

FORM NRC-313 I (3-80) 10 CFR 30	U.S. NUCLEAR REGULATORY COMMISSION	1. APPLICATION FOR: <u>NEW LICENSE</u> (Check and/or complete as appropriate)
APPLICATION FOR BYPRODUCT MATERIAL LICENSE INDUSTRIAL		a. NEW LICENSE
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 K Street, NW, Washington, D. C. or 7915 Eastern Avenue, Silver Spring, Maryland.		b. AMENDMENT TO: LICENSE NUMBER
		c. RENEWAL OF: LICENSE NUMBER X <u>12-13972-02</u>

2. APPLICANT'S NAME (Institution, firm, person, etc.) <u>Northern Petrochemical Company</u> TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION <u>(815) 942-7011</u>	3. NAME AND TITLE OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION <u>John H. Lovell, Supt. Design Engr.</u> TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION <u>(815) 942-7263</u>
4. APPLICANT'S MAILING ADDRESS (Include Zip Code) (Address to which NRC correspondence, notices, bulletins, etc., should be sent.) <u>P.O. Box 459</u> <u>Morris, IL 60450</u>	5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED (Include Zip Code) <u>Rt. 6 & Tabler Road</u> <u>Morris, IL 60450</u>

(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. <u>John H. Lovell</u>	<u>Supt. Design Engineering</u>
b. <u>Ronald K. Barnard</u>	<u>Feedstock Analyst</u>
c. <u>Phillip I. Derby</u>	<u>Supt. Elec. & Instrument Maintenance</u>
7. RADIATION PROTECTION OFFICER <u>John H. Lovell</u>	

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.	ELEMENT AND MASS NUMBER	CHEMICAL AND/OR PHYSICAL FORM	NAME OF MANUFACTURER AND MODEL NUMBER (If Sealed Source)	MAXIMUM NUMBER OF MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTIVITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME
	A	B	C	D
(1)	<u>Cesium 137</u>		<u>Chmart Corp. Mod. #A-2102</u>	4 @ 2 Ci TOTAL
(2)	<u>Cobalt 60</u>		<u>Gamma Industries Mod. S-17</u>	8 @ 300mCi TOTAL
(3)	<u>Cesium 137</u>		<u>New England Nuclear Mod. #NER-370</u>	1 @ 10mCi TOTAL
(4)	<u>Nickel 63</u>		<u>Tracor, Inc. Mod. #111019-001</u>	2 @ 200mCi TOTAL

THIS DOCUMENT CONTAINS
POOR QUALITY PAGES

E	
DESCRIBE USE OF LICENSED MATERIAL	
(1)	<u>To be used in Chmart Model SHRH-A source holders to detect level of molten polymer in steel vessels.</u>
(2)	<u>To be used to detect level of molten polymer in steel vessels. 20 sources to be installed in 4 vessels. 20 sources to be in possession only during time required to replace the sources approximately every 4 years.</u>
(3)	<u>1mCi source to be used in a Kay-Ray, Inc Model 7062 source holder. 200mCi sources to be used in Kay-Ray, Inc Model 7063 source holders. All to be used to measure polymer powder level in steel vessel.</u>

FORM NRC-313 I (3-80) Foil in a detector cell to be used in a Honeywell H-1000 gas chromatograph.

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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)	Sources in use in Manufacturer's source holder	Ohmart Corp.	SHRH-1
(2)	Sources installed in vessel or stored in lead-filled container (see Attach. A)	Ohmart Corp.	See Ohmart Dwg. E-17850
(3)	Sources in use in Manufacturer's source holder	Kay-Ray, Inc.	10mCi in 7062 200mCi in 7063
(4)	Source used in Manufacturer's source holder	Tracer, Inc.	111010-001

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)		Vistoreen	M/592B	1	Gamma	Min. 0-1 mr/hr Max. 0-100 mr/hr
(2)						
(3)						
(4)						

11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10

☐ a. CALIBRATED BY SERVICE COMPANY

NAME, ADDRESS, AND FREQUENCY

☐ b. CALIBRATED BY APPLICANT

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

12. PERSONNEL MONITORING DEVICES

TYPE (Check and/or complete as appropriate.) A.	SUPPLIER (Service Company) B.	EXCHANGE FREQUENCY C.
<input type="checkbox"/> (1) FILM BADGE <input type="checkbox"/> (2) THERMOLUMINESCENCE DOSIMETER (TLD) <input type="checkbox"/> (3) OTHER (Specify): _____ _____ _____	None Required	<input type="checkbox"/> MONTHLY <input type="checkbox"/> QUARTERLY <input type="checkbox"/> OTHER (Specify): _____ _____ _____

13. FACILITIES AND EQUIPMENT (Check where 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.

14. WASTE DISPOSAL

a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED

None

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.

All sources are sealed and will be returned to the original manufacturer in the event they need replacement or are retired from service.

8. LICENSED MATERIAL cont.

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Element And Mass Number	Chemical And/Or Physical Form	Name Of Manufacturer And Model Number	Maximum Number Of Millicuries And/Or Sealed Sources And Maximum Acti- vity Per Source Which Will Be Possessed At Any 1 Time
A	B	C	D
(5) Cesium 137		Texas Nuclear Corp. Mod. #696-696833	8 @ 1 Ci TOTAL 8 Ci
(6) Cesium 137		Texas Nuclear Corp. Mod. #570-57157	2 @ 200mCi TOTAL 400mCi

DESCRIBE USE OF LICENSED MATERIAL cont.

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(5) To be used in Texas Nuclear Corp. Model 5196 source holders for detection of polymer powder level in steel reactor vessels.

(6) To be used in Texas Nuclear Corp. Model 5180A source holders for detection of powder level in steel tanks.

9. STORAGE OF SEALED SOURCES cont.

Container And/Or Device In Which Each Sealed Source Will Be Stored Or Used	Name Of Manufacturer	Model Number
A	B	C
(5) Source used and stored in Manufacturer's source holder	Texas Nuclear Corp.	696-696833
(6) Source used and stored in Manufacturer's source holder	Texas Nuclear Corp.	570-57157