

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.

- a. NEW LICENSE
b. AMENDMENT TO LICENSE NUMBER
c. RENEWAL OF LICENSE NUMBER
X #37-03572-06

2. APPLICANT'S NAME (Institution, firm, person, etc.)
Hamilton Watch Company, Inc.
941 Wheatland Ave., Lancaster PA 17604
TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION
717/394-7161

3. NAME OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION
Thomas E. Deitzler
TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION
717/394-7161 Extension 231

4. APPLICANT'S MAILING ADDRESS (Include Zip Code)
Same

5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED (Include Zip Code)
Same
3615 #460/3A
Renewal
3/22/82

(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)

Table with columns: FULL NAME, TITLE. Rows: a. Daniel Fenwick (Supervisor of TLQ & Quartz Analog Repair), b. W. Parke McKinney (Director of Factory Operations), c. Thomas E. Deitzler (Industrial Engineer)

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

B. LICENSED MATERIAL

Table with columns: LINE NO., 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 ACTIVITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME

DESCRIBE USE OF LICENSED MATERIAL E

8512050416 X4

(1) Tritium filled tubes to be placed behind a liquid crystal display within a digital watch, permitting reading of time in low ambient light. For sale of a Hamilton watch to pensions as authorized by section 32.22, 10CFR32. Hamilton LCD watches will be manufactured under California radioactive material.

(4) (Home Use License) 0-

10678

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)	Sorosilicate Glass Sources	American Atomics Corporation	(M/N 60307)
(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)	Tritium Air Monitor	Overhoff & Assoc.	Betatec Mod. 210	1	SuCi/M3 to 2000 uCi/MET.	Survey
(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.
Betatec Model 210 is calibrated in accordance with instructions supplied by Overhoff and Associates.

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"/> MONTHLY
<input type="checkbox"/> (2) THERMOLUMINESCENCE DOSIMETER (TLD)		<input type="checkbox"/> QUARTERLY
<input checked="" type="checkbox"/> (3) OTHER (Specify): Refer Supplement 12		<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. Refer Supplement 13

d. RESPIRATORY PROTECTIVE EQUIPMENT, ETC.

14. WASTE DISPOSAL

a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED
Refer Supplement 14

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 THIS APPLICATION IS FOR SEALED SOURCES AND DEVICES AND THEY WILL BE RETURNED TO THE MANUFACTURER, SO STATE.

Do not place this info
 on the back of the info
 sheet.

6. IF COMMERCIAL, W
BE USED FOR DISP
THE APPLICATION

3-313 (11-75)

INFORM DN 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.
Refer to Supplement 15
- 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.

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 170.31)	b. CERTIFYING OFFICIAL (Signature) <i>Thomas E. Dettmer, Jr.</i>
	c. NAME (Type or print) Thomas E. Dettmer, Jr.
(1) LICENSE FEE CATEGORY 3A	d. TITLE Mgr. - Industrial & About Equip.
(2) LICENSE FEE ENCLOSED: \$460.00	e. DATE Oct 11, 1962

SUPPLEMENT TO ATOMIC ENERGY COMMISSION FORM 313SUPPLEMENT SECTION 11

The monitor shall be calibrated at a frequency of once a month. The monitor shall be re-calibrated if, for reasons of one kind or another, the instrument has been out of service. The monitor shall be re-calibrated if the alarm has been used. Equipment used for calibration for the monitor shall be a calibrator type CL-1 (Accuracy $\pm 10\%$, reproductable $\pm 2\%$, no license required), made by Johnston Laboratories, Cockeysville, Maryland. The monitor shall be calibrated according to instructions provided by Johnston Laboratories, by Thomas E. Deitzler, Industrial Engineer, at Hamilton Watch Company, Inc.

The Tritium air monitor which shall be used has the following specifications: Minimum Scale - 0 to 10 $\mu\text{Ci}/\text{M}^3$ with gamma compensation; Accuracy - 10% of full scale; Reproducibility - $\pm 2\%$; Capacity - 10 liter; Time Constant - 15 seconds, 45 seconds. The monitor shall be equipped with a strip charge recorder and the records of this strip charge recorder are going to be kept and audited on a yearly basis. The sensitivity of this equipment is 1 $\mu\text{Ci}/\text{M}^3$ of tritium. In addition to the above, a Radiation Safety Course shall be attended by Mr. Thomas E. Deitzler as soon as possible.

See the following attached pages for Equipment Specifications.