NATIONAL FEEDSCREW & MACHINING INCORPORATED

216-837-3868

577 Oberlin Road, S.W. Massillon, Ohio 44646

7/1/85

United States Nuclear Regulatory Comm.
Region III
799 Roosevelt Road
Glen Ellyn, Illinois, 60137

Gentlemen:

Enclosed is the information you requested in your letter dated June 6, 1985. We hope that this will be of help in processing our application.

Control Number 78864.

Sincerely,

Thomas E. McInnes,
Chief Radiographer

dlm

cc: file

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REG3 LIC30
34-24500-01 PDR

JUL 5 1985

MINIMIZING EXPOSURE OF PERSONS IN THE EVENT OF AN ACCIDENT - EMERGENCY PROCEDURES

There will be no radiographer or radiographer assistants attempting a source retrieval. In case of an emergency, the cobalt room will be closed and locked. A guard will be posted at the entrance of the room until the emergency is corrected. The vice-president in charge of the radiation program and the chief radiographer will be notified and a phone call will be made to the manufacturer for trained personnel to make the recovery.

INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM.

I. Ronald B. Pribich, Vice-President of Finance.
Thomas E. McInnes, Chief Radiographer

II. Mr. Pribich has no training in radiation. He will oversee the radiation program to insure all records are kept up-to-date.

Mr. Thomas McInnes has ten years experience in radiation and its use. His training began with a course in radiation safety, Isotopes for Industrial Radiography, at the Picker Industrial Radiography Laboratory in Cleveland, Ohio. This was a one week course ending July 13, 1973. Enclosed is the certificate from Picker Corporation. On-the-job training after the course was completed began in July, 1973. This training was conducted by Mr. Jerome Hathaway at the Massillon Steel Casting Co. @ 577 Oberlin Rd. S.W., Massillon, Ohio.

The equipment used for on-the-job training was sealed source (technical operations model A-424-2) with a (technical operations) collimator model 527 and project 04 model 402. The dates that Thomas McInnes was made assistant radiographer and then radiographer to chief radiographer have been destroyed by the bank that foreclosed on the former Massillon Steel Casting Co.

Also included is a radiation dosimetry report from R.S. Landauer, Jr. & Co. showing the inception date of Thomas McInnes' film badge to 10/23/83 when the Massillon Steel Casting Co. filed bankruptcy.

INTERNAL INSPECTION PROGRAM

Mr. Pribich will be in charge of the internal inspection program. He will have a list of the functions and what dates they are to be carried out on. If a deficiency occurs, the vice-president in charge of the radiation program will require a written report as to why the deficiency occurred and the measures to be taken to prevent the deficiency from reoccurring. The written report will be discussed with the vice president in charge. At not more than three (3) month intervals, the vice president in charge will use a check list (enclosed) to quiz the radiographer regarding the three (3) month period.

RADIATION DETECTION INSTRUMENTS

There will be one operable and calibrated survey meter, Victoreen model 592 B Gamma survey meter with a range of 0-10, 0-100, 0-1000 MR/H. The meter will be calibrated at (+) or (-) 20% of actual reading at intervals not to exceed (3) month periods or after each servicing. A tag affixed to the meter with the calibration date and the next calibration due date will be evident. The calibration chart (chart enclosed) will be filed for not less than two (2) years. The calibration will be performed by the chief radiographer.

RADIATION SURVEYS OR CALCULATIONS

Using the inverse square law $\frac{I_A}{I_B} = \frac{D_B^2}{D_A^2}$

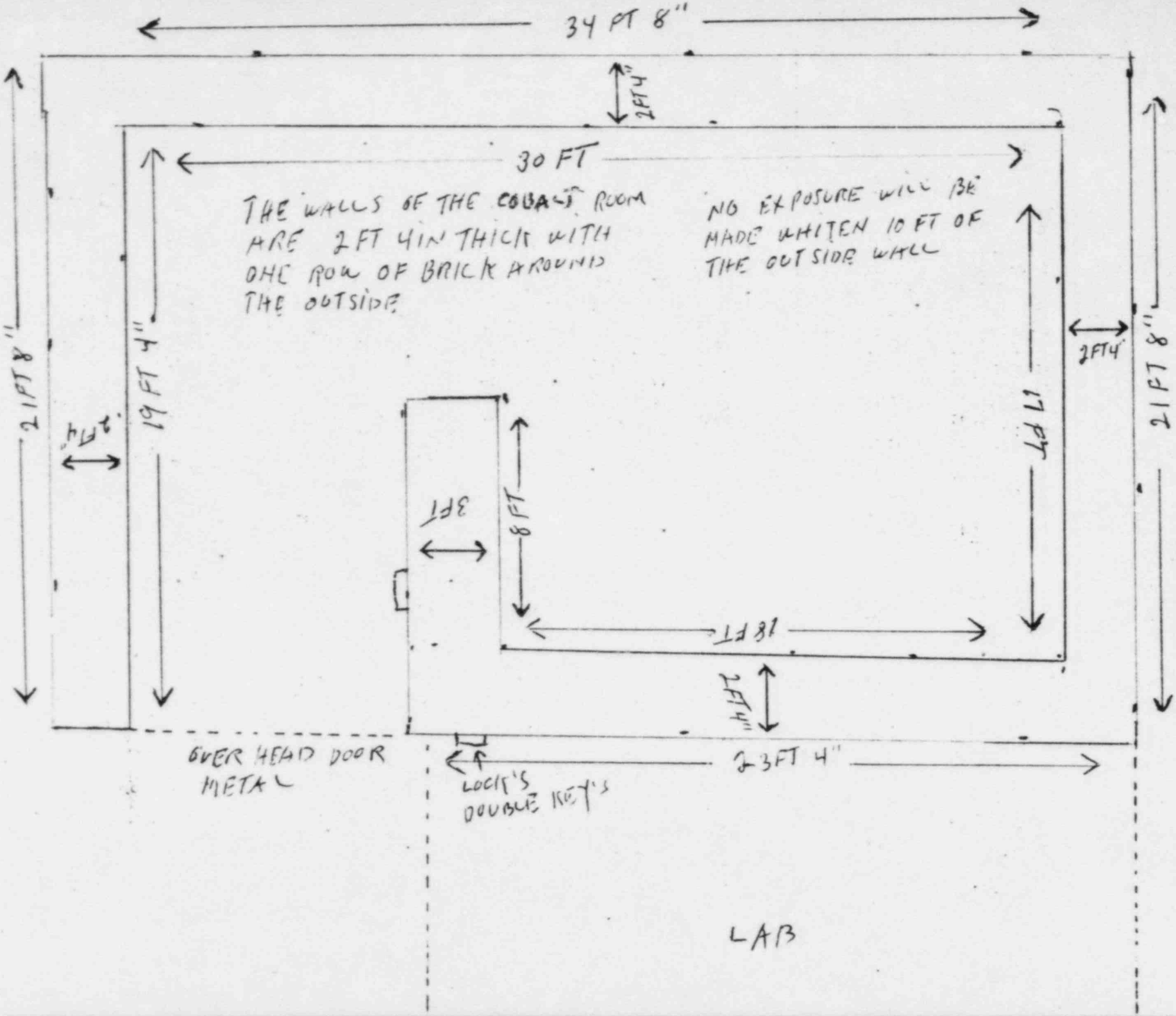
using a 20 curie source which is max. the building was designed for. Cobalt 60 emits 14,500MR/HR at one foot 20 curies x 14,500 MR/HR = 290,000 MR/HR. making no exposure less than 10 ft. from the outside walls $10^2 = 100 \div 290,000$ = 2,900 MR/HR intensity at 10 ft. To reduce the radiation level to 2MR/HR outside the building use the reduction factor $\frac{2,900 MR/HR}{2\ MR/HR} = 1450$ MR/HR.

Using the broadbean shielding for absorption chart for concrete 1450 MR/HR you would use 28 1/2" concrete. Making no exposure less than 10 ft. from the outside of the building the radiation level around the building would be 2 MR/HR or less.

The roof of the cobalt room is metal. There is a 5 ft. high chain link fence around the top of the building. There is no access to the roof. The fence on all sides is posted with "Caution High Radiation Area" signs. All department supervisors will be issued a memo stating that no one is to be in the cobalt room without checking with the radiographer first.

RADIOACTIVE MATERIAL

In reply to your request for the name and model number of the container, there is no visible name or model on it.


34 FT 8"
2FT4"
30 FT
THE WALLS OF THE COBALT ROOM ARE 2FT 4IN THICK WITH ONE ROW OF BRICK AROUND THE OUTSIDE
NO EXPOSURE WILL BE MADE WITHIN 10 FT OF THE OUTSIDE WALL
21FT 8"
19 FT 4"
2FT4"
17 FT
2FT4"
21 FT 8"
3FT
8 FT
18 FT
2FT4"
23FT 4"
OVER HEAD DOOR METAL
LOCK'S DOUBLE KEY'S
LAB

QUARTERLY METER CALIBRATION

CO_{60} x 14.5 =

3 MR/HR =	$\sqrt{}$ =	$\sqrt{}$ =	=	=
6 MR/HR =	$\sqrt{}$ =	$\sqrt{}$ =	=	=
30 MR/HR =	$\sqrt{}$ =	$\sqrt{}$ =	=	=
60 MR/HR =	$\sqrt{}$ =	$\sqrt{}$ =	=	=
300 MR/HR =	$\sqrt{}$ =	$\sqrt{}$ =	=	=
600 MR/HR =	$\sqrt{}$ =	$\sqrt{}$ =	=	=

METER MODEL NO._____ SERIAL NO._____

NAME OF MANUFACTURER_____

DATE_____ NEXT CALBIRATION DATE_____

NAME AND TITLE OF PERSON MAKING CALBIRATION

_____

SOURCE SERIAL NO._____ SOURCE STRENGTH_____

	CALCULATED DISTANCE	METER READING	% ERROR
SCALE 3 MR/HR.	_____	_____	_____
x 1 6 MR/HR	_____	_____	_____
SCALE 30 MR/HR	_____	_____	_____
x 10 60 MR/HR	_____	_____	_____
SCALE 300 MR/HR. . . .	_____	_____	_____
x 100 600 MR/HR	_____	_____	_____

PICKER CORPORATION

INDUSTRIAL DIVISION

THOMAS E. McINNES

has successfully completed a course in

Isotopes for Industrial Radiography

at the Picker Industrial Radiography Laboratory, Cleveland, Ohio

Date July 13, 1973

Vice President M. H. Leipner

Instructor Mark R Rommny

NATIONAL FEEDSCREW & MACHINING, INC.

INTERNAL INSPECTION-RADIOGRAPHY SAFETY

	YES	NO
1. Previous internal inspection records on file, and any deviations corrected or satisfactorily explained.		
2. Film badges worn; exposure records current and available.		
3. Dosimeters working, being worn, records current and available. Calibration current and available.		
4. Warning signs in place and legible; locks, controls and equipment in working condition; audible and visual alarms tested and working. Record of daily inspections current and available. Record of any service work done.		
5. Survey meter working, calibrated, and calibration records current and available.		
6. Leak test current and records available.		
7. Utilization log current and available.		
8. Quarterly inventory completed, current, and records available.		
9. Periodic equipment inspection and maintenance completed, current, and records available.		
10. General housekeeping i the Cobalt Room acceptable.		
11. Required documents available to those people who need access to them.		
12. Are proper security measures being followed.		

COMMENTS:

This inspection conducted on _____, 198____.

_____ _____

C. Calibration of Survey Meters (Continued) -

1. Rezero the survey meter.

m. Place switch on proper scale and read radiation at the distances previously marked on the work sheet. Hold the instrument so that the can chamber is above distance marks. Keep time to a minimum.

n. If the measured radiations are within plus or minus 10 per cent of the calculated valids the source can be returned to its safe position and locked. Place in reverse order as given in g thru k.

o.. Fill out and sign calibration work sheet and file. Mark inspection tag on survey instrument as to the date of the calibration.

D. Inspection and Maintenance of Cobalt Projector -

1. This is to be done once every three (3) months.

2. The source is checked for safe storage. This is accomplished by checking the source position signal lights and survey meter.

3. The source extension housing is disconnected and the shipping dummy is inserted in the source storage safe to confine the source in the stored position.

4. The control housings for the cable is disconnected from the storage safe and the crank. The crank mechanism is disassembled.

5. The control cable is pulled from the cable housing and crank mechanism, coiled for cleaning purposes, as well as inspected for defects.

6. The cable is washed in a basin of solvent and brushed from the safe storage entrance to its end.

7. The crank shell is removed from the crank housing, cleaned and inspected for wear or trouble. The crank housing is also cleaned and inspected.

8. The cable housing, both the extension and control sections are cleaned with solvent and inspected.

9. After giving sufficient time for the cable and housing to dry, the housings are mounted in place and the cable inserted and fed into the control housing. The cable is greased with the recommended lubricant as it is fed into the housing.

10. The crank wheel is greased and mounted in the crank housing and the cable fed to the crank mechanism. After the cable is completely inserted in the housing and crank mechanism, the housing connections are made to the storage safe and crank housing.

11. Records of the maintenance program will be kept for two (2) years or more.