

## 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, 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.

## Licensee

1. Brosz Engineering, Inc.

3. License number 40-27551-01

2. 206 W. Dakota, Box 23  
Pierre, South Dakota 57501

4. Expiration date December 31, 2001

5. Docket or  
Reference No 030-342966. Byproduct, source, and/or  
special nuclear material7. Chemical and/or physical  
form8. Maximum amount that licensee  
may possess at any one time  
under this license

A. Cesium-137

A. Sealed sources  
registered either with  
NRC under  
10 CFR 32.210 or with  
an Agreement State and  
incorporated in a  
compatible gauging  
device as specified in  
Item 9 of this licenseA. See Condition  
9.A.

B. Americium-241

B. Sealed sources  
registered either with  
NRC under  
10 CFR 32.210 or with  
an Agreement State and  
incorporated in a  
compatible gauging  
device as specified in  
Item 9 of this licenseB. See Condition  
9.B.

## 9. Authorized use

A., B., and C. To be used, for measurement purposes, in compatible portable Boart Longyear Company (formerly Campbell Pacific Nuclear Company), Humboldt Scientific, Inc., Seaman Nuclear Corporation and/or Troxler Electronic Laboratories, Inc. gauging devices that have been registered either with NRC under 10 CFR 32.210 or with an Agreement State and have been distributed in accordance with an NRC or Agreement State specific license authorizing distribution to persons specifically authorized by an NRC or Agreement State license to receive, possess, and use the devices.

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number

40-27551-01

Docket or Reference Number

030-34296

**CONDITIONS**

10. Licensed material may be used at the licensee's facilities located at 204 W. Dakota, Garage A, Pierre, SD, and may be used 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.
  - A. Licensed material shall only be used by, or under the supervision and in the physical presence of, the Radiation Safety Officer or individuals who have successfully completed the manufacturer's training program for gauge users, have received copies of, and training in, the licensee's operating and emergency procedures, and have been designated by the Radiation Safety Officer.
  - B. The Radiation Safety Officer for this license is Brad Lawrence.
12.
  - A. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed 6 months or at such other intervals as specified by the certificate of registration referred to in 10 CFR 32.210 or by an Agreement State.
  - 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 3 months.
  - C. In the absence of a certificate from a transferor indicating that a leak test has been made within 6 months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.
  - D. Sealed sources 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

MATERIALS LICENSE  
SUPPLEMENTARY SHEET

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## 12. D. (Continued)

(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 transferred 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.

E. The leak 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 in accordance with 10 CFR 30.50(b)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within 5 days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011, ATTN: Director, Division of Nuclear Materials Safety. The report shall specify the source involved, the test results, and corrective action taken.

F. The licensee is authorized to collect leak test samples for analysis by Troxler Radiation Monitoring Services. 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.

13. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
14. The licensee shall conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the license.
15. Each portable 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.
16. Except for maintaining labeling as required by 10 CFR Part 20 or 71, the licensee shall obtain authorization from NRC before making any changes in the sealed source, device, or source-device combination that would alter the description or specifications as indicated in the respective Certificates of Registration issued either by the Commission pursuant to 10 CFR 32.210 or by an Agreement State.

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number

40-27551-01

Docket or Reference Number

030-34296

17. Any cleaning, maintenance, or repair of the gauges 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.
18. The licensee is authorized to transport licensed material only in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
19. The licensee shall not use sealed sources or probes containing sealed sources at depths exceeding 3 feet below the surface.
20. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material to quantities below the minimum limit specified in 10 CFR 30.35(d) for establishing decommissioning financial assurance.
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 December 2, 1996
  - B. Facsimile of letter dated December 18, 1996

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Original Signed By  
Billie Gruszynski

Date DEC 19 1996

By

Billie Gruszynski  
Nuclear Materials Licensing Branch  
Region IV  
Arlington, Texas 76011





UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION IV

611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-8064

December 19, 1996

Brosz Engineering, Inc.  
ATTN: Brad Lawrence  
Radiation Safety Officer  
206 W. Dakota, Box 23  
Pierre, South Dakota 57501

SUBJECT: NEW LICENSE

Please find enclosed License No. 40-27551-01. You should review this license carefully and be sure that you understand all conditions. If you have any questions, you may contact the reviewer who signed your license at (817)860-8120.

NRC expects licensees to conduct their programs with meticulous attention to detail and a high standard of compliance. Because of the serious consequences to employees and the public which can result from failure to comply with NRC requirements, you must conduct your program involving radioactive 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: Inspection and Investigations," 10 CFR Part 20, "Standards for Protection Against Radiation," and other applicable regulations.
2. Possess radioactive material only in the quantity and form indicated in your license.
3. Use radioactive material only for the purpose(s) indicated in your license.
4. Notify NRC in writing of any change in mailing address (no fee required if the location of radioactive material remains the same).
5. Request and obtain written NRC consent before transferring your license or any right thereunder, either voluntarily or involuntarily, directly or indirectly, through transfer of control of your license to any person or entity. A transfer of control of your license includes not only a total change of ownership, but also a change in the controlling interest in your company whether it is a corporation, partnership, or other entity. In addition, appropriate license amendments must be requested and obtained for any other planned changes in your facility or program that are contrary to your license or contrary to representations made in your license application, as well as supplemental correspondence thereto, which are incorporated into your license. A license fee may be charged for the amendments if you are not in a fee-exempt category.

6. Maintain in a single document decommissioning records that have been certified for completeness and accuracy listing all the following items applicable to the license:
  - Onsite areas designated or formerly designated as restricted areas as defined in 10 CFR 20.3(a)(14) or 20.1003.
  - Onsite areas, other than restricted areas, where radioactive materials in quantities greater than amounts listed in Appendix C to 10 CFR 20.1001-20.2401 have been used, possessed, or stored.
  - Onsite areas, other than restricted areas, where spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site have occurred that required reporting pursuant to 10 CFR 30.50(b)(1) or (b)(4), including areas where subsequent cleanup procedures have removed the contamination.
  - Specific locations and radionuclide contents of previous and current burial areas within the site, excluding radioactive material with half-lives of 10 days or less, depleted uranium used only for shielding or as penetrators in unused munitions, or sealed sources authorized for use at temporary job sites.
  - Location and description of all contaminated equipment involved in licensed operations that is to remain onsite after license termination.
7. Submit a complete renewal application with proper fee, or termination request at least 30 days before the expiration date on your license. You will receive a reminder notice approximately 90 days before the expiration date. Possession of radioactive material after your license expires is a violation of NRC regulations.
8. Request termination of your license if you plan to permanently discontinue activities involving radioactive material.

You will be periodically inspected by 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; 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), 60 FR 34381, June 30, 1995.

Thank you for your cooperation.

Sincerely,

Original Signed By  
Billie Gruszynski

Billie Gruszynski (Ms.)  
Nuclear Materials Licensing Branch

Docket: 030-34296  
License: 40-27551-01  
Control: 466261

Enclosures: As stated

DOCUMENT NAME: P:\BROSZENG.CVR

To receive a copy of this document, indicate in the box "C" - Copy without attachment/enclosure "E" - Copy with attachment/enclosure "N" - No Copy

RIV:NMLB	N						
BGruszynski <i>Bg</i>							
12/19/96							

OFFICIAL RECORD COPY





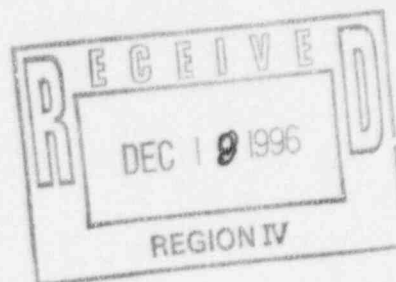
☐ 315 S. Main • Box 357 • Bowman, ND 58623  
Phone: (701) 523-3340 • Fax: (701) 523-5243

☒ 206 W. Dakota • Box 23 • Pierre, SD 57501  
Phone: (605) 224-1123 • Fax: (605) 224-0656

Registered in North Dakota, South Dakota, and Montana

December 18, 1996

Billie Gruszynski  
U.S. NRC, Region IV  
611 Ryan Plaza Dr. Suite 400  
Arlington, TX 76011-8064



RE: Application for Material License

Dear Ms. Gruszynski:

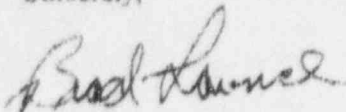
In response to your questions about Brosz Engineering, Inc.'s application for a material license dated December 2, 1996, I offer the following answers:

1. Item 8. The copies of the training certificates will be maintained on file for a minimum of 3 years.
2. Item 8. The annual in-house refresher training will be conducted by the RSO. The training will contain, but not be limited to:
  1. "Dry Runs" of Brosz Engineering, Inc.'s., Emergency Procedures.
  2. Operating and emergency procedures.
  3. DOT requirements.
  4. Any changes in applicable regulations and license conditions.
  5. Deficiencies identified during the performance of annual audits of the Radiation Safety Program.
3. Item 10.5. Any maintenance requiring exposure to or removal of the source rod will be conducted by the manufacturer.
4. Item 10.6. We will develop and implement procedures to ensure that DOT regulations are followed.
5. Item 10.8 Blake Barringer received his initial training in Radiation Safety from Troxler Electronic Laboratories, Inc., his training certificate is enclosed.

466261

If you have any further questions or inquiries please contact me at the office at (605)224-1123 or by fax at (605)224-0659.

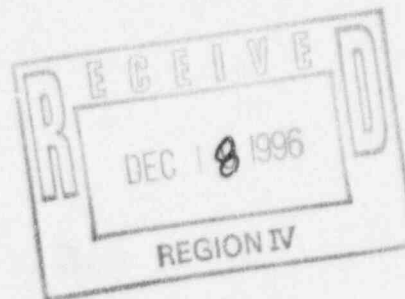
Sincerely,



Brad Lawrence  
Project Engineer

Enclosure

cc: File



466 261

# TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

BLAKE D. BARRINGER

of

BRDSZ ENGINEERING, 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          |                      |

CERTIFICATE #: 054711

ROBERT WILSON

INSTRUCTOR

8/07/92

DATE

WILLIAM F. TROXLER

PRESIDENT

# CONVERSATION RECORD

TIME

DATE

12/18/96

TYPE

☐ VISIT

☐ CONFERENCE

☒ TELEPHONE

☐ INCOMING

☒ OUTGOING

ROUTING

NAME/SYMBOL

INT

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU

ORGANIZATION (Office, dept., bureau, etc.)

TELEPHONE NO.

Brad Lawrence

Bross Engineering Inc.

605-224-1123

SUBJECT

Application for new license

SUMMARY

Mr. Lawrence was asked to address:

- X 1. Training records will be kept 3 years.
- X 2. Topics included in annual refresher try? Instructor's qualifications if other than RSO.
- X 3. Who will perform more extensive maintenance?
- X 4. 10.6 top of page 27 - develop & implement procedure to comply w/ DOT Regs?
- X 5. Annual audit - Blake Barringer's Qualifications to audit program? 10.8

ACTION REQUIRED

await reply

NAME OF PERSON DOCUMENTING CONVERSATION

SIGNATURE

DATE

Billie Brzezinski 12/18/96

ACTION TAKEN

SIGNATURE

TITLE

DATE

# LEGAL IDENTITY QUESTIONNAIRE

The type of information requested by this form will be helpful to Region IV in performing its regulatory responsibilities and should be sought during initial licensing and subsequent routine inspection contacts with licensees. However, licensee provision of this information is not a requirement. If the licensee cannot supply all of the indicated information, obtain as much as possible, especially for smaller businesses. Information should be obtained informally by telephone or personal contact. This form shall be completed by Region IV personnel only. It should not be sent to an applicant or licensee nor should the information requests be part of any standard correspondence format. Place the completed copy of this form in the docket file.

Current Full Legal Name of Licensee: B. az Engineering, Inc.

Previous Legal Name: Same

License No. \_\_\_\_\_

Licensee Contact and Title: Brad Lawrence, RSO  
Telephone: 605-224-1123

Form of business:

- ☐ Individual Person  
☐ Sole Proprietorship  
List Owner's Name, Home Address, and Telephone No. below  
☐ Partnership  
List Partners' Names, Home Addresses, and Tele Nos. below  
☒ Corporation

Attach List of Names and Home Addresses for the following:

Corporate Officers Don Bressy, President

Any Principal Stock Holder

Members of Board of Directors

Other (Provide detailed information below)

Blake Barringer, V-P

David Lutz, Secy. Treas.

Johnny Paulson

Billie Gueszynski  
NRC Staff Member

12/18/96  
Date

\*\*\*\*\*



(FOR LEMS USE)  
INFORMATION FROM LTS

BETWEEN:

License Fee Management Branch, ARM  
and  
Regional Licensing Sections

Program Code: \_\_\_\_\_  
Status Code: 3 \_\_\_\_\_  
Fee Category: \_\_\_\_\_  
Exp. Date: 0 \_\_\_\_\_  
Fee Comments: \_\_\_\_\_  
Decom Fin Assur Req'd: \_\_\_\_\_

1996 DEC 11 PM 1:27

LICENSE FEE TRANSMITTAL

A. REGION IV

1. APPLICATION ATTACHED

Applicant/Licensee: BROSZ ENGINEERING, INC.  
Received Date: 961204  
Docket No.: 3034296  
Control No.: 466261  
License No.: \_\_\_\_\_  
Action Type: New Licensee

2. FEE ATTACHED

Amount: \$550.00  
Check No.: 3429

3. COMMENTS

Signed Billie Gruzynski  
Date 12/11/96

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered / ✓)

1. Fee Category and Amount: 3P \$550

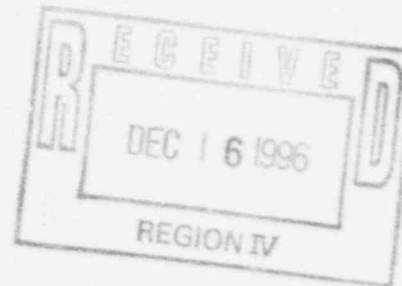
2. Correct Fee Paid. Application may be processed for:

Amendment \_\_\_\_\_  
Renewal \_\_\_\_\_  
License ✓

3. OTHER \_\_\_\_\_

Signed  
Date

Rita Messier  
12/11/96



Log	<u>Dec 1 IV</u>
Remitter	_____
Check No.	<u>3429</u>
Amount	<u>\$550</u>
Fee Category	<u>3P</u>
Type of Fee	<u>App</u>
Date Check Rec'd.	<u>12/11/96</u>
Date Completed	<u>12/11/96</u>
By:	<u>Kem</u>



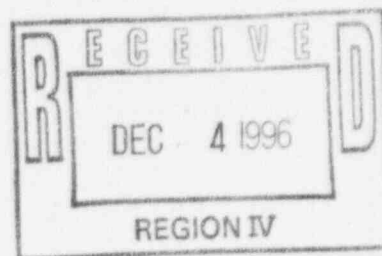
☐ 315 S. Main • Box 357 • Bowman, ND 58623  
Phone: (701) 523-3340 • Fax: (701) 523-5243

☒ 206 W. Dakota • Box 23 • Pierre, SD 57501  
Phone: (605) 224-1123 • Fax: (605) 224-0659

Registered in North Dakota, South Dakota, and Montana

December 2, 1996

Nuclear Materials Licensing Section  
U.S. Nuclear Regulatory Commission, Region IV  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011-8064



TO WHOM IT MAY CONCERN:

Enclosed is the completed application for material license.

If you have any questions or comments, please contact this office.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Brad Lawrence'.

Brad Lawrence  
Project Engineer

Enclosure

cc: File

4 6 6 2 6 1

(10-94)  
10 CFR 30, 32, 33  
34, 35, 36, 39 and 40

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 (T-8 F33), 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.

## APPLICATION FOR MATERIAL LICENSE

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:

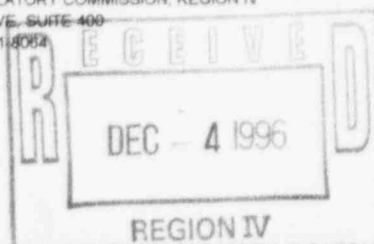
DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY  
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS  
U.S. NUCLEAR REGULATORY COMMISSION  
WASHINGTON, DC 20555-0001

## 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 19406-1415ALABAMA, 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 2000  
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  
801 WARRENVILLE RD.  
LISLE, IL 60532-4351ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS,  
LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA,  
OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH,  
WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:NUCLEAR MATERIALS LICENSING SECTION  
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TX 76011-8002

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  
☐ B  
☐ C

NEW LICENSE

AMENDMENT TO LICENSE NUMBER \_\_\_\_\_

RENEWAL OF LICENSE NUMBER \_\_\_\_\_

## 2. NAME AND MAILING ADDRESS OF APPLICANT (Include Zip code)

Brosz Engineering, Inc.  
206 W. Dakota, PO Box 23  
Pierre, SD 57501

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

Licensed material will be used/stored at 204 W. Dakota,  
Garage A, Pierre, South Dakota and at temporary job sites  
in State's subject to NRC & Regulatory Authority.

## 4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Brad Lawrence

TELEPHONE NUMBER

(605) 224-1123

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 1C &amp; 3E

AMOUNT  
ENCLOSED \$ 550.00

## 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, 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 82 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

Blake D. Barringer, Vice-President

SIGNATURE

DATE

12-2-96

## FOR NRC USE ONLY

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

466261

Item 5.

RADIONUCLIDE	SEALED SOURCE	MAX ACTIVITY/SOURCE (MILLICURIES)
A. Cs-137	Special Form Troxler Drawing #A-102112	9
B. Am-241:Be	Special Form Troxler Drawing #A-102451	44
C. Am-241-Be	Special Form Troxler Drawing #A-102700	11
D. Am-241:Be	Special Form Troxler Drawings# - 100608	100

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AUTHORIZED USE

- A. For use in TROXLER MODEL 3400 series, or 4640 series or 4545 portable measuring devices.
  - B. For use in TROXLER MODEL 3400 series, or 3216 portable measuring devices.
  - C. For use in TROXLER MODEL 4300 series portable measuring devices.
  - D. For use in TROXLER MODEL 3241 series portable measuring devices.
- 

POSSESSION LIMIT COMMITMENT

We will confine our possession of licensed material to quantities such that we will not exceed the applicable limits of 10 CFR 30.35(d).

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DATA ON REGISTRATION CERTIFICATES

MANUFACTURER	REGISTRY NO.	MODEL NO.
TROXLER	NC-646-D-128-S	3241 SERIES
TROXLER	NC-646-D-130-S	3400 SERIES
TROXLER	NC-646-D-131-S	4640 SERIES
TROXLER	NC-646-D-134-S	4300 SERIES
TROXLER	NC-646-D-126-S	3216 SERIES
TROXLER	NC-646-D-132/133-S	4545 SERIES

Item 6.

- A. For use in Troxler Model 3400 series, or 4640 series, or 4545 series portable measuring gauges to measure construction materials.
- B. For use in Troxler Model 3400 series or 3216 series portable gauges to measure construction materials.
- C. For use in Troxler Model 4300 series portable moisture measuring gauge.
- D. For use in Troxler Model 3241 series portable asphalt content measuring gauge.

The maximum depth the density source rod will be lowered is 12 inches.

Item 7.

Brad Lawrence will be the Radiation Safety Officer. The RSO has completed the Troxler Nuclear Gauge Safety Training Class. (Copy of Certificate attached). The RSO has a High School diploma. "The RSO duties and responsibilities will be those listed in Appendix C of the Draft Regulatory Guide DG-0008.

Enclosed is a copy of the company's organizational chart. Company management will provide a commitment that the RSO has independent authority to stop unsafe operations and will be given sufficient time to fulfill his/her radiation safety duties and responsibilities.

Item 8.

Each individual that will operate the nuclear gauge will complete the Troxler Nuclear Gauge Training course taught by Troxler Instructors; read and understand our radiation safety procedures; and be approved by our Radiation Safety Officer. Copies of each individuals training certificate will be maintained on file.

Annual refresher training will be accomplished by sending all gauge operators to the Troxler Nuclear Gauge Safety Training course once a year or by conducting annual in-house refresher training. Copies of individuals training certificates will be maintained on file to reflect the refresher training.

Item 9.

The address for the permanent gauge storage area (item #3) is a structure that currently exists.

The proposed address is located in an office complex garage presently serving as the Materials Laboratory for Brosz Engineering, Inc. The gauge will be stored in a lockable cabinet - see attached drawing of location and description. Access to the gauge storage will be restricted to only those individuals approved by the RSO. The gauge storage area will be secured by a double lock system.

Gauge Security - The usage of nuclear gauges will be only by individuals authorized by the RSO. Each gauge shall be accounted for by a usage or utilization log in the gauge storage area. All possible means shall be provided to ensure that the equipment is fully secured in the transport vehicle. When not being used in the field, the authorized user shall maintain control over the gauge at all times. The gauge will never be left unattended. The gauge will be under constant physical surveillance while in the field. All unauthorized personnel shall be kept out of the gauge operating area. When not making measurements with the gauge, it shall be placed in the transport case with the source rod locked in the safe position and returned to the gauge storage area as soon as possible. During transport, the case shall be secured so that the gauge cannot be removed or tampered with unauthorized personnel.

Item 10. Radiation Safety Program

10.1 Personnel Monitoring Program

All gauge operators will wear personnel monitoring devices when utilizing the equipment. Personnel monitoring equipment will consist of TLD's supplied by Troxler Radiation Monitoring Services on a quarterly exchange period.

Troxler radiation Monitoring Services Division of Troxler Electronic Labs, Inc.  
PO Box 12057



Research Triangle Park, NC 27709

License Number 032-01-82-1-NC

Radiation Detection from TLD

"Beta, Gamma, X-Ray and Neutron measurement.

### 10.2 Radiation Detection Instruments

"At each jobsite we will have at least one survey meter capable of measuring between 0.1 microsievert per hour (0.01 millirem per hour) and 1 millisievert per hour (100 millirem per hour). This instrument will be used to perform surveys after an incident. Each survey instrument will be calibrated annually by the manufacturer. Before using a survey instrument, the response will be checked by the manufacturers instructions. If the instrument does not respond properly, then we will not use the instrument until it is repaired and operable or until we obtain an operable instrument".

### 10.3 Leaktesting

All gauges will be leaktested at intervals not to exceed six (6) months. The leak test will be performed using the Troxler Model 3880 Leaktest kit. The leak test will be performed using the manufacturers instructions. When performing the leak test, personnel monitoring devices must be worn. Troxler Radiation Monitoring Services will analyze all leaktests using the 3880 kit. Troxler license number, 032-01-82-1 NC. Any analysis with the removable activity of  $>0.005\mu\text{Ci}$  will cause affected gauge to be immediately removed from use. The gauge shall be sent to the manufacture for repair or disposal. A report shall be sent to the NRC in the event of a leaking source. Leaktests shall only be taken by individuals authorized by the RSO.

### 10.4 Inventories

Every six (6) months, an inventory shall be taken to account for all gauges possessed under the license. Inventory records will be maintained for at least 3 years.

Example below:

<u>Model &amp; Type</u>	<u>Sources</u>	<u>Type</u>	<u>Amount</u>	<u>Drawing Number</u>
3430 Surface	Cs 137	Sealed	8.0 mCi	TEL A-102112
Moisture Density	Am241-Be	Sealed	40.0 mCi	TEL A-1-2451

Gauge

SN 6405

In storage \_\_\_\_\_

Out of Storage \_\_\_\_\_, at \_\_\_\_\_

Date \_\_\_\_\_

### 10.5 Maintenance

When performing any cleaning or maintenance on a gauge, the operator will wear a personnel monitoring device. At all times, the source rod shall be in the locked, safe, shielded position in accordance with the manufacturers recommendations. At no time, shall cleaning be performed with the source exposed out of the shield or the source rod be removed from the gauge.

## 10.6 Transportation of gauges to field locations.

Before shipping a nuclear gauge, the gauge case shall be inspected to ensure that the case is in proper condition "unimpaired physical condition except for superficial marks" and that each device, (hinge, closure, hasp, latch, etc.) is properly installed, secured and free of defects. Each case has proper labeling, and the labels are legible. The gauge case is sealed or locked. Copy of Type A Package Test results are on file for appropriate gauge case. Current copies of IAEA Certificates of Competent Authority are on file for each type of source used in the nuclear gauge. Records of HAZMAT training for each gauge operator on file. BILL OF LADING for each gauge must be in the transport vehicle, visible and immediately accessible to the driver. EMERGENCY RESPONSE INFORMATION for each gauge must be in the transport vehicle, visible and immediately accessible to the driver.

NO gauge shall be shipped without a current leaktest. Area surveys of gauges shall be performed with a survey meter. The Manufacturer Radiation Profiles for each gauge model shall be used for referee measurements.

We currently have and will maintain copies of DOT regulations as appropriate to Yellow Label II portable gauging devices.

## 10.7

We commit to provide Operating and Emergency Procedures to include all topics listed in Appendix H of the DG-0008 and provide assurance that these procedures will be implemented into our licensing program.

Each gauge user will be given a copy of our Operating and Emergency Procedures. Each gauge operator will read and understand the procedures BEFORE they can operate a gauge. A copy of our Operating and Emergency Procedures will be available at each jobsite.

### Operating and Emergency Procedures

Personnel exposure shall be kept to a minimum by following the concepts of time, distance, and shielding principals for all gauge users as taught in the Troxler Nuclear Safety Training Manual related to ALARA concept.

#### OPERATING PROCEDURES:

1. Before any operator removes a gauge from storage for the purpose of transport, check to see that the source rod is in the locked and safe position. Check to see that gauge case is structurally sound and that all hinges, clasps and locks are in operating condition. Additionally, check to see that all case labels are legible and intact. Before removing the gauge, ensure that the case is locked or secured.
2. Each gauge removed from storage shall be accounted for on the utilization log. (operator signing for, date out and location).
3. Each gauge shall have proper shipping documentation in the transport vehicle. A proper completed Bill of Lading and Emergency Response Information shall be in the vehicle, immediately accessible to the driver and visible.

4. When the gauge is in the field, the authorized user will maintain control over the gauge at all times and keep unauthorized personnel out of the gauge operating area. The user will at no time leave the gauge unattended.
5. Never at any time expose the source the rod and guide it visually into the ground. Never permit any contact of the source by your hands, fingers or any part of your body. After each measurement, ensure that the source has been retracted into the locked and safe position.
6. When using the equipment, you will wear the personnel monitoring device assigned to you. Never wear another operators TLD or film badge. When you are not using the equipment, your personnel monitoring device is to be stored in the radiation free area that has been designated for you. When not making measurements, keep the source rod in the safe and locked position. The gauge should be placed in the transportation case and returned to its permanent storage area as soon as possible. Upon return to storage annotation will be made in the utilization log.

## EMERGENCY PROCEDURES

In the event that a gauge is lost or stolen, immediately notify the RSO.

In the event of physical damage to a gauge and the source shielding is or could be comprised:

1. Locate the gauge and immediately secure an area around the gauge. A radius of 15 feet will be sufficient.
2. If a vehicle is involved, it must be stopped until the extent of contamination, if any, can be established.
3. A visual inspection of the gauge is to 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, you must contact Brad Lawrence at 605-224-1123. Describe the present condition and follow the instructions of the Radiation Safety Officer.

Name\*\*

Work Phone Number\*\*

Home Phone Number\*\*

Brad Lawrence

605-224-1123

605-223-9653

The gauge is to be used only for its intended purpose only. By doing so, you will maintain any radiation exposure to As Low As Reasonably Attainable, ALARA levels. No source will be lowered into the ground over 12 inches.

## 10.8 Annual Audit of Radiation Safety Program

The Radiation Safety Officer and/or Blake Barringer will be responsible for the yearly audit. "We will conduct audits as described in Appendix I of Draft Guidance DG 0008.

10.9 Financial Assurance and Recordkeeping for Decommissioning Based on the Regulations, the Quantity and Physical form of the sources requires no financial assurance. Possession will be less than 100 curies of Americium-241 and less than 100,000 curies of Cesium-137.

## FACILITY DECOMMISSIONING FILE:

The records will include the following:

1. Records of any leakage involving the spread of contamination, where the contamination remains after cleanup procedures have been exhausted, and/or if the contamination is inaccessible.
2. Drawings or sketches of areas in facility where radioactive materials are used and/or stored.

These drawings will indicate locations of any non-removable contamination.

3. Records of the cost estimate for the decommissioning of the facility.

NOTE\*\* If there are no events involving spills, leaking sources, or spread of contamination, then you do not need to maintain any records.

#### Item 11. WASTE MANAGEMENT

"Disposition of the gauge will be by transfer to either another license specifically licensed to possess the radioactive material or to a licensed disposal facility. It is our intent to "recycle" the sealed sources used in our gauges back to the manufacturer. In this manner waste is not created.

# TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

BRAD LAWRENCE

of

BROSZ ENGINEERING

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

*Robert Wilson*  
ROBERT WILSON

CERTIFICATE #: 067002

2/15/95

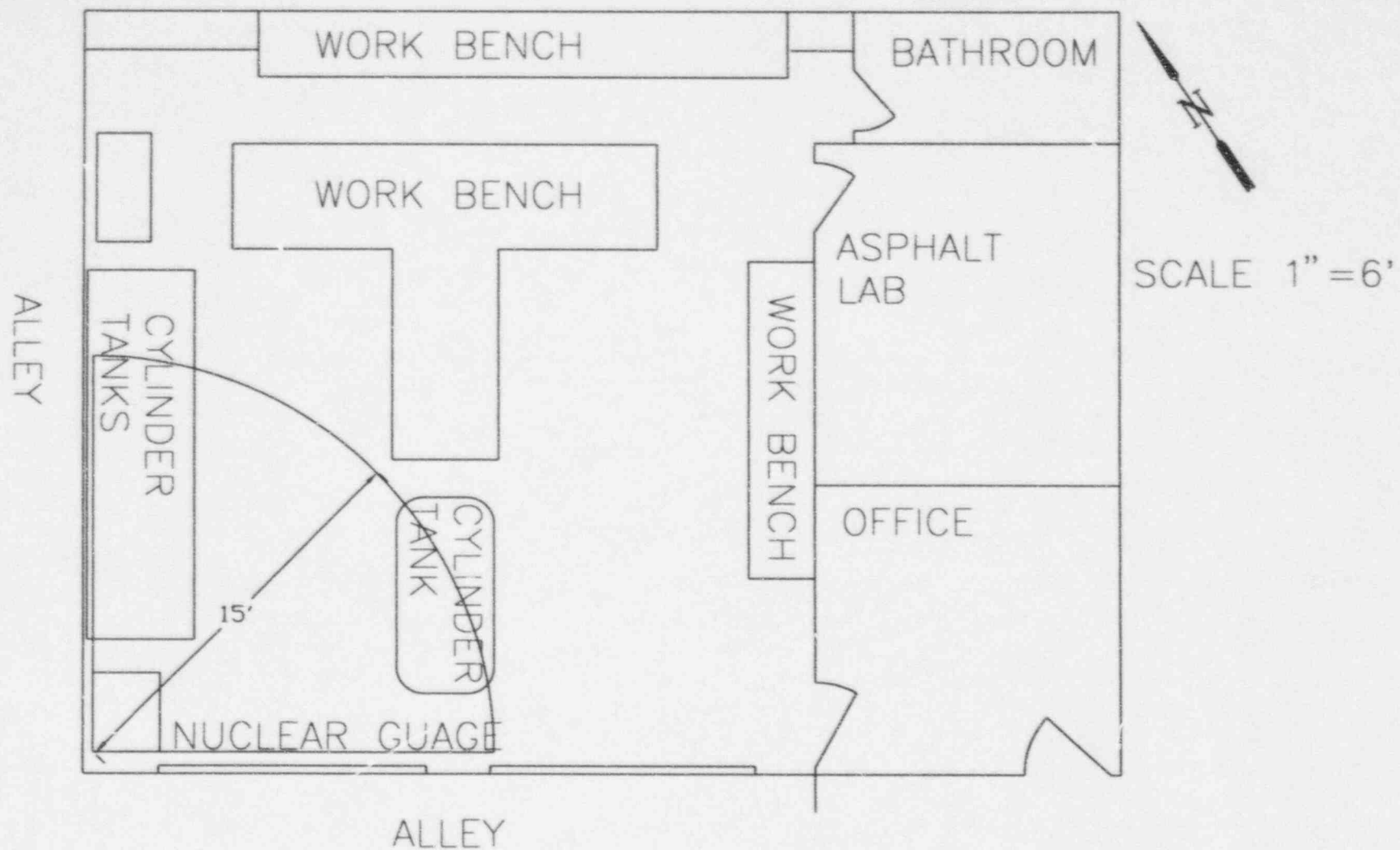
WILLIAM F. TROXLER

INSTRUCTOR

DATE

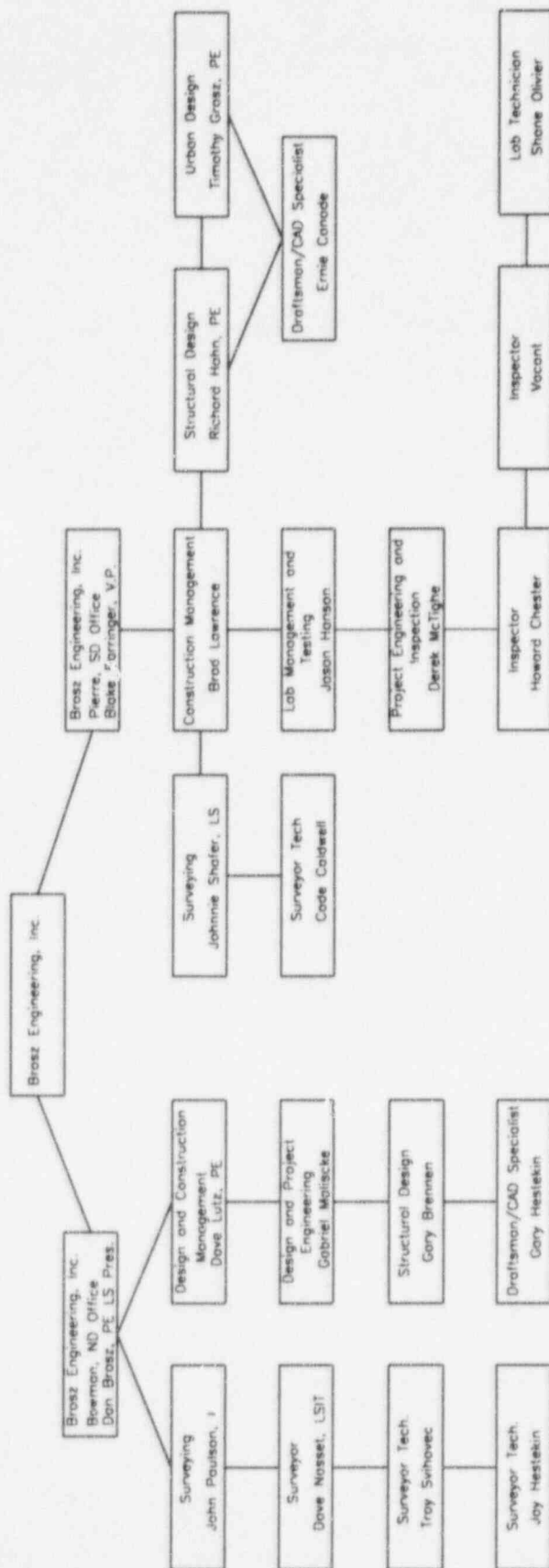
PRESIDENT





BROSZ ENGINEERING, INC. LAB LAYOUT

# Brosz Engineering, Inc. Corporate Organizational Chart



# interoffice

## MEMORANDUM

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**to:** Brosz Engineering Employees  
**from:** Blake Barringer  
**subject:** Nuclear Density  
**date:** November 27, 1996

Brad Lawrence has been appointed Radiation Safety Officer (RSO) for Brosz Engineering, Pierre, South Dakota.

The RSO has authority to stop any operation he considers unsafe.

Any concerns or questions on Nuclear Gauge safety and safe usage shall be directed to the RSO.

All gauge operators will be required to receive initial Nuclear Gauge training from the Troxler Training Representative before being placed on the access roster.

All qualified gauge operators must attend an annual refresher course, either at the Troxler/DOT course or at the annual in house refresher.

All operators shall be required to sign out the nuclear gauge prior to removal from the locked storage area. Only qualified operators on the posted access roster will be permitted to sign out the nuclear gauges.

