

Estimated burden per response to comply with this mandatory collection request: 4.4 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

APPLICATION FOR MATERIAL LICENSE

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, MISSISSIPPI, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

LICENSING ASSISTANCE TEAM
DIVISION OF NUCLEAR MATERIALS SAFETY
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-4005

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

1. THIS IS AN APPLICATION FOR (Check appropriate item)



A. NEW LICENSE



B. AMENDMENT TO LICENSE NUMBER _____



C. RENEWAL OF LICENSE NUMBER _____

2. NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP code)

Library of Congress
Conservation Division LM-G38
101 Independence Ave, SE
Washington, DC 20540-4530

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

Conservation Division LM-G38
101 Independence Ave, SE
Washington, DC 20540-4530

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Sylvia R. Albro, 202-707-1202; F. Hengemihle, 202-707-1791

TELEPHONE NUMBER

(202) 707-1202

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL

a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSE FEES (See 10 CFR 170 and Section 170.31)

FEE CATEGORY 1D

AMOUNT ENCLOSED

1200.00
\$ 2,000.00

13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

SEE ATTACHED NOTE PAGE 5

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR 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.

CERTIFYING OFFICER -- TYPED/PRINTED NAME AND TITLE

Nels A. Olson Ph.D. Chief Preservation Research

SIGNATURE

N. A. Olson

DATE

05/15/2007

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			\$		
APPROVED BY				DATE	

140606
NMSS/RGN1 MATERIALS-002

March 2007

Library of Congress Preservation Directorate

Application for the Material License for beta-radiographic plates

Category: Academic use of Nuclear Material

Attachment to NRC Form 313

5. RADIOACTIVE MATERIAL:

Two sheets of polymethyl methacrylate measuring 15cm x 20cm x 1mm in size, each containing 13.6 millicuries of Carbon-14. The sealed sources are manufactured by GE Healthcare (formerly Amersham Biosciences) according to Model CFR series.

6. PURPOSE FOR WHICH LICENSED MATERIAL WILL BE USED:

The licensee, to obtain images of watermarks from rare books and other historical works on paper, will use the beta-radiography plates. The method use is the following: 1) the beta plate is positioned against a paper or book page in the location which contains a watermark, 2) a piece of photographic film is placed on the other side of the page and the image is produced upon long-term exposure (2-8 hours) depending on the thickness of the paper.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE:

Robert Browne is the Library of Congress Safety Officer who will be ultimately responsible for the overall safety program at the Library of Congress. Within the Preservation Directorate, where the Beta Radiograph plates will be kept and used, Dr. Nels Olson is the Chief of the Research and Testing Division and will be responsible for the laboratory safety program. Dr. Olson has degrees in Organic Synthesis/Analytical Chemistry from University of Washington and Biochemistry from Reed College. Molecular Dynamics, Illumina, Amersham and the Surface Chemistry Institute in Stockholm Sweden where he had responsibility for the use and handling of radioactive materials previously employed Dr. Olson. Dr. Lambertus van Zelst, consulting scientist to the Preservation Research and Testing Laboratory has a PhD in nuclear physics.

Frank Hengemihle is the Radiation Safety Officer for the Research and Testing Division laboratory. He has a Master's degree in Physical Science and he attended the Radiation Safety Protective Training Course at the Library of Congress presented by the Federal Occupational Health Service in 2006 and received a certificate after passing an exam. Frank Hengemihle has extensive hands-on experience with the x-ray equipment at the Library of Congress.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS

All authorized users (AU) who will be operating the beta-radiographic plates within the Preservation Directorate have received Radiation Safety Protective Training presented by the Federal Occupational Health Service to the Library of Congress, passed a written exam and received a certificate. These individuals learned how to safely handle, operate and store the material. (This course was most recently presented in April of 2006). The same course will be provided for new users. Conservator Sylvia Albro has taken the Radiation Safety Protective Training and has five years of experience working with beta-radiographic plates for obtaining watermark images at the Library of Congress.

9. FACILITIES AND EQUIPMENT

The beta-radiographic plates will be stored between polyester sheets inside sealed boxes in a laboratory cabinet in the licensee's facilities located at the Library of Congress. The plates will be labeled with identifying information and the sealed box will have a warning sticker attached. The box will be kept in a closed laboratory cabinet with a radiation-warning label on the outside. No one will have access to the laboratory without authorization by the Chief of the Division. The laboratory is a secure area with access only by coded pass. Security guards are present in the building at all times.

10. RADIATION SAFETY PROGRAM

The licensee will annually inspect the radiographic plates, and their housing and storage. The licensee will use a Geiger counter with a thin-end window to annually measure for radiation leakage through the storage materials housing the plates. Information from the inspections will be recorded in a chart and kept for a minimum of three years. Records of these inspections will include: date of audit, name of person(s) who conducted audit, persons contacted by the auditor(s), areas audited, audit findings, corrective actions, and follow-up. NRC will maintain these records for inspections.

With regard to monitoring individuals' exposure to radiation, the level of radiation emitted by the beta-radiographic plates is much lower than the threshold that requires monitoring of individuals. However, all AU's will wear an identifying badge while they are handling the beta-radiographic plates.

11. WASTE MANAGEMENT

Licensees will transfer radioactive waste to an authorized recipient for disposal. The licensee's will verify that the intended recipient is authorized to receive the radioactive waste prior to making the shipment. The waste will be packaged in approved containers for shipment, and each container will identify the radioisotopes and the amounts contained in the waste.

The licensee will provide all information required in NRC's Uniform Low-Level Radioactive Waste Manifest, and transfer this recorded manifest information to the intended recipient in accordance with 10 CFR Part 20, Appendix G.

06/06/2007

NRC,

Payment has been made for this license by credit card to Shirley Crutchfield on 06/06/2007. For varification call 301 415-6097. The Library would appreciate this application being made a priority as our two Beta-Radiography plates are currently being held for shipping by the company.

Michael Smith
Library of Congress Preservation Directorate
202 707-6066
msmith@loc.gov

This is to acknowledge the receipt of your letter/application dated

5/15/2007, and to inform you that the initial processing which includes an administrative review has been performed.

☒ NEW LICENSE APPLICATION (03037484)
There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

☐ Please provide to this office within 30 days of your receipt of this card

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned Mail Control Number 140606.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.

BETWEEN:

License Fee Management Branch, ARM
and
Regional Licensing Sections

: (FOR LFMS USE)
: INFORMATION FROM LTS
: -----
:
: Program Code: 03122
: Status Code: 3
: Fee Category: _____
: Exp. Date: 0
: Fee Comments: _____
: Decom Fin Assur Reqd: __
: ::

LICENSE FEE TRANSMITTAL

A. REGION **I**

1. APPLICATION ATTACHED

Applicant/Licensee: LIBRARY OF CONGRESS
Received Date: 20070608
Docket No: 3037484
Control No.: 140606
License No.: **08-31251-01**
Action Type: New Licensee

2. FEE ATTACHED

Amount: **See note below.**
Check No.: _____

3. COMMENTS

**Note attached to application
stating credit card info given
to Shirley Crutchfield, Fee Br
on 6/6/2007.**

Signed *M. A. Perkins*
Date 6/12/2007

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered /___/)

1. Fee Category and Amount: _____

2. Correct Fee Paid. Application may be processed for:

Amendment _____
Renewal _____
License _____

3. OTHER _____

Signed _____
Date _____