

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.

FEDERAL AGENCIES FILE APPLICATIONS WITH:

U.S. NUCLEAR REGULATORY COMMISSION
DIVISION OF FUEL CYCLE AND MATERIAL SAFETY, NMSS
WASHINGTON, DC 20555

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS, IF YOU ARE LOCATED IN:

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

U.S. NUCLEAR REGULATORY COMMISSION, REGION I
NUCLEAR MATERIAL SECTION B
631 PARK AVE. NINE
KING OF PRUSSIA, PA 19406

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

U.S. NUCLEAR REGULATORY COMMISSION, REGION II
MATERIAL RADIATION PROTECTION SECTION
101 MARIETTA STREET, SUITE 2900
ATLANTA, GA 30323

IF YOU ARE LOCATED IN:

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

U.S. NUCLEAR REGULATORY COMMISSION, REGION III
MATERIALS LICENSING SECTION
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:

U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
MATERIAL RADIATION PROTECTION SECTION
511 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TX 76011

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

U.S. NUCLEAR REGULATORY COMMISSION, REGION V
MATERIAL RADIATION PROTECTION SECTION
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CA 94596

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 JURISDICTION.

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

- ☐ A. NEW LICENSE
☐ B. AMENDMENT TO LICENSE NUMBER _____
☒ C. RENEWAL OF LICENSE NUMBER 35-19254-01

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

City of Stillwater, Oklahoma
P.O. Box 1449
723 S. Lewis
Stillwater, OK 74076

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

Within the City Limits of Stillwater, Oklahoma

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Jed Banks, Assistant City Engineer

TELEPHONE NUMBER

(405) 372-0025 x260

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 Exempt AMOUNT See 10 CFR 170.11
ENCLOSED \$ (a) (9)

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

Jed Banks

Jed Banks

Assistant City Engineer

1/10/1985

14. VOLUNTARY ECONOMIC DATA

a. ANNUAL RECEIPTS

< \$250K
\$250K—500K
\$500K—750K
\$750K—1M

\$1M—3.5M
\$3.5M—7M
\$7M—10M
> \$10M

b. NUMBER OF EMPLOYEES (Total for entire facility excluding outside contractors)

c. NUMBER OF BEDS

d. WOULD YOU BE WILLING TO FURNISH COST INFORMATION (Dollar and/or staff hours) ON THE ECONOMIC IMPACT OF CURRENT NRC REGULATIONS OR ANY FUTURE PROPOSED NRC REGULATIONS THAT MAY AFFECT YOU? (NRC regulations permit it to protect confidential commercial or financial—proprietary—information furnished to the agency in confidence)

☒ YES

☐ NO

FOR NRC USE ONLY

AMOUNT OF FEE

FEE LOG

FEE CATEGORY

COMMENTS

APPROVED BY

AMOUNT RECEIVED

CHECK NUMBER

FREE EXEMPT

DATE

1/24/85



APPLICATION FOR MATERIAL LICENSE

ITEM 5: Radioactive Material

a. <u>Element and Mass</u> <u>Number</u>	b. <u>Chemical and/or Physical</u> <u>Form</u>	c. <u>Amount</u> <u>Possessed</u>
Am-241:Be	Sealed Source (Troxler A Dwg. A-102112)	Not to exceed 10 millicuries per source
Cs-137	Sealed Sources (Troxler B Dwg. A-102451)	Not to exceed 50 millicuries per source

(See exhibit 5)

ITEM 6: Purpose for which licensed material will be used

The licensed material will be used in the Troxler Model 3411-B moisture-density gauge to measure the properties of construction materials.

ITEM 7: Individuals Responsible for radiation safety program and their training and experience

Ron Hill, Civil Defense Director (see exhibit 7 for training and experience)

ITEM 8: Training for individuals working on or frequently restricted areas

<u>Name</u>	<u>Training</u>	<u>Date</u>
Monty Karns	Troxler Electronics and Laboratories, Inc. Radiation Safety Course	May 25, 1982
Jed Banks	"	October 13, 1983
Douglas C. Gable	"	October 13, 1983
Clark D. Johnston	"	September 20, 1984
Troy McCarthy	"	September 20, 1984
John Waldo	"	November 26, 1979

(See exhibit 8a-8g)

CITY OF STILLWATER
OPERATIONS DEPARTMENT
ENGINEERING DIVISION
723 S. LEWIS, P. O. BOX 1449
STILLWATER, OKLAHOMA 74076
405-372-0025

ITEM 9: Facilities and Equipment

The Facilities include:

1. A storage area, shielded on three sides by eight inch concrete blocks, used for overnight or extended storage.

(See exhibit 9a)

- 2) An ABS transportations case made specifically for protection and shielding of the Troxler model 3411-B moisture-density gauge. The gauge is kept in this case at all times when not in actual use.
3. Transport vehicle equipped with metal box with locking device to be engaged during transportation.

The equipment includes:

1. Troxler model 3411-B surface moisture density gauge
2. ABS case

(See exhibit 9b)

ITEM 10: Radiation Safety Program

(Use attached sheets)

460504

ITEM 10: RADIATION SAFETY PROGRAM

The City of Stillwater specifically requests authority for performing routine maintenance in strict adherence to the manufacturer's instruction titled "Periodic Maintenance" in the 3400 Series Instruction Manuel. A copy of those instruction are attached, (see exhibit 10a)

The maintance will be limited to the personnel listed in Item 8.

Moisture Density Gauge will be locked in storage place as described in Item 9, Facilities and Equipment. The gauge has a sealed source and will be transported in model 3411 Troxler transport case. Vehicle used will have metal holder bolted to pickup bed with strap and locking device engaged during transport. When transported in a passenger vehicle the gauge will be in transport case and locked in the trunk of the car. The name and telephone number of the radiation protection officer will be placed on the transport case and on the nuclear moisture density gauge.

Dismantling the gauge will not be permitted.

The six month leak test will be performed using Troxler 3880 leak test kit.

RADIATION SAFETY AND EMERGENCY PROCEDURES1. Storage of the Gauge

At the end of each day, and/or when gauge is to be stored, the gauge is to be placed in storage area shoven in Item 9, facilities and equipment.

2. Transportation the Gauge.

- a. Transporting the gauge in pickup truck.
 1. Employee will use only the pickup truck equipped with the nuclear transporting device.
 2. The employee will place the gauge in the transport case.
 3. The transport case is to be placed in the transporting device and the locking mechanism engaged.
- b. Transporting the gauge in passenger vehicle.
 1. The gauge will be place in transport case.
 2. The transport case will be carried only in the trunk of the vehicle and will be placed in such a manner as to avoid topping, sliding or movement within the trunk.
 3. The trunk of the vehicle will be locked during transport.

GENERAL OPERATING SAFETY PROCEDURES

- a. Do keep your personnel film badge upon your person at all times while you are in the vicinity of the moisture density gauge.
- b. Do not sit on, loiter about or remain in the immediate vicinity of the moisture density gauge longer than is necessary to run the test.
- c. Do request personnel not equipped with film badges to remain at a distance of 10 feet away from the moisture density gauge.
- d. NEVER leave the moisture density gauge unattended.
- e. Do not leave the gauge at any temporary jobsite. Return the gauge to the storage area at the end of each day or at the end of each use period.

EMERGENCIES

- a. In the event that for any reason the gauge is damaged (i.e. dropping, struck by vehicles, or contractors equipment):
 1. The operator will immediately notify the City Radiation Safety Officer, via radio.
 2. Immediately stop and isolate the vehicle(s) involved.
 - a. Get license in case the vehicle leaves the scene. The Radiation Safety Officer will immediately notify the police. Protect from traffic and direct traffic if necessary.
 - b. Wait for instruction from either the Radiation Safety Officer or the Dept. of Civil Defense.
- b. In the event of an emergency involving possible damage to the sealed source of the gauge. The Radiation Safety Officer will contact Director of Civil Defense for monitoring and appropriate reporting.

(See exhibit 10b for Emergency Operations Plan)

ITEM 11: Waste Management

The instrument will be returned to the manufacturer for disposal.

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EXHIBIT 5

RADIOACTIVE SOURCE CERTIFICATE

Code	<u>47</u>	Customer Number	<u>S05600KAS</u>
Source Number	<u>CAA-3083</u>	Code	<u>40</u>
Type	<u>Am-241:Be</u>	Source Number	<u>CC-4049</u>
Type of Radiation	<u>Gamma/Neutron</u>	Type	<u>Cs-137</u>
Activity	<u>40 mCi</u>	Type of Radiation	<u>Gamma</u>
Neutron Output	<u>8.7 X 10**4</u>	Activity	<u>8.3 mCi</u>
		Neutron Output	

Sources are encapsulated in stainless steel, Special Form Type A containers

<u>10/12/79</u>	DATE OF MEASUREMENT	<u>9/28/79</u>
WIPE TEST RECORD	Less than .005 micro-curies removable contamination.	WIPE TEST RECORD
<u>4/27/81</u>		<u>4/27/81</u>

COMPETENT AUTHORITY

Special Form Certificate

ORIGINAL USE

Enclosed in Model 3411B, Serial No. 6911

Date Shipped 3/28/80

To City of Stillwater
Engineering Department
723 South Lewis Street
Stillwater, OK 74074

Customer P. O. No. _____, License No. _____

W. O. No. _____

RECOMMENDATIONS

1. Treat radioactive source with respect.
2. Do not touch with hands or body. Use tongs.
3. Do not expose to personnel.
4. Wipe test every six months.
5. If dropped, or struck, immediately wipe test.
6. Consult your Radiological Safety Officer on shipping, handling and surveillance procedures.
7. If questions arise contact Troxler Electronic Laboratories, Inc.
8. Wipe Test Kit for use.

CLASSIFICATION OF RADIOACTIVE SOURCE

According to regulations of the Department of Transportation, this source is Special Form. Whenever shipped by public carrier, a special shipping label is required.

Marden W. Buz
RADIOLOGICAL SAFETY OFFICER



P. O. BOX 12057 RESEARCH TRIANGLE PARK, N.C. 27709 USA

Manufacturers of Surface Moisture, Surface Density, Depth Moisture, and Depth Density Equipment



EXHIBIT 7

Stillwater-Payne County

Civil Defense



February 6, 1980

Roger Gose
City Engineer
City of Stillwater
Stillwater, Oklahoma 74074

Dear Roger,

In regard to your inquires, the office of Civil Defense in Stillwater-Payne County is charged with the responsibility of radiological monitoring in a nuclear concept against the United States.

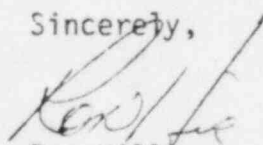
In the past, we have used our training and equipment on other natural man-made emergencies pertaining to radioactive articles. Civil Defense does maintain several different types of monitoring devices which are furnished to us by the Oklahoma State Civil Defense. A few of these devices which are maintained on inventory are: CDV-720, CDV-717, CDV-715, and CDV-700.

In regard to training, I have completed a DCPA home study course of approximately 12 hours followed by specialized instructions on Radiological Monitoring of 8 hours. Our Civil Defense Radiological Defense Officer is Professor Bennett Basore. Professor Basore is a full Professor and Head of General Engineering, School of Electrical Engineering at OSU. Professor Basore holds the following degrees: BS-Math, BS-Electrical Engineering, SCD-Electrical Engineering. Professor Basore also has completed the Radiological Officer (RDO) and Radiological Instructors Workshop (RDIW) given by the Oklahoma State Civil Defense of some 48 hours of instruction.

The Stillwater-Payne County Civil Defense office has direct contact with the State Civil Defense Office located in Oklahoma City of which the Oklahoma State Civil Defense RADEF Maintenance Officer is housed and, communications with the Oklahoma State Health Department of which Mr. Dale McHard, the State RADEF Officer is located.

If we can be of any further assistance to your department please do not hesitate to let us know.

Sincerely,


Ron Hill
Director

RH:mj

460504



Nuclear Gauge and Radiation Safety Training by Troxler

Troxler Electronic Laboratories, Inc. historically has stressed the necessity of a comprehensive, in depth, course of instruction for all personnel involved in nuclear testing programs. Thousands of people from many different professions have learned the basics of nuclear gauging and testing by attending an annual series of Troxler nuclear gauge conferences; by attending monthly in plant instructional programs; or by participating in field programs held on customer jobsites. These programs have contributed greatly to the worldwide acceptance and understanding of nuclear testing.

An understanding of nuclear theory as it relates to gauges and their applications, gauge calibration techniques, and radiological safety coupled with a thorough knowledge of proper field operation and maintenance procedures is essential in insuring that tests are performed with maximum effectiveness and that resulting test data is properly interpreted.

Experienced Troxler sales engineers conduct instructional programs with support from research and development, service, and production personnel. An effort is made to tailor the presentation of subject matter to the background and experience of the program participants. Group interaction and discussion of the material being presented is encouraged. Common nuclear gauging pitfalls are identified, discussed, and methods of correction are presented.

EXHIBIT 8b

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

Monty Karns

of

City of Stillwater

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

[Signature]
INSTRUCTOR

5/25/82
DATE

W. F. TROXLER
PRESIDENT

EXHIBIT 8c

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

JED BANKS

of

CITY OF STILLWATER

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

Michael E. Gualley
INSTRUCTOR

10/13/83

DATE

W.F. TROXLER

PRESIDENT

Nº 04291

EXHIBIT 8d

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

DOUGLAS C. GABLE

of

CITY OF STILLWATER

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 | |


INSTRUCTOR

10/13/83
DATE

W.F. TROXLER
PRESIDENT

No 14292

EXHIBIT 8e

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

CLARK D. JOHNSTON

of

CITY OF STILLWATER

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 | |

Michael E. Huntley
INSTRUCTOR

9/20/84

DATE

W.F. TROXLER

PRESIDENT

No 8270

460504

EXHIBIT 8f

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

TROY A. McCARTHY

of

CITY OF STILLWATER

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 | |

Michael E. Hurley
INSTRUCTOR

9/20/84
DATE

W.F. TROXLER

PRESIDENT

No 8269

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

JOHN WALDO

of

CITY OF STILLWATER, OKLAHOMA

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. |
| 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 | |


INSTRUCTOR

11/26/79

DATE

WILLIAM F. TROXLER

PRESIDENT

ENGINEERING LAB (SOILS & ASPHALT & CONC.)

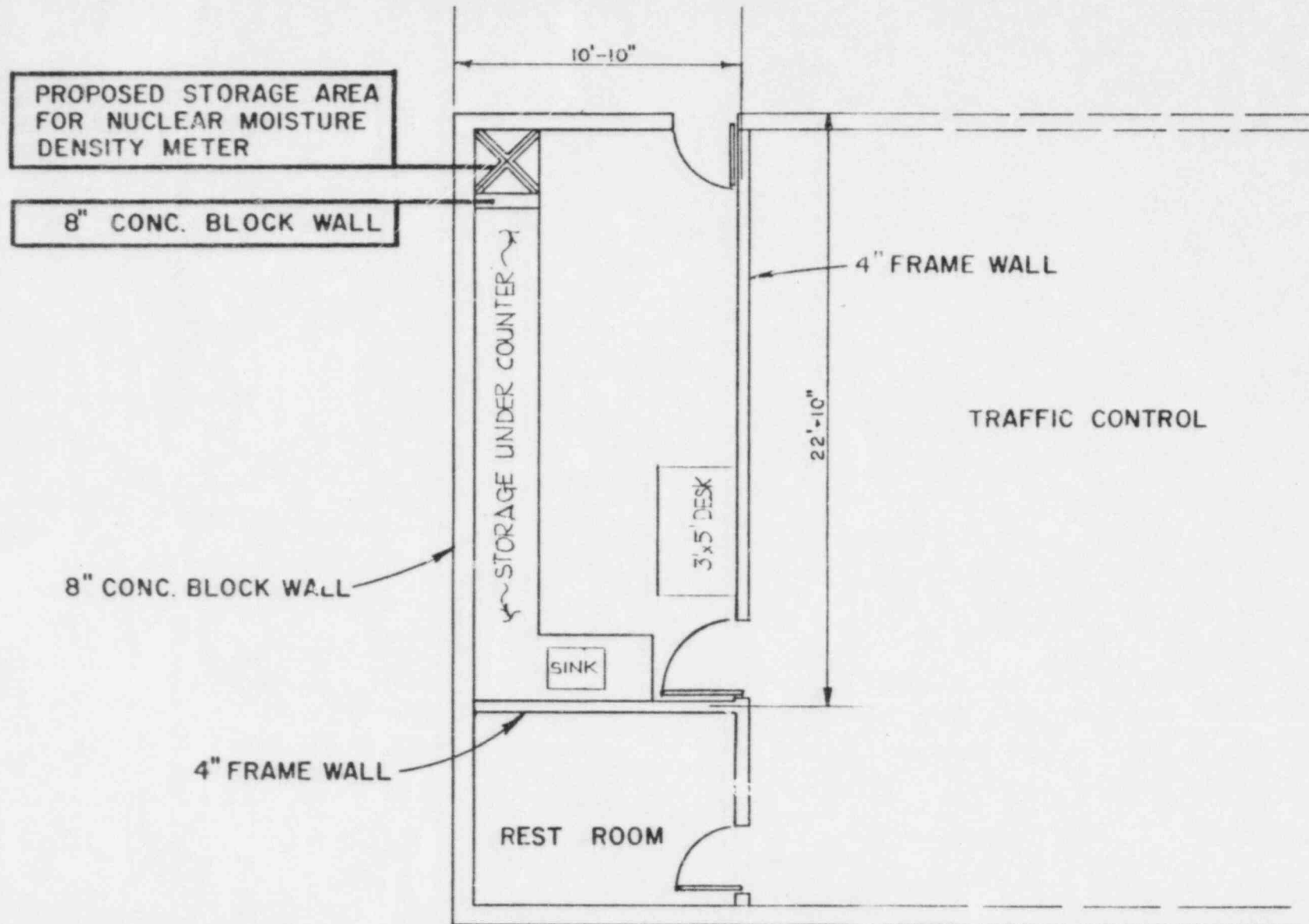


EXHIBIT 9a

4605094

*Side
truck - D*SOLD TO:

City of Stillwater
P.O. Box 631
Stillwater, Oklahoma

SHIP TO:**EXHIBIT 9b**REMIT TO:

P. O. Box 12057
Research Triangle Park, N. C. 277

INVOICE NO. 2936

INVOICE DATE: 3/31/80

CUSTOMER ACCOUNT NO.		CUSTOMER ORDER NO.	OUR REFERENCE NO.	SALES CODE	TERMS
S04000KA			S010334	3	Net 30
ITEM	QUAN.	DESCRIPTION		UNIT PRICE—US \$	AMOUNT—US \$
1	1	Surface Moisture Density Gauge Model 3411B, S/N 6911		\$	3,900.00
2	1	ABS Case			200.00
3	1	NRC License Application Fee			110.00
4	1	Training Course			340.00

Received machine
3/28/80
3/28/80
3/28/80
3/28/80

DATE SHIPPED: 3-28-80 FOB: _____ TOTAL \$ 4,550.00
 CARRIER: Roadway COLLECT: _____ SALES TAX _____
 BILL - PRO NO.: _____ PREPAID: XXX Dest. FREIGHT & INS. _____
 GRAND TOTAL \$ 4,550.00

EXHIBIT 10a

VIII. PERIODIC MAINTENANCE

A. BATTERY CHARGING

Since the life of rechargeable batteries is a function of the number of charge-discharge cycles, it is best not to recharge unless a low state of charge exists, or at least limit the recharge to the amount required to bring the battery up to a full charge level.

The 3401 instrument has a power consumption of 100 milliwatts. The 3411 has an average power consumption of 120 milliwatts assuming an average of four site measurements per hour of use. If the display heater is used continuously, these values increase to approximately 800 milliwatts.

Since the battery stores approximately 40 watts, the 3401 will operate for 350 hours and the 3411 for 300 hours before requiring a full recharge or approximately 50 hours if the display heater is in use. If the battery has been used to the point where either the BAT alarm is displayed or the battery voltage is below the automatic shutdown, the recharge period will be 14 hours or overnight for a full charge.

Using the above figures, one hour of recharge will replace approximately 25 hours of usage or four hours of heater use.

Since the heater will seldom be in use full time, the lower limits of battery life will not normally apply. Where possible, the instrument should be stored inside a heated space during nights when the temperature is likely to drop below 5°C (40°F). This will eliminate the long waiting period for the display to get to a reasonable operating temperature.

The AC charger will operate from 115 or 230 volt power at 50-60 Hz. While it will not damage either the charger or instrument to connect it to 115 volts with the charger switch set for 230, damage to the charger will occur if it is connected to a 230 volt supply with the switch set for 115 volt operation.

The DC charger cable supplied will operate while plugged into a cigarette lighter receptacle in a 12 volt negative ground vehicle system. No damage will occur, but no charging will be possible in 6 volt or positive ground systems.

With the vehicle engine in operation or with a fully charged vehicle battery, the charge rate is approximately the same as with the AC charger. The charge rate will decrease rapidly as the vehicle battery voltage decreases, and little or no charging will occur as the vehicle battery approaches 11 volts.

The DC charger is intended for emergency use when required. A thirty minute charge will allow use of the gauge for many hours.

B. CLEANING AND LUBRICATION

The source rod in the 3400 Series is supported in linear bearings packed with a molybdenum disulfide grease (Molykote Type G Paste). The grease is retained within the bearings and soil kept out by a system of wipers and seals at the top and bottom of the center post of the gauge. These bearings will require little or no service, unless the gauge is overhauled.

On the bottom surface of the gauge is a removeable plate with a metal wiper ring mounted in it. This ring will remove most of the soil from the source rod. However, under some soil conditions, small amounts will be carried into the sliding shield assembly. If allowed to build up, this soil can cause wear in the shield cavity and can ultimately be forced into the bearings and ruin them.

Cleaning the cavity is relatively simple. Place the gauge on its side on a bench with the base away from the operator. The source rod should be latched in the SAFE position. Using a Phillips screwdriver, remove the four screws holding the bottom plate assembly in position and pry out the assembly using a flat blade screwdriver. Using the same tool, remove the sliding shield and spring.

The radiation dose rate at the entrance to the cavity (flush with the bottom surface) is approximately 300 mrem per hour, and the hands should not be exposed to this dose rate for more than four hours per week. The cleaning time will take no more than five minutes, so the procedure is quite safe.

Using a rag, stiff brush and compressed air, if available, remove all soil and wipe clean the cavity, sliding shield and bottom plate assembly. Inspect all items for excessive wear and replace if required. Check the scraper ring to insure that it is free to move in its groove. If the ring is damaged, it may be replaced or replace the assembly.

Coat all of these items, including the cavity and the inner surface of the plate assembly with a bonded molybdenum disulfide lubricant (Molykote Type 321 Spray). Reassemble all items.

Using the rag, clean the source rod and index rod and coat the index rod with bonded lubricant. Using a cotton tipped stick (Q-Tip) lubricate the visible portions of the trigger and indexer with paste lubricant.

If the last items have soil embedded in the mechanism, they should be removed for cleaning. Lower the handle to the backscatter position and, using a 3/32 pin punch, remove the roll pin in the index rod. Remove the index rod cap by unscrewing. Depress the

trigger and lift the handle clear of the index rod. Before releasing the trigger, note the position of the indexer pin and trigger to facilitate replacement. With the trigger released, the indexer can be slid forward and sideways out of the handle. Clean the parts and handle. If the indexer shows signs of wear, it should be replaced. Lubricate these parts and reassemble.

To replace the index rod cap, latch the handle in the SAFE position, and screw the cap down until the neoprene bumper puts a light pressure on the handle. Drop the handle, look into the roll pin hole and line up the hole in the cap with the hole in the index rod by unscrewing the cap, if necessary. These holes must be in alignment to replace the roll pin. If the cap is screwed too tightly, pressure against the bumper will prevent the indexer from latching in the SAFE position.

Using a mineral solvent, clean all of the outer surfaces of the instrument.

C. INTERNAL CONDENSATION

Under some climatic conditions, changes in atmospheric pressure will cause some flow of moist air in and out of the gauge case since it is not pressure sealed. This will result in the formation of water inside the case due to condensation. This water must be removed or erratic operation and possibly failure may occur. The case will dry if it is stored in a warm, dry room with the electronic module removed.

D. FRONT PANEL MODULE REMOVAL

Unscrew the front panel and lift the panel from the opening. There is a cable connecting the module to the base assembly. Disconnect the base end of the cable, noting the relative position of the connector and receptacle. The red wire side of the connector is positioned towards the center post of the gauge.

When replacing this connector, it must be done carefully and in the proper orientation. The pins are small and can be easily bent if not aligned properly. If the connector is rotated 180 degrees, no damage will occur but the gauge cannot be turned on. If the connector is plugged in with the pins offset by one or more rows, the battery fuses will burn out and prevent other damage. The fuses may be replaced with a Bussman type GMW, two ampere fuse.

E. LEAK TEST PROCEDURE

State and Federal laws require that the radioactive sources be leak tested every six months and records maintained of the results. Radium sources in non-agreement states are not covered by law, but OSHA regulations are being changed to cover this situation. In any case, personnel safety must be considered and leak tests performed to eliminate possible radiotoxicity hazards.

It is also worthwhile noting that of over 5000 sealed radioactive sources delivered by Troxler Electronic Laboratories, Inc. in this type of equipment during the past fifteen years, not one has ever shown a positive leak test even though some instruments have been totally destroyed by fire or accident.

The leak test is performed by using the Troxler type RK-1 Leak Test Kit (part number 7271) or similar kit. This kit will contain 2 inch, 5.5 cm or 2.25 inch filter paper as the absorbing medium. It also contains a pair of metal tongs, wood dowel, solvent and plastic envelopes. Lay these items out on a clean paper towel. Using a ball point pen, write the gauge type, serial number and source serial numbers around the edge of the filter paper.

Since this instrument contains two sealed sources, two areas must be wiped with the piece of filter paper. Wet the filter paper with solvent.

With the gauge on its side and base away from the operator, position the handle in the 4 inch direct transmission position. Using the tongs and wood dowel for pressure, wipe the weld area on the source rod tip with the filter paper. Retract the source and sit the gauge in an upright position. Remove the electronic module as noted in section C above.

Looking into the cavity, a yellow and magenta label will be seen just forward of the printed circuit board assembly. Using the tongs and dowel as before, wipe the edge of this label with filter paper.

Lay the filter paper on the towel and allow to air dry in a flat position before sealing in the plastic envelopment. After wiping the first source, the filter must not be touched with any part of the hands. Place the plastic envelopment(s) in another envelopment and write your company name, address and other pertinent details on the outside. This envelopment must be marked "RADIOACTIVE MATERIALS - NO LABEL REQUIRED."

Place this envelopment into another envelopment addressed to Troxler or other approved facility for processing. Prior to being mailed, the contents and packing must be checked with a survey instrument and the radiation at any point on the surface must not exceed a dose rate greater than 0.5 millirem per hour in order to comply with U.S. Postal Regulations.

Safety regulations require that the factory leak test all sealed sources prior to entering our plant; therefore, this service will be performed on all instruments returned for checkout and repair. The certificate will be sent to the owner, and charges for the service will be included with other repair charges.

F. SOURCE ROD REMOVAL

On occasion it may be necessary to remove the entire source rod assembly to facilitate repairs to the instrument. This is easily accomplished, but provision must be made for shielded storage of the rod while it is out of the gauge. The Troxler A-100761 Source Rod Pig will provide this shielding but other similar storage may be used.

In an emergency, the rod can be stored for short periods without shielding at a distance of at least five feet from all personnel.

The procedure is the same as noted in paragraph B above, which details the removal of the index rod roll pin and cap. At this point the source rod can be lifted entirely out of the gauge shield and stored in a separate shield. While handling the source rod, keep the tip away from the body and other personnel, and do not touch the tip of the rod. The dose rate at the handle with the rod removed is approximately 15 mrem per hour.

Replace the source rod assembly as outlined in paragraph B.

**ANNEX "H"
RADIOLOGICAL****I. PURPOSE:**

The purpose of this annex is to establish an effective radiological (RADEF) monitoring and reporting system for the City of Stillwater.

II. GENERAL SITUATION:

- A. The RADEF monitoring and reporting for the City of Stillwater will be under the supervision of the Radiological Defense Officer.
- B. The Radiological Defense Officer for the City of Stillwater will be appointed by the Civil Defense Director of Stillwater.

III. RESPONSIBILITY:

- A. The Radiological Defense Officer (RDO) for the City will be responsible for, but not limited to, the following:
 - B. He will develop a system for radiological defense monitoring and reporting.
 - 1. He will make and maintain a list of all RADEF monitors, stations, and equipment within Stillwater.
 - 2. The RDO will be responsible for preparing all RADEF situation reports for district or State Civil Defense offices as directed by state plans.
 - 3. The RDO will establish a reporting procedure for all fixed and shelter monitoring stations within the City.
 - a. He will request spontaneous reports be made from any station when following RADEF readings are made.
 - 1. .5 r/hr and rising
 - 2. 5 r/hr and rising
 - 3. 50 r/hr and rising
 - 4. Peak r/hr
 - 5. 50 r/hr and falling
 - 6. 5 r/hr and falling
 - 7. .5 r/hr and falling
 - b. If a domestic incident has occurred within the City all stations may be activated by the RDO or Civil Defense Director. Other authorized officials may cause them to be activated in the absence of the RDO or Civil Defense Director, when the situation warrants.
 - 4. The RDO will establish a nuclear detonation (NUDET) reporting procedure for the City of Stillwater.

5. The RDO will be responsible for radiological fallout plotting, predicting, and the releasing, with the Civil Defense Directors or other appropriate official's approval, or any radiological to the City of Stillwater.
6. The RDO will advise the Civil Defense Director and the executive group of the radiation situation at all times and the effect it will have on the City of Stillwater.
7. The RDO will make a decision based on the emergency requiring early departure which will determine the length of stay and mission dose for anyone making an emergency early shelter exit.
8. The RDO will cause the following to be maintained.
 - a. The dose rate and dosimeter readings for all persons performing emergency missions.
 - b. The approximate exposure level for each shelter.
 1. He will advise the Civil Defense Director of any shelter rotation necessary.
9. The RDO for the City will maintain in the EOC a list of RADEF monitors, fixed monitors, fixed monitor stations, and shelters with pre-positioned radiological kits.
10. The RDO will designate two (2) persons to assist him in the EOC.
11. The RDO will determine if decontamination procedures would be appropriate for early post-attack restoration of specific vital facilities and if the protection of any shelters would be substantially improved by decontamination. The basic data available in the National Fallout Shelter Survey Printout, "Phase II" Printout, provides the raw data for such a determination. If decontamination appears feasible, the method and building areas will be specified in Appendix IV to this annex.

IV. PROCEDURES:

A. Phase I: Warning

1. The operability of all radiological instruments will be checked. RADEF kits will be distributed where necessary.
2. All monitors will be alerted.
3. Communications with monitoring stations will be checked and/or established.

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B. Phase II: Movement to Shelter

1. All monitors will report immediately to monitoring stations and will report operational readiness.
2. Monitors will begin monitoring for fallout arrival.

C. Phase III: In-Shelter

(See III-B above)

D. Phase IV: Leaving Shelter

1. The RDO will supervise monitoring operations of large areas and marking of radiological hazard areas.
2. He will approve areas to which access will be denied, times of final shelter departure and decontamination requirements and methods.
3. He will see that records are maintained of radiation exposures of shelterees and work groups. These records will be available to medical personnel for future medical treatment of casualties.
4. The RDO will cooperate with public health personnel in the operational recovery and final recovery phases in restoring the community.

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33 FR 10923
40 FR 8774
sion product activity not in excess of 0.25 millicurie of fission products per gram of U^{235} ; and

(iii) Facilities in which processing is conducted pursuant to a license issued under Parts 30 and 70 of this chapter, or equivalent regulations of an Agreement State, for the receipt, possession, use, and transfer of irradiated special nuclear material, which authorizes the processing of the irradiated material on a batch basis for the separation of selected fission products and limits the process batch to not more than 100 grams of uranium enriched in the isotope 235 and not more than 15 grams of any other special nuclear material.

(h) "Research reactor" means a nuclear reactor licensed by the Commission under the authority of subsection 104c of the Act and pursuant to the provisions of § 50.21(e) of this chapter for operation at a thermal power level of 10 megawatts or less, and which is not a testing facility as defined by paragraph (m) of this section.

(i) "Sealed source" means any by-product material that is encased in a capsule designed to prevent leakage or escape of the byproduct material.

(j) "Source material" means:

(1) Uranium or thorium, or any combination thereof, in any physical or chemical form; or

(2) Ores which contain by weight one-twentieth of one percent (0.05%) or more of (i) uranium, (ii) thorium, or (iii) any combination thereof. Source material does not include special nuclear material.

(k) "Special nuclear material" means:

(1) Plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Act, determines to be special nuclear material but does not include source material; or

(2) any material artificially enriched by any of the foregoing, but does not include source material.

(l) "Manufacturing license" means a license pursuant to Appendix M of Part 50 of this chapter to manufacture a nuclear power reactor(s) to be operated at sites not identified in the license application.

(m) "Testing facility" means a nuclear reactor licensed by the Commission under the authority of subsection 104c of the Act and pursuant to the provisions of § 50.21(e) of this chapter for operation at:

(1) A thermal power level in excess of 10 megawatts; or

(2) A thermal power level in excess of 1 megawatt, if the reactor is to contain:

(i) A circulating loop through the core in which the applicant proposes to conduct fuel experiments; or

(ii) A liquid fuel loading; or

(iii) An experimental facility in the core in excess of 16 square inches in cross-section.

(n) "Utilization facility" means any nuclear reactor other than one designed or used primarily for the formation of plutonium or U^{233} and any other equipment or device determined by rule of the Commission to be a utilization facility within the purview of subsection 110c of the Act.

(o) [Deleted 43 FR 7210.]

(p) "Human use" means the internal or external administration of byproduct, source, or special nuclear material, or the radiation therefrom, to human beings.

(q) "Nuclear Steam Supply System" consists of the reactor core, reactor coolant system, and related auxiliary systems including the emergency core cooling system, decay heat removal system, and chemical volume and control system.

(r) "Balance of plant" consists of the remaining systems components, and structures that comprise a complete nuclear power plant and are not included in the nuclear steam supply system.

(s) "Special projects" means those projects submitted to the Commission for review and for which specific fees are not prescribed in this chapter. Examples of special projects include, but are not limited to, topical reports, early site reviews, waste solidification facilities, fuel reprocessing facilities, and amendment or renewal of standardized reference design approvals.

(t) "Routine inspection" means an inspection performed at frequencies or during a certain period of time prescribed by the Commission for purposes of reviewing a licensee's authorized activities to assure that they are being conducted in accordance with regulatory or statutory requirements and that associated facilities and equipment are being operated in a safe manner.

(u) "Duplicate unit" means one of a limited number of the same kind of units which are to be constructed within a limited time span and subject to review at the same time by the staff.

(v) "Replicate unit" means a unit based on the reuse of a plant design previously reviewed and approved for construction by the same utility or by another utility as part of another construction permit application.

(w) "Reference systems concept" means a concept that involves the review of an entire facility design or major fraction of a facility design outside of the context of a license application. The standard design would be referenced in subsequent license applications.

(x) "Advanced reactor" means any nuclear reactor concept other than light water reactors and high temperature gas cooled reactors.

§ 170.4 Interpretations.

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by an officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 170.5 Communications.

All communications concerning the regulations in this part should be addressed to the Executive Director for Operation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Communications may be delivered in person at the Commission's offices at 1717 H Street NW, Washington, DC or at 7920 Norfolk Ave., Bethesda, MD.

§ 170.11 Exemptions.

(a) No application fees, license fees, amendment fees, renewal fees, approval fees, or inspection fees shall be required for:

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(1) A license authorizing the export only of a production or utilization facility.

(2) A license authorizing the export only or import only of byproduct material, source material or special nuclear material.

(3) A license authorizing the receipt, ownership, possession, use or production of byproduct material, source material, or special nuclear material incidental to the operation of a production or utilization facility licensed under Part 50 of this chapter, including a license under Part 70 of this chapter, authorizing possession and storage only of special nuclear material at the site of a nuclear reactor for use as fuel in operation of the nuclear reactor or at the site of a spent fuel processing plant for processing at the plant.

(4) A construction permit or license applied for by, or issued to, a nonprofit educational institution for a production facility or utilization facility, other than a power reactor, to be used for teaching, training, or medical purposes, or for byproduct material, source material, or special nuclear material to be used for teaching, training, or medical purposes, or in connection with a facility, other than a power reactor, used for teaching, training, or medical purposes.

(5) A construction permit or license applied for by, or issued to, a Government agency, except for a utilization facility designed to produce electrical or heat energy pursuant to section 103 or 104h of the Atomic Energy Act of 1954, as amended.

(6) [Deleted 38 FR 18443.]

(7) [Deleted 38 FR 18443.]

(8) A license authorizing the use of source material as shielding only in devices and containers, provided, however, that all other licensed byproduct material, source material, or special nuclear material in the device or container will be subject to the fees prescribed in § 170.31.

(9) A license for possession and use of byproduct material, source material, or special nuclear material applied for by, or issued to, an agency of a State or any political subdivision thereof, except for licenses which authorize distribution of byproduct material, source material, or special nuclear material, or products containing byproduct material, source material, or special nuclear material, or licenses authorizing services to any person other than an agency or political subdivision of the State.

(10) Activities of the Commission undertaken, pursuant to Part 75 of this chapter, solely for the purpose of implementation of the US/IAEA Safeguards Agreement.

(b) (1) The Commission may, upon application by an interested person, or upon its own initiative, grant such exemptions from the requirements of this part as it determines are authorized by law and are otherwise in the public interest.

(2) Applications for exemption under this paragraph may include activities such as, but not limited to, the use of licensed materials for educational or noncommercial public displays or scientific collections.

(3) [Deleted 43 FR 7210.]

§ 170.12 Payment of fees.

(a) *Application Fees.* Each application for which a fee is prescribed shall be accompanied by a remittance in the full amount of the fee. No application will be accepted for filing or processed prior to payment of the full amount specified. Applications for which no remittance is received may be returned to the applicant. All application fees will be charged irrespective of the Commission's disposition of the application or a withdrawal of the application.

(b) *License fees.* Fees for review of applications for construction permits, operating licenses, manufacturing licenses, and materials licenses, are payable upon notification by the Commission when the review of the project is completed. For the purposes of this part the review of a project is completed when a permit or license is issued, or an application for a permit or license is denied, withdrawn, suspended, or action on the application is postponed.

(c) *Amendment Fees.* The appropriate amendment fee shall accompany the application for amendment when filed with the Commission. Where applicable, the applicant shall provide a proposed determination of the amendment class and state the basis therefor as part of the amendment request and shall remit the fee corresponding to this determination with the application for amendment. The Commission will examine the amendment fee and will, where applicable, refund any overcharges or bill the applicant for the additional amendment fee.

(d) *Renewal Fees.* The appropriate renewal fee shall accompany the renewal application when filed with the Commission.

(e) *Approval Fees.* Fees for review of applications for spent fuel cask and shipping container approvals, standardized spent fuel facility design approvals, and construction approvals are payable upon notification by the Commission when the review of the project is completed. For the purposes of this part the review of a project is completed when the approval is issued, or the application for an approval is denied, withdrawn, suspended, or action on the application is postponed. Fees for facility reference standardized design approvals will be paid in five (5) installments based on payment of 20 percent of the approval fee (see footnote 3 § 170.21) as each of the first five (5) units of the approved design are referenced in an application(s) filed by a utility or utilities. In the event the standardized design approval application is denied, withdrawn, suspended, or action on the application is postponed, fees will be collected when the review is completed and the five (5) installment payment procedure will not apply.

(f) *Special Project Fees.* Fees for review of special projects are payable upon notification by the Commission when the review of the project is completed. For the purposes of this part the review of the project is completed upon notification by the staff that it has finished its review, upon withdrawal of the request, or suspension or postponement of further review.

(g) *Inspection Fees.* Inspection fees are payable upon notification by the Commission.

(h) *Method of Payment.* Fee payments shall be by check, draft, or money order made payable to the U.S. Nuclear Regulatory Commission.

(i) This section applies to all applications for licenses, permits, approvals or requests for review of special projects on file with the Commission on or after March 23, 1978.

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