

July 15, 1985

U. S. Nuclear Regulatory Commission, Region IV
Material Radiation Protection Section
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011

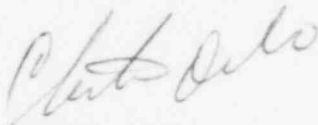
Gentlemen:

Please accept this application for Radioactive Material License.

We asked the help of IPIA who has submitted this same procedures manual for several pipe inspection companies that use equipment made by the same manufacturer with this same source, and it has been approved for them.

Please note that we are requesting exemption from personnel monitoring due to the very low levels of radiation. Supporting documentation can be submitted, if you so desire, showing the totals of quarterly monitoring reports for several quarters from several licensed companies using this same gauge who do monitoring. However, most inspection companies using these devices are not required to do personnel monitoring.

Sincerely,



Clinton Delno
Radiation Protection Officer

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Enc

U.S.N.R.C.
LIC. FEE MON. BOARD

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REG4 LIC30
35-23191-01 PDR

RESUMES

See 35 - 21336-01

Clinton A. Delno
Date of Birth - December 14, 1933
Social Security No. - 440-34-1876

Clinton started working for AMF Tuboscope in 1961. While there, he attended Tuboscope's Radiation Safety, Sonoscope and Isolog School in August of 1965. While with Tuboscope, he attended numerous supervisory and safety schools on Radiation and had sixteen years practical experience running their units before terminating his employment in 1977 while District Manager of Tuboscope's Pauls Valley, Oklahoma, branch. From 1977 to 1980, Mr. Delno was employed by Mustang Services as District Manager. In September of 1980, Mr. Delno left Mustang and became Vice-President of Operations for Wilson Inspection Co. From September 1982 to January 1985, Mr. Delno was employed by Accu Test as Operations Manager and served as Assistant Radiation Safety Officer in Mr. Ferrell's absence. Since mid-January 1985, Mr. Delno has been employed by TISCO, Inc. as Supervisor and will be TISCO's Radiation Safety Officer.

Rick A. Delno
Date of Birth - July 13, 1956
Social Security No. - 441-60-4419

Rick Delno started to work for Wilson Inspection from August 1980 to October 1982 as Operator and Shop Technician. While at Wilson, he attended a four-hour Radiation Safety Meeting in October of 1980, and on March 5 and 6 of 1981, he attended NSSI Radiation Safety School. From 1982 to 1985, Mr. Delno was employed by Accu Test as an Operator. Presently, Mr. Delno is employed by TISCO, Inc. as an Operator/Technician.

460712

Additional Sheet -

Item 10 - Radiation Safety Program

Tisco, Inc.
3429 South Mable
Oklahoma City, OK 73129

RADIATION SAFETY PROCEDURES MANUAL

Prepared By:

Allen J. Kindrick
International Pipe Inspectors Association
4101 Oates Road
Houston, Texas 77013

Rev July 5, 1985

Diag. of
8510310526

Tisco, Inc.

GENERAL COMMENT:

Wherever this manual refers to the Commission, that reference specifically means:

U.S. Nuclear Regulatory Commission and its authorized representatives.

This manual outlines the procedures pertaining to the use and handling of radioactive sources. It is the intent of Tisco, Inc. to comply in every way possible with State and Federal Regulations for control of radiation. The objectives of these procedures are to:

- o minimize safety problems
- o minimize hazards to employees and the general public
- o prevent radiation incidents.

Although the devices operated emit very low levels of radiation, every effort will be made to provide procedures and practices that will maintain dose levels to individuals as low as is reasonably achievable.

A copy of these procedures will be given to each Authorized User (Inspection Unit Operator). It is the responsibility of each Authorized User to have a working knowledge of these procedures.

RADIATION SAFETY PROCEDURES

I. RESPONSIBILITY OF THE RADIATION PROTECTION OFFICER.

- A. The Radiation Protection Officer (RPO) is responsible for management of the entire radiation program. Specific duties include:
1. Assuring that byproduct materials possessed under the license conform to the materials listed on the license.
 2. Assuring that use of the devices, particularly in the field, is only by individuals designated as Authorized Users in personnel records after completing the prescribed training.
 3. Assuring that the source holders are properly secured against unauthorized removal at all times when they are not in use.
 4. Assuring that proper authorities (NRC, local police, State officials, etc.) are notified promptly in case of accident or radiation incident. To serve as a point of contact and give assistance in case of emergency (gauge damage in the field, fire, theft, etc.)
 5. Assuring that the terms and conditions of the license, such as periodic leak tests, are met and that the required records are in compliance with NRC regulations and license conditions.
 6. Ensuring compliance with DOT regulations during transit of any inspection unit containing a radioactive source.
- B. The RPO is committed to make every effort to comply with state and federal regulations and to report to the Commission any incident, theft, or loss of radioactive material.

II. RECORDS

- A. Records of the following events will be kept in the radiation file:
1. Receipts, transfers, and disposals of all radioactive material
 2. Results of all radiation surveys.
 3. Calibration reports of survey meters.
 4. Source leak/wipe test evaluation reports.
 7. Documentation of training and qualification for Authorized Users (Operators).

III. TRAINING AND QUALIFICATION OF PERSONNEL

- A. Each Authorized User (Operator) will receive formal training through the International Pipe Inspectors Association's Radiation Safety School. Also, each Individual User will receive a copy of these procedures and have sufficient training to ensure a working knowledge.
- B. Each Individual User (Operator) must have received on-the-job training in operation and record keeping to ensure proficiency.

IV. RADIATION MONITORING

A. Personnel Monitoring.

Due to the very low radiation levels, and as stated by the Texas Department of Health, the licensing agency for the manufacturer, no personnel monitoring is required for users of the Wm. B. Wilson Mfg Co. Wilsalog 5000 containing a model 2202 spinning gauge.

B. Surveys.

1. Although no maintenance on the sealed source or the source holder will be done by the licensee, a survey meter is to be kept on each of the mobile inspection units. During transit the meter will be carried in the vehicle drivers compartment.
2. The radiation survey meters are G. E. Smith & Associates Model GS-500A. These survey instruments are sensitive from 0.01 mR/hr to 500 mR/hr.
3. Each survey instrument is to be calibrated semi-annually and after any repairs. Calibration shall be done by Gulf Nuclear or Nuclear Sources and Services, Inc. (NSSI), or other specifically licensed firm.
4. Area surveys shall be taken at the beginning of each inspection service at a remote site before commencing the job and at completion of the job before leaving the area.
5. Source holder profile shall be taken when a source is received or transferred and recorded on the Radiation Profile Form.

C. Leak/Wipe Tests and Equipment Check.

1. A leak/wipe test and an equipment check on the source holder is to be performed by the Radiation Safety Officer at intervals not greater than six months. Only the source holder will be wiped. The lead seals permitting access to the source will not be broken for a leak/wipe test.

2. Leak/wipe tests are performed following the instructions on the kit supplied by NSSI, Gulf Nuclear, or other specifically licensed firm.

V. STORING, MONITORING, AND TRANSPORTING RADIOACTIVE MATERIAL

A. Storing.

1. When not in use, the source holder (camera) will have the OPEN/SHUT slide locked in the SHUT position. Also, when the inspection unit is not in use, the doors providing access to the source holder will be locked.
2. At temporary job sites, the unit will not be left unattended unless the source holder is locked shut, the cover locked, and all access doors to the unit locked.
3. When not inspecting pipe at a temporary job site, each inspection unit will be parked at the permanent facilities inside the fenced compound with the unit locked.

B. Monitoring.

1. Each source holder will be posted with decals as stated in the users manual. These decals shall not be removed and will be replaced when they become defaced or illegible.
2. Each inspection unit will be surveyed at the beginning and end of each inspection service and at least monthly if the unit is not in service. If radiation levels at a distance of 1 foot from the source holder exceed 5 millirems per hour, the unit will not be used until released by the RSO.
3. A detailed radiation profile survey will be made
 - o when the source holder is initially received
 - o when the source holder is transferred to another licensee
4. A record of each survey will be kept in the radiation file.

C. Transporting.

1. Prior to transit each inspection unit will be checked to see that the source holder slide is locked in the shut position and the rotating head is pinned so that it cannot rotate.
2. The driver of the unit must observe all DOT regulations and have a completed SHIPPER'S CERTIFICATE FOR RADIOACTIVE MATERIALS FOR PUBLIC CARRIER SHIPMENTS. This completed certificate must be carried in the drivers compartment within reach of the driver when restrained by safety belts.

VI. REPAIRS

- A. No repairs will be made to the source, source holder, or shielding. Any repairs or maintenance will be performed by the manufacturer or other specifically licensed firm.
- B. Mechanical repairs to the gauge, other than the source, source holder, or shielding, may be done by RPO or Authorized Users. The OPEN/SHUT slide must be in the SHUT position when making mechanical adjustments or repairs.

VII. EMERGENCY PROCEDURES

- A. In the event of an emergency arising from malfunction of source holder, or mechanical damage to the spinning pipe gauge that could affect radiation emissions:
 - 1. The area must be surveyed immediately. If radiation levels are more than 2 millirems per hour at any distance greater than three feet from the source holder, warning signs and barriers must be placed at the 2-millirem perimeter or a distance of 60 feet from the source holder.
 - 2. Notify the RPO - Phone 405/677-0585 or 405/381-3643.
 - 3. All reports to the Commission will be made by the RPO.
- B. In the event of fire:
 - 1. Notify all personnel in the area immediately.
 - 2. Attempt to put out the fire if a radiation hazard is not immediately present.
 - 3. Notify fire department if it appears the fire cannot be handled by personnel on hand.
 - 4. Notify RPO. Phone 405/677-0585 or 405/381-3643.
 - 5. Monitor the area immediately after the fire is extinguished.
 - 6. All necessary reports to the Commission will be made by the RPO.

SHIPPER'S CERTIFICATION FOR RADIOACTIVE MATERIALS
FOR PUBLIC CARRIER SHIPMENTS
(Motor Vehicle or Water Transport)

DESCRIPTION AND
PROPER SHIPPING NAME: Radioactive Material Special Form NOS
NA9182. Quantity 1.5 Curies.

RADIONUCLIDE: Cesium 137
PHYSICAL FORM: Ceramic Microspheres
ACTIVITY: 1500 millicuries

TRANSPORT GROUP: Special Form
Note: Source Capsule IAEA Identification
and Marking is "3M Model 4F6S"

CATEGORY OF LABEL: Radioactive Yellow-II
QUANTITY: Type A Quantity

PACKAGING: Type A Note:
This shipment contains packages of Type A
radioactive materials limited in accordance
with the 1973 IAEA Regulations, pursuant to
the provisions of 49 CFR 171.12(e).

PACKAGE SPECIFICATIONS: Specification 7A, general packaging, Type A
PACKAGE MARKING: USA DOT 7A TYPE A

TRANSPORTATION INDEX: _____
VEHICLE PLACARDING
REQUIREMENTS: None

ATTACHMENTS: Special Form Certificate of Competent
Authority.

This is to certify that the above named materials are properly
classified, described, packaged, marked and labeled, and are in
proper condition for transportation according to the applicable
regulations of the Department of Transportation.

EXPORT AUTHORITY: 10 CFR 110.24

Name and Address of Shipper

Tisco, Inc.
3420 South Marble
Oklahoma City, OK 73129

Name and title of person
signing Certification

Signature of the Shipper

Date _____.

For each source holder shipped, one completed and signed certificate
shall be handed to the carrier.

Item 5. RADIOACTIVE MATERIAL

- a. Element: Cesium Mass number: 137
- b. Chemical and Physical Form: Ceramic Microspheres,
Double Encapsulated,
Special Form Sealed Source,
3M Model 4F6S[®]
1500 millicuries
(Certificate of Competent
Authority Attached)
or
Gulf Nuclear Model CSV
- c. Maximum amount which will be possessed at any one time:
Two sources. No single source to exceed 1500 millicuries.

Item 6. Purpose for which license material will be used:

For use in a spinning pipe gauge for measuring wall thickness of pipe. The spinning pipe gauge is an Wm. B. Wilson, Inc., Model No. 2202 Wall Caliper. The manufacturer holds a Specific License by the of Texas Department of Health to manufacture the device.

Due to the low levels of radiation, we respectfully request that it be written into our license conditions that no personnel monitoring is required. The radiation levels at any point on the surface of the source holder are less than 40 millirems and at 3-feet feet from any point on the surface of the source holder are less than 1 millirem.

DOT labeling for transportation purposes is Radioactive Yellow II.

Item 7. Individual Responsible for Radiation Safety Program and His Experience and Training.

Clinton Delno: Resume relating to radioactive material is attached.

Item 8. Training for individuals working in or frequenting restricted areas:

The levels of radiation from this spinning pipe gauge are such that there is no restricted area. When inspecting pipe, the source holder emits a pencil thin beam directed through the pipe into a scintillation crystal. The scintillation crystal is completely shielded except for the beam entry window. The beam is unaccessible when inspecting pipe. When not engaged in pipe inspection operation the source holder OPEN/SHUT slide mechanism is locked in the SHUT position.

However, each Authorized User (Operator) of these units will be trained in radiation safety by the International Pipe Inspectors Association.

Item 9. Facilities and Equipment:

Attached is a drawing of the facilities where the units will be stored when not inspecting pipe at a remote location.

Item 11 - Waste Management.

When it becomes necessary to dispose of the 1.5 Curie Cesium 137 Special Form source, disposal will be accomplished through NSSI, Gulf Nuclear, or other specifically licensed firm.

July 5, 1985

SOURCE USE LOG
AND
TRANSPORTATION SURVEY FORM

DATE: _____

CUSTOMER NAME: _____

LOCATION: _____

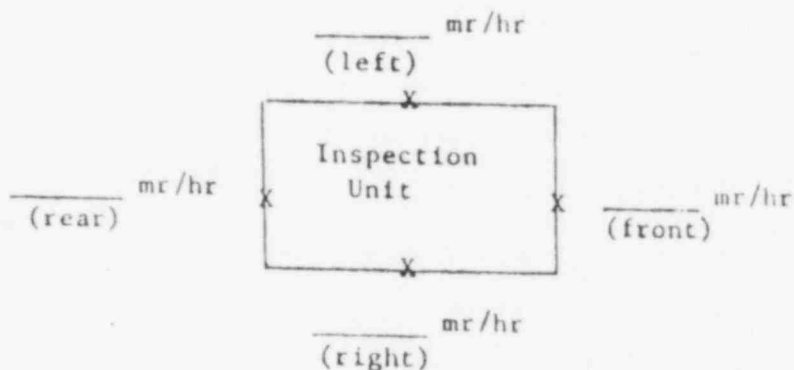
SURVEY METER IDENTIFICATION:

Manufacturer: _____

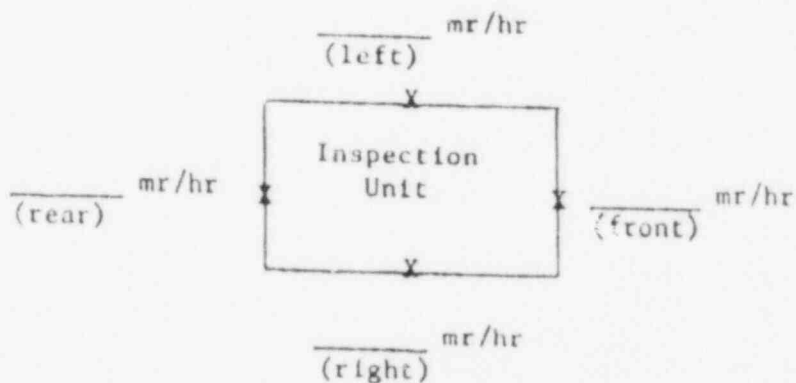
Model No.: _____

Serial No.: _____

Before Job Reading



After Job Reading



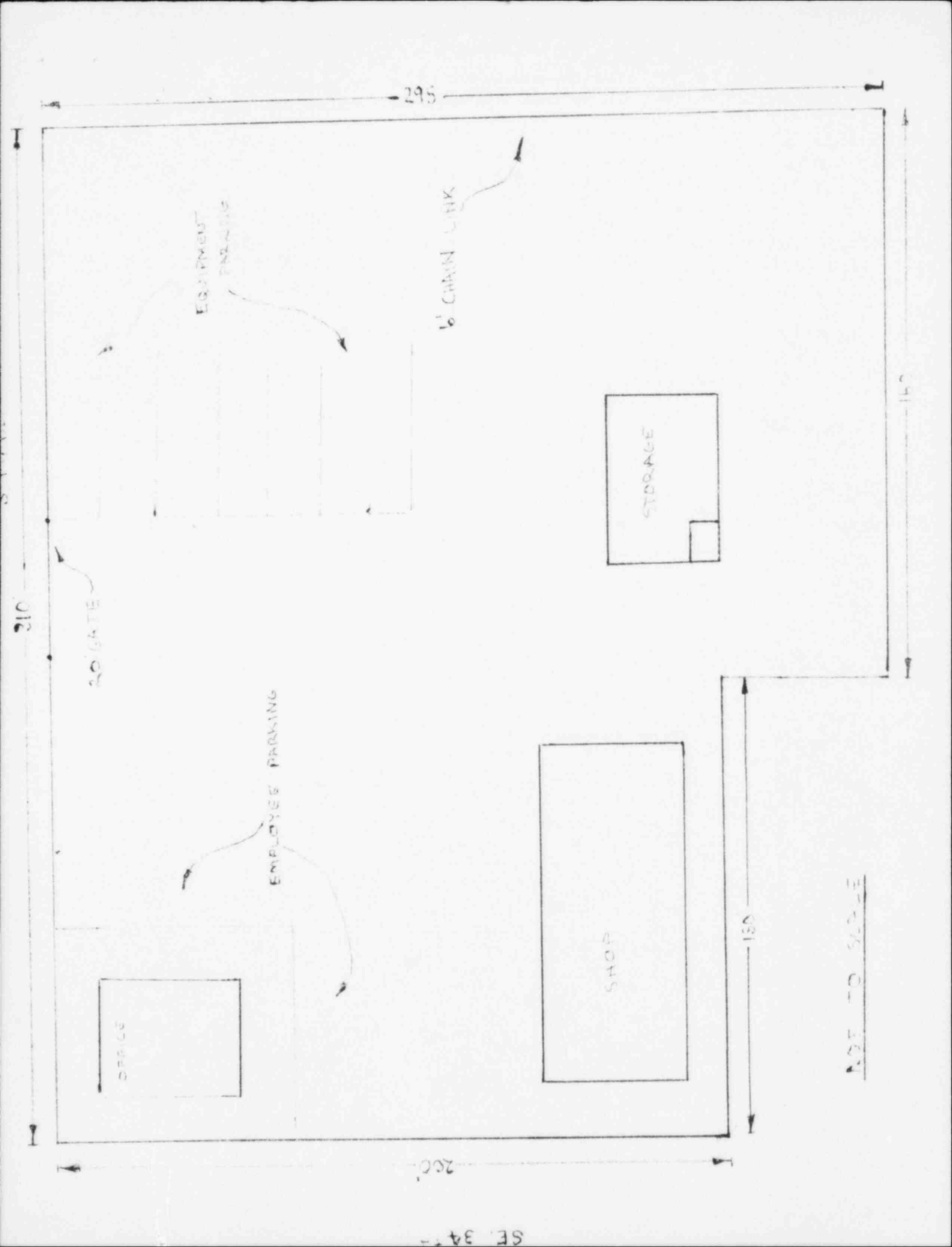
Source Serial No.: _____

Isotope: _____

Signature: _____

Operator

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Source Serial No. _____

Millirems per Hour

Reading
Position

Slide Open

Slide Shut

Surface

1-foot

3-feet

Surface

1-foot

3-feet

Curies - Date _____

Installed in Unit _____

Survey Date _____

Survey
Instrument
Model No. _____

Serial No. _____

Calibration
Date _____

Surveyed by: _____

(Signature) _____

Eight
Radial
Positions

A

B

C

D

E

F

G

H

Top

I

Thruwall

Aperture J

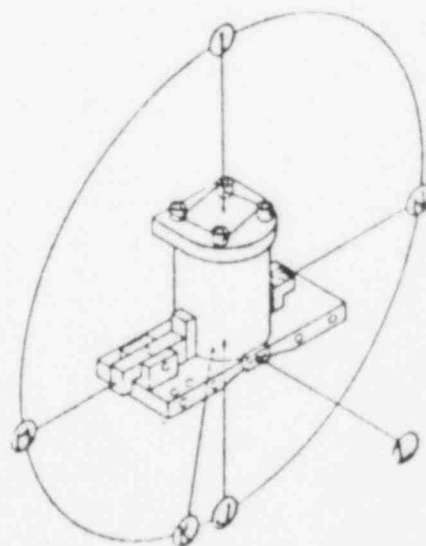
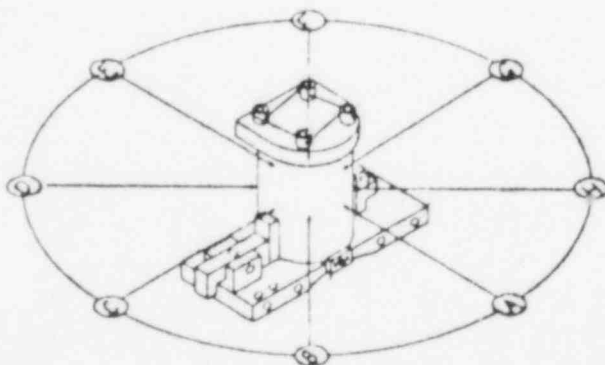
Chord

Aperture K

V-Blocks L

Slide M

Slide N



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Attachment 1:

Copy of the
SHIPPER'S CERTIFICATION FOR RADIOACTIVE MATERIALS FOR PUBLIC CARRIER
SHIPMENTS (Motor Vehicle or Water Transportation) with attached

DOT IAEA CERTIFICATE OF COMPETENT AUTHORITY for the 3M Model 4F6S
Special Form Radioactive Material Encapsulation.

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Attachment 2:

Inspection Unit Radiation Survey Form

and

Source Holder Radiation Profile

Attachment 3:

Copy of Certificate to Clinton Delno, the Radiation Protection Officer,
for completion of an approved Radiation Safety Course

and

Description of the Radiation Safety Course and the Course Outline.

Attachment 4:

Sketch of the facilities.

