

UNITED STATES ATOMIC ENERGY COMMISSION

APPLICATION FOR SOURCE MATERIAL LICENSE

Pursuant to the regulations in Title 10, Code of Federal Regulations, Chapter 1, Part 40, application is hereby made for a license to receive, possess, use, transfer, deliver or import into the United States, source material for the activity or activities described.

1 (Check one) <input checked="" type="checkbox"/> (a) New license <input type="checkbox"/> (b) Amendment to License No. _____ <input type="checkbox"/> (c) Renewal of License No. _____ <input type="checkbox"/> (d) Previous License No. _____		2 NAME OF APPLICANT THE PESSES CO.	
3 PRINCIPAL BUSINESS ADDRESS 29605 Hall Street Solon, Ohio 44139			
4 STATE THE ADDRESS(ES) AT WHICH SOURCE MATERIAL WILL BE POSSESSED OR USED 29605 Hall Street, Solon, Ohio 44139			
5 BUSINESS OR OCCUPATION Manufacture & Distribution of alloys		6 (a) IF APPLICANT IS AN INDIVIDUAL, STATE CITIZENSHIP (b) AGE	
7 DESCRIBE PURPOSE FOR WHICH SOURCE MATERIAL WILL BE USED SEE ATTACHED			
8 STATE THE TYPE OR TYPES, CHEMICAL FORM OR FORMS, AND QUANTITIES OF SOURCE MATERIAL YOU PROPOSE TO RECEIVE, POSSESS, USE, OR TRANSFER UNDER THE LICENSE			
(a) TYPE	(b) CHEMICAL FORM	(c) PHYSICAL FORM (Including % U or Th.)	(d) MAXIMUM AMOUNT AT ANY ONE TIME (in pounds)
NATURAL URANIUM			
URANIUM DEPLETED IN THE U 235 ISOTOPE			
THORIUM (ISOTOPE)		2% Thoriated Nickel and/or Nickel Alloys	25,000 lbs. scrap alloy (containing 500 lbs. Thorium Oxide)
(e) MAXIMUM TOTAL QUANTITY OF SOURCE MATERIAL YOU WILL HAVE ON HAND AT ANY TIME (in pounds) 500 lbs. Thorium contained			
9 DESCRIBE THE CHEMICAL, PHYSICAL, METALLURGICAL, OR NUCLEAR PROCESS OR PROCESSES IN WHICH THE SOURCE MATERIAL WILL BE USED, INDICATING THE MAXIMUM AMOUNT OF SOURCE MATERIAL INVOLVED IN EACH PROCESS AT ANY ONE TIME, AND PROVIDING A THOROUGH EVALUATION OF THE POTENTIAL RADIATION HAZARDS ASSOCIATED WITH EACH STEP OF THOSE PROCESSES SEE ATTACHED			
10 DESCRIBE THE MINIMUM TECHNICAL QUALIFICATIONS INCLUDING TRAINING AND EXPERIENCE THAT WILL BE REQUIRED OF APPLICANT'S SUPERVISORY PERSONNEL INCLUDING PERSON RESPONSIBLE FOR RADIATION SAFETY PROGRAM (OR OF APPLICANT IF APPLICANT IS AN INDIVIDUAL) SEE ATTACHED			
11 DESCRIBE THE EQUIPMENT AND FACILITIES WHICH WILL BE USED TO PROTECT HEALTH AND MINIMIZE DANGER TO LIFE OR PROPERTY AND RELATE THE USE OF THE EQUIPMENT AND FACILITIES TO THE OPERATIONS LISTED IN ITEM 9. INCLUDE (a) RADIATION DETECTION AND RELATED INSTRUMENTS (including film badges, dosimeters, counters, air sampling, and other survey equipment as appropriate. The description of radiation detection instruments should include the instrument characteristics such as type of radiation detected, window thickness, and the range(s) of each instrument). SEE ATTACHED			
(b) METHOD, FREQUENCY AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED IN (a) ABOVE, INCLUDING AIR SAMPLING EQUIPMENT (for film badges, specify method of calibrating and processing, or name supplier).			

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11(c) VENTILATION EQUIPMENT WHICH WILL BE USED IN OPERATIONS WHICH PRODUCE DUST, FUMES, MISTS OR GASES, INCLUDING PLAN VIEW SHOWING TYPE AND LOCATION OF HOOD AND FILTERS, MINIMUM VELOCITIES MAINTAINED AT HOOD OPENINGS AND PROCEDURES FOR TESTING SUCH EQUIPMENT.

12. DESCRIBE PROPOSED PROCEDURES TO PROTECT HEALTH AND MINIMIZE DANGER TO LIFE AND PROPERTY AND RELATE THESE PROCEDURES TO THE OPERATIONS LISTED IN ITEM 9. INCLUDE (a) SAFETY FEATURES AND PROCEDURES TO AVOID NONNUCLEAR ACCIDENTS, SUCH AS FIRE, EXPLOSION, ETC. IN SOURCE MATERIAL STORAGE AND PROCESSING AREAS.

SEE ATTACHED

(b) EMERGENCY PROCEDURES IN THE EVENT OF ACCIDENTS WHICH MIGHT INVOLVE SOURCE MATERIAL.

SEE ATTACHED

(c) DETAILED DESCRIPTION OF RADIATION SURVEY PROGRAM AND PROCEDURES.

SEE ATTACHED

13. WASTE PRODUCTS: If none will be generated, state "None" opposite (a), below. If waste products will be generated, check here ☒ and explain on a supplemental sheet:

- (a) Quantity and type of radioactive waste that will be generated.
- (b) Detailed procedures for waste disposal.

14. IF PRODUCTS FOR DISTRIBUTION TO THE GENERAL PUBLIC UNDER AN EXEMPTION CONTAINED IN 10 CFR 40 ARE TO BE MANUFACTURED, USE A SUPPLEMENTAL SHEET TO FURNISH A DETAILED DESCRIPTION OF THE PRODUCT, INCLUDING:

- (a) PERCENT SOURCE MATERIAL IN THE PRODUCT AND ITS LOCATION IN THE PRODUCT.
- (b) PHYSICAL DESCRIPTION OF THE PRODUCT INCLUDING CHARACTERISTICS, IF ANY, THAT WILL PREVENT INHALATION OR INGESTION OF SOURCE MATERIAL THAT MIGHT BE SEPARATED FROM THE PRODUCT.
- (c) BETA AND BETA PLUS GAMMA RADIATION LEVELS (Specify instrument used, date of calibration and calibration technique used) AT THE SURFACE OF THE PRODUCT AND AT 12 INCHES.
- (d) METHOD OF ASSURING THAT SOURCE MATERIAL CANNOT BE DISASSOCIATED FROM THE MANUFACTURED PRODUCT.

CERTIFICATE

(This item must be completed by applicant)

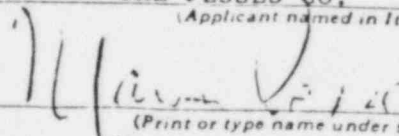
15. The applicant, and any official executing this certificate on behalf of the applicant named in Item 2, certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, Part 40, and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.

THE PESSES CO.

(Applicant named in Item 2)

Dated July 23, 1975

BY:



(Print or type name under signature)

Marvin Pesses

President

(Title of certifying official authorized to act on behalf of the applicant)

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.

Form AEC-2
Application for Source Material License
July 23, 1975

7. Source materials, 2% maximum ThO_2 , such as Nickel-Thoria, in the form of plate scrap, will be used as 10% of a melt along with Nickel, Copper, Silicon, etc., and induction melted under an oxidizing slag cover. The resultant product will be used as an addition agent of 1% maximum in gray iron foundries. However, eventually all of the Thoria will be tied up in an insoluble siliceous slag.
9. As described in Item No. 7, the materials are received as sheared plate, with no fine particles. These are placed into a furnace as 1/10th of a furnace charged with Nickel and Silicon in an induction furnace under a slag cover and then poured into pigs, so there are no airborne particles as fine particulate. In any case, the Thorium content of the metal is almost nil at this point in time. These pigs are used by iron and steel foundries as 1 - 2% of their charge. The Thoria content of the resultant slag will be less than 2%.
10. Dr. Marvin Pesses will supervise any radiation safety program required. However, it is our opinion that the precautions noted below are sufficient unto themselves, based upon many years of past experience.
11. While Vice President at Mercer Alloys, Greenville, Pennsylvania, we melted similarly, checked for radiation levels, and had no problems in this area. Both the sheared plate and the final pigs are handled with gloves. There are no airborne particles and no ventilation is required for this purpose.
12. (a) The source material is stored as heavy sheared plate in 55 gallon heavy gauge steel drums. There is nothing that a fire or explosion will do nor is there any potential for same.

(b) and (c) We do not believe any is needed, but would be willing to comply with AEC recommendations.
13. The waste slag will be buried and/or stored on our 15 acres of land in conformity with AEC requirements.