FORM NRC-313 I (3-80)
10 CFR 30

U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR BYPRODUCT MATERIAL LICENSE
INDUSTRIAL

See attached instructions for details.

Completed applications are filed in duplicate with the Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety, and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555 or applications may be filed in person at the Commission's office at 1717 H Street, NW, Washington, D. C. or 7915 Eastern Avenue, Silver Spring, Maryland.

1. APPLICATION FOR: *(Check and/or complete as appropriate)*

X	a. NEW LICENSE
	b. AMENDMENT TO: LICENSE NUMBER
	c. RENEWAL OF: LICENSE NUMBER

2. APPLICANT'S NAME *(Institution, firm, person, etc.)*

Thomas Steel Corporation

TELEPHONE NUMBER: AREA CODE – NUMBER EXTENSION

3. NAME AND TITLE OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION

Wilbur Muzzey - Plant Engineer

TELEPHONE NUMBER: AREA CODE – NUMBER EXTENSION

257-7701 312 41

4. APPLICANT'S MAILING ADDRESS *(Include Zip Code)*
(Address to which NRC correspondence, notices, bulletins, etc., should be sent.)

P.O. Box 280
Lemont, Illinois 60439

5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED *(Include Zip Code)*

Stephen Street - North & Sanitary Canal
Lemont, Illinois 60439

(IF MORE SPACE IS NEEDED FOR ANY ITEM, USE ADDITIONAL PROPERLY KEYED PAGES.)

6. INDIVIDUAL(S) WHO WILL USE OR DIRECTLY SUPERVISE THE USE OF LICENSED MATERIAL
(See Items 16 and 17 for required training and experience of each individual named below)

	FULL NAME	TITLE
a.	James D. Wyatt	Melt Shop Superintendent
b.	Edward F. McCormick	Pit Foreman
c.	Jesse Zaragossa	Pit Foreman

7. RADIATION PROTECTION OFFICER

Wilbur Muzzey

Attach a resume of person's training and experience as outlined in Items 16 and 17 and describe his responsibilities under Item 15.

8. LICENSED MATERIAL

LINE NO.	A ELEMENT AND MASS NUMBER	B CHEMICAL AND/OR PHYSICAL FORM	C NAME OF MANUFACTURER AND MODEL NUMBER *(If Sealed Source)*	D MAXIMUM NUMBER OF MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTIVITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME
(1)	Cesium-137	Sealed Source	3M Co., Model 4F6S	No single source to exceed 1000 millicuries
(2)				
(3)				
(4)				

DESCRIBE USE OF LICENSED MATERIAL
E

(1) For use in a Ronan Model X90-SA-1 Source Holder to measure level of molten
(2) steel in a casting mold.

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DEC 10 1984
REGION III

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REG3 LIC30
12-24421-01 PDR

License Fee Information on Next Page

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CONTROL NO. 77946

9. STORAGE OF SEALED SOURCES

LINE NO.	CONTAINER AND/OR DEVICE IN WHICH EACH SEALED SOURCE WILL BE STORED OR USED. A.	NAME OF MANUFACTURER B.	MODEL NUMBER C.
(1)	Storage in gaging device only.	Ronan Engineering Company	X90-SA-1
(2)			
(3)			
(4)			

10. RADIATION DETECTION INSTRUMENTS

LINE NO.	TYPE OF INSTRUMENT A	MANUFACTURER'S NAME B	MODEL NUMBER C	NUMBER AVAILABLE D	RADIATION DETECTED (alpha, beta, gamma, neutron) E	SENSITIVITY RANGE (milliroentgens/hour or counts/minute) F
(1)	None required. Ronan Engineering will provide start-up service, make initial					
(2)	radiation surveys, and provide 24 hour emergency service.					
(3)						
(4)						

11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10

☐ a. CALIBRATED BY SERVICE COMPANY

NAME, ADDRESS, AND FREQUENCY

N/A

☐ b. CALIBRATED BY APPLICANT

Attach a separate sheet describing method, frequency and standards used for calibrating instruments.

N/A

12. PERSONNEL MONITORING DEVICES

TYPE (Check and/or complete as appropriate.) A	SUPPLIER (Service Company) B	EXCHANGE FREQUENCY C
☐ (1) FILM BADGE ☐ (2) THERMOLUMINESCENCE DOSIMETER (TLD) ☐ (3) OTHER (Specify): _____	None required. Radiation to be less than 5 MR/hr at 1 foot and personnel exposure less than 0.3 Rem/qtr.	☐ MONTHLY ☐ QUARTERLY ☐ OTHER (Specify):

13. FACILITIES AND EQUIPMENT (Check were appropriate and attach annotated sketch(es) and description(s).

☒ a. LABORATORY FACILITIES, PLANT FACILITIES, FUME HOODS (Include filtration, if any), ETC.
☐ b. STORAGE FACILITIES, CONTAINERS, SPECIAL SHIELDING (fixed and/or temporary), ETC.
☐ c. REMOTE HANDLING TOOLS OR EQUIPMENT, ETC.
☐ d. RESPIRATORY PROTECTIVE EQUIPMENT, ETC.

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Date 12/24/85
Log Rec. 17
By CP
Orig. To RIV
Action Compl

14. WASTE DISPOSAL

a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED

b. IF COMMERCIAL WASTE DISPOSAL SERVICE IS NOT EMPLOYED, SUBMIT A DETAILED DESCRIPTION OF METHODS WHICH WILL BE USED FOR DISPOSING OF RADIOACTIVE WASTES AND ESTIMATES OF THE TYPE AND AMOUNT OF ACTIVITY INVOLVED. IF THE APPLICATION IS FOR SEALED SOURCES AND DEVICES AND THEY WILL BE RETURNED TO THE MANUFACTURER, SO STATE.

SEE ATTACHED SHEET

Applicant Log: Dec. 17-III
Check No. 011611
Amount/Fee Category 3P-$126+
Type of Fee APP
Date Check Rec'd 12-24-84
Received By Dac

ON920
A110

1/22/85

FORM NRC-313 I (3-80)

INFORMATION REQUIRED FOR ITEMS 15, 16 AND 17

Describe in detail the information required for Items 15, 16 and 17. Begin each item on a separate page and key to the application as follows:

15. RADIATION PROTECTION PROGRAM. Describe the radiation protection program as appropriate for the material to be used including the duties and responsibilities of the Radiation Protection Officer, control measures, bioassay procedures *(if needed)*, day-to-day general safety instruction to be followed, etc. If the application is for sealed source's also submit leak testing procedures, or if leak testing will be performed using a leak test kit, specify manufacturer and model number of the leak test kit.

16. FORMAL TRAINING IN RADIATION SAFETY. Attach a resume for each individual named in Items 6 and 7. Describe individual's formal training in the following areas where applicable. Include the name of person or institution providing the training, duration of training, when training was received, etc.

    a. Principles and practices of radiation protection.

    b. Radioactivity measurement standardization and monitoring techniques and instruments.

    c. Mathematics and calculations basic to the use and measurement of radioactivity.

    d. Biological effects of radiation.

17. EXPERIENCE. Attach a resume for each individual named in Items 6 and 7. Describe individual's work experience with radiation, including where experience was obtained. Work experience or on-the-job training should be commensurate with the proposed use. Include list of radioisotopes and maximum activity of each used.

Wilbur Muzzey	None	Alexander Baird	None
James D. Wyatt	None	Gerald E. McGuire	None
Edward F. McCormick	None	James H. McNamara	None
Jesse Zaragossa	None		

18. CERTIFICATE

(This item must be completed by applicant)

The applicant and any official executing this certificate on behalf of the applicant named in Item 2, certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, Part 30, and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.

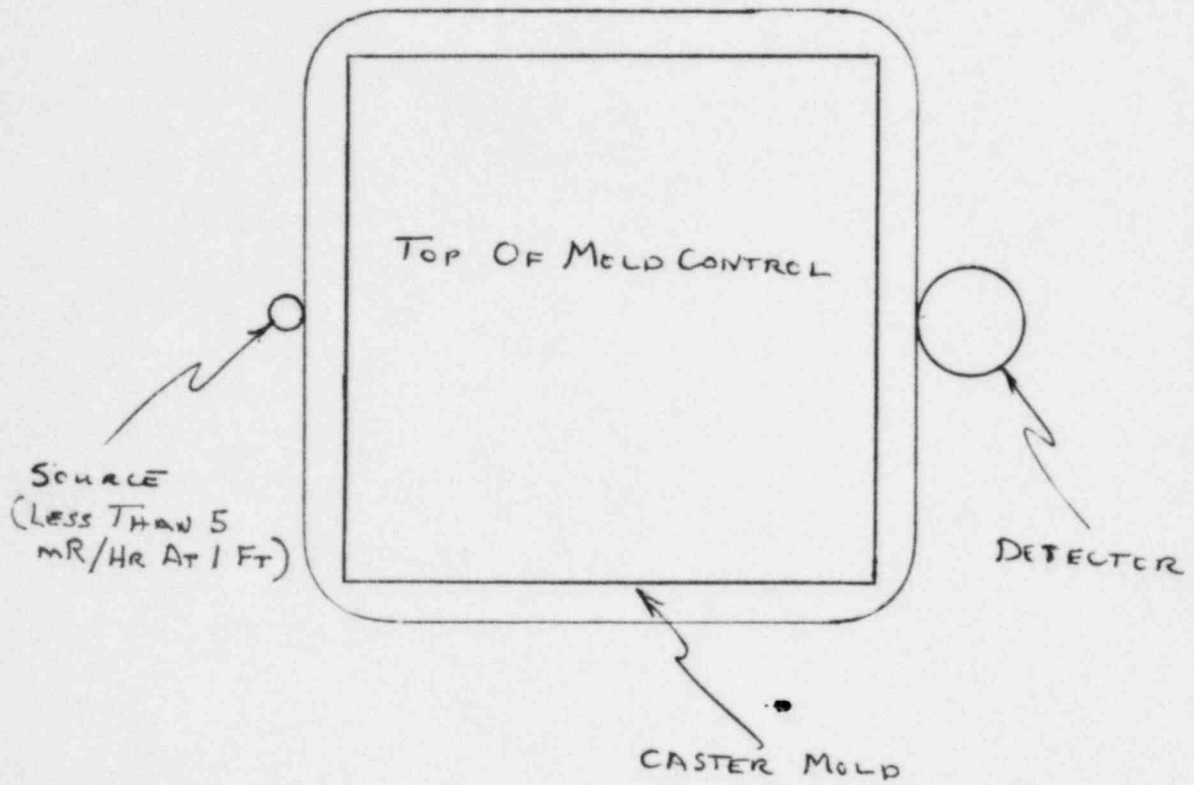
WARNING.—18 U.S.C., Section 1001; Act of June 25, 1948; 62 Stat. 749; makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

a. LICENSE FEE REQUIRED *(See Section 170.31, 10 CFR 170)*	b. CERTIFYING OFFICIAL *(Signature)* C. W. Shaw
	c. NAME *(Type or print)* C. W. Shaw
(1) LICENSE FEE CATEGORY:	d. TITLE Vice President & Plant Manager
(2) LICENSE FEE ENCLOSED: $ 110.00	e. DATE 12-4-84

FORM NRC-313 I (3-80)

CONTROL NO. 77946

ROKOP CASTER MOLD LEVEL MEASUREMENT



SOURCE TO:

OPERATOR DISTANCE ——— 3'

CONTROL ROOM DISTANCE —— 25'

STAIRWAY DISTANCE ——— 30'

ROADWAY DISTANCE ——— 75'

SKETCHED BY
WB Muzzey - 12/4/84
PLANT ENGINEER
THOMAS STEEL CORPRATION

ITEM 13

THOMAS STEEL CORPORATION

TO: THOMAS STEEL MELT SHOP PERSONNEL

SUB: SAFETY PROVISION PROCEDURE FOR CHANGING CASTER MOLDS

Because the molten metal level is controlled by incorporating a hazardous radiation source, the following precautions will be taken prior to changing any molds.

1. Radiation protection officer will be on hand.
2. Radiation source will be shut down.
3. RPO will insure that source unit is properly shut down.

Wilbur Muzzey
Plant Engineer

ITEM 14

WASTE DISPOSAL

Whenever the source holder is no longer needed it will be either

1. removed and stored in a locked room properly labeled. It will not be replaced in service without prior leak testing, or

2. removed and returned to the manufacturer for disposal.

In either case, the services of the manufacturer's representative will be obtained to supervise removal, reinstallation, and/or packaging for return to the manufacturer.

ITEM 15

RADIATION PROTECTION PROGRAM

Instruction for the safe use of this device will be provided by a Ronan Engineering Company representative at the job site. A radiation protection program as outlined by Ronan will be followed, and the Radiation Protection Officer will be apprised of necessary safety procedures.

Control measures:

(a) The source holders will be received and stored pending arrival of Manufacturer's Field Engineer. The source holders will be installed in the closed position under the supervision of the representative. A written procedure for prevention of entry into the vessel when the source is in the open (source exposed) position will be prepared. This program will be developed in consultation with the manufacturer's representative.

(b) The initial radiation survey will be made by the representative at the time of placing the device in service. An occupancy evaluation will be made by the representative and should film badges appear to be required they will be obtained. Form NRC-3 will be posted and should the radiation survey with the vessel (s) empty reveal radiation fields in excess of 5 mR/hr at 12 inches from the surface of the vessel (s), appropriate warning signs will be posted. Procedures will be adjusted to reduce the total dose to personnel to the minimum reasonable achievable. A copy of the radiation survey and written procedures will be kept on file for future reference.

(c) In case of emergency such as fire or explosion involving apparent damage to the source holder the appropriate Regional Office of Inspection and Enforcement (10CFR 20 Appendix D), USNRC will be contacted for assistance. The area around the source holder will be barricaded. The services of a manufacturer's representative will be obtained to assist in inspection for damage and local health authorities will also be notified.

(d) Leak test procedure-A test will be performed on the surface of the source holder at the manufacturer's specified interval of six months or three years by the individual user listed in item 16 of the application in accordance with the instructions of the manufacturer's representative and contained in the gage instruction manual. The wipe test kit to be used is the Ronan Model WK and the wipe will be evaluated for leakage by Ronan Engineering. Should the presence of 0.005 microcuries of removable contamination be detected, the source holder will be withdrawn from service, the Regional Office of the USNRC notified, and the device repaired or replaced by the manufacturer.

ITEM 16

FORMAL TRAINING IN RADIATION SAFETY

Two to three days of training by a Ronan Field Engineer at the jobsite during the startup of the gage.

ITEM 17

EXPERIENCE

List previous experience, if any.

Wilbur Muzzey	None
James D. Wyatt	None
Edward F. McCormick	None
Jesse Zaragossa	None
Alexander Baird	None
Gerald E. McGuire	None
James H. McNamara	None

RONAN

November 30, 1984

THOMAS STEEL
ATTN: MR. BOB THOMAS
P O BOX 280
WILL COUNTY
LEMONT IL 60439

REF: ROKOP CASTER MOLD LEVEL MEASUREMENT
INSTRUCTIONS FOR OBTAINING A SPECIFIC LICENSE FROM THE NUCLEAR REGULATORY COMMISSION (NRC) TO POSSESS RONAN NUCLEAR GAGES

Dear Mr. Thomas:

Enclosed is a sample copy of an application for byproduct material license. This Specific License must be applied for by you in order for you to receive the three Ronan Mold Level Devices. Please appoint someone as your Radiation Safety Officer, or better, a committee to be in charge of safe handling.

Ronan Engineering will provide safety instructions and qualify your people to use the devices at start-up.

A blank copy of an application for byproduct material license is enclosed to be filled in by you. In reviewing the sample copy, items 1, 2, 3, 4, 5, 6, and 7 can easily be completed by you. Items 8, 9, 10, 11, 12, and 13 can be coped from the sample copy onto your blank copy exactly as worded. Item 13 also requires you to submit a free hand sketch of the vessel(s). An example of this can be found on page 68 in the enclosed Ronan Radiation Safety School Handbook.

In completing items 14, 15, 16, and 17, you will also need to refer to the Ronan Radiation Safety School Handbook. The response for item 14 (Waste Disposal) is found on page 69 of the handbook. Please type this response on an attached sheet labeled Item 14 since the space on the form for the answer is not large enough. As stated on the application, items 15, 16, and 17 need to be addressed on separate pages for each item. The response for Item 15 can be found on page 69 of the enclosed handbook and Items 16 and 17 are on page 70. They can be typed exactly as seen in the book.

The procedure for applying for a Specific License is very simple. However, the sooner you submit your application to the USNRC, Region III, the easier it will be to meet the required ship date. We are prepared to ship the devices by the end of January, but we MUST have a copy of your license IN OUR HANDS before we are permitted to ship the equipment.

RONAN ENGINEERING COMPANY
MEASUREMENTS DIVISION
8050 Production Drive • Florence, Kentucky 41042 • (606) 342-8500 • TELEX 214-700

Therefore, we recommend strongly that you apply for this license as soon as possible. We will assist you in any way we can. The license application must however be initiated by you. It normally takes approximately 4 to 6 weeks for the license application to be looked at, reviewed, and signed by the NRC. It will then be sent out to you and then you will send a Xerox copy to us. That's all that is required.

If you will send me a copy of your completed application form the same time you send your original and one copy to the NRC Region III, I will keep on top of it with them in efforts to expedite the processing of your license. Also, if you have any questions whatsoever in completing the application, please don't hesitate to call us. We look forward to working with you.

Very truly yours,

RONAN ENGINEERING COMPANY
MEASUREMENTS DIVISION

Marlene Cahill

Marlene Cahill
Licensing

mc

enclosures

P. S. Be sure to enclose the proper application fee:

New License - $110.00

Send to:

REGION III, OFFICE OF INSPECTION AND ENFORCEMENT, USNRC
799 ROOSEVELT ROAD
GLEN ELLYN IL 60137

cc: Mr. Harvey Treschow, Rokop Corporation