. REGION

I

- APPLICANT/LICENSEE: SOIL TECHNOLOGY ASSOCIATES, INC.
RECEIVED DATE: 960909
DUCKET NO: 3034238
CONTROL NO.: 123661
LICENSE NO.:
ACTION TYPE: NEW LICENSEE

- AMOUNT: 550.00
CHECK NO.: 1485

- SIGNED
DATE

M. A. Perkins
9/10/96

1. FEE CATEGORY AND AMOUNT: 3P 855-0

3. OTHER -----

SIGNED
DATE

Log Aug 22
 Hamster _____
 Check No 1465
 Amount 5550
 Fee Category 3P
 Type of Fee APP
 Date Check Rec'd 9/19/96
 Date Completed _____
 By JA