



RESEARCH CENTER  
350 KNOTTER DRIVE, P.O. BOX 586  
CHESHIRE, CT 06410-0586  
(203) 271-4000

June 18, 1985

John E. Glenn  
U.S. Nuclear Regulatory Commission  
Region 1  
631 Park Avenue  
King of Prussia, PA 19406

Reference Material License 06-08166-02

Dear Dr. Glenn:

We wish to amend the above cited Material License as follows,  
for which we enclosed a required check for \$120.00.

1. Under Section 6: add P-32, any chemical or physical form,  
not to exceed 5mCi

add S-35, any chemical or physical form,  
not to exceed 5mCi

add H-3, any chemical or physical form,  
not to exceed 10 mCi

add I-125, any chemical or physical form,  
not to exceed 5 mCi

2. Under Section 12: add the name of Jon R. Geiger (Resume  
attached - Attachment 1 dated June 18,  
1985)
3. The three radionuclides will be used in our biotechnology  
program but as per section 18 of our license no material will  
be used in or on human beings. A description of the  
anticipated usage is enclosed in Attachment 2.
4. Materials will be handled in Laboratories B31 and B15 shown  
in yellow on attached Figure 1.
5. Detailed laboratory floor plans of Labs B31 and B15 are  
attached, Figures 2 and 3.

Sincerely,

Robert N. Scott  
Associate Director of Research

8512190297 851118  
REG1 LIC30  
06-08166-02 PDR

att.

OLIN CORPORATION

"OFFICIAL RECORD COPY"

JUN 24 1985

ML10 03997

*July-4-I*

Check No.	289270
Amount, Fee Category	7/120(3m)
Type of Fee	Amendment
Date Check Rec'd.	7/5/85
Received By	Jacques

## ATTACHMENT 2

### USES OF RADIONUCLIDES IN BIOTECHNOLOGY

1. Phosphorus-32 and sulfur-35 are used as isotopic tracers in experiments designed to determine deoxyribonucleic acid (DNA) sequences. Labelled monomers are incorporated enzymatically into DNA polymers. The labelled polymers are then subjected to polyacrylamide gel electrophoresis and the sequences determined after autoradiography.
2. Hydrogen-3 (tritium) is used as a label in DNA hybridization experiments. Deoxythymidine 5'triphosphate[methyl-<sup>3</sup>H] (purchased from New England Nuclear) is enzymatically incorporated into DNA sequences (probes) designed to bind to complementary DNA sequences in specific microorganisms. The label is used to detect binding of the probes and therefore presence of the particular organisms containing complementary DNA.
3. I-125 used in Biotechnology for "radioimmunoassays" (RIA). As a label, it is incorporated into antibody and antigen molecules to facilitate the detection of antibody-antigen reactions.

U.S. N.R.C.  
IN. FEE MGMT. BRANCH

85 JUL -5 PM 2:24

## Resume

Jon Ross Geiger

Address: Olin Research Center  
P.O. Box 586  
Cheshire, CT 06410

Telephone: (203) 271-4087 (office)  
(203) 245-0219 (home)

## Education:

B.S.	1965	Pennsylvania State University (Science: Chemistry)
Graduate	1966	Nuclear Power School, run by General Electric Company and U.S. Navy (one-year course)
Graduate	1972	Bacterial Genetics Summer Course Cold Spring Harbor Laboratory
Ph.D.	1976	University of Connecticut (Genetics)

## Work Experience:

1965-1970	U.S. Navy submarine service Last Position: Weapons Officer and Nuclear Safety Officer
1970-1974	Teaching Assistant, Biology Department University of Connecticut
1974-1976	NIH Cell Biology Trainee, University of Connecticut Field of Training: Molecular Genetics Handled <sup>3</sup> H-labeled nucleotides for use in studying nucleic acid metabolism
1975	Instructor, University of Connecticut
1976-1981	Assistant Professor, Smith College Supervised the use by students of <sup>3</sup> H-labeled nucleotides
1980-1981	Visiting Scientist, Biology Department Massachusetts Institute of Technology Observed the handling and use of <sup>32</sup> P-labeled nucleotides

FIGURE 1

Olin Research Center  
350 Knotter Drive  
Cheshire, CT 06410

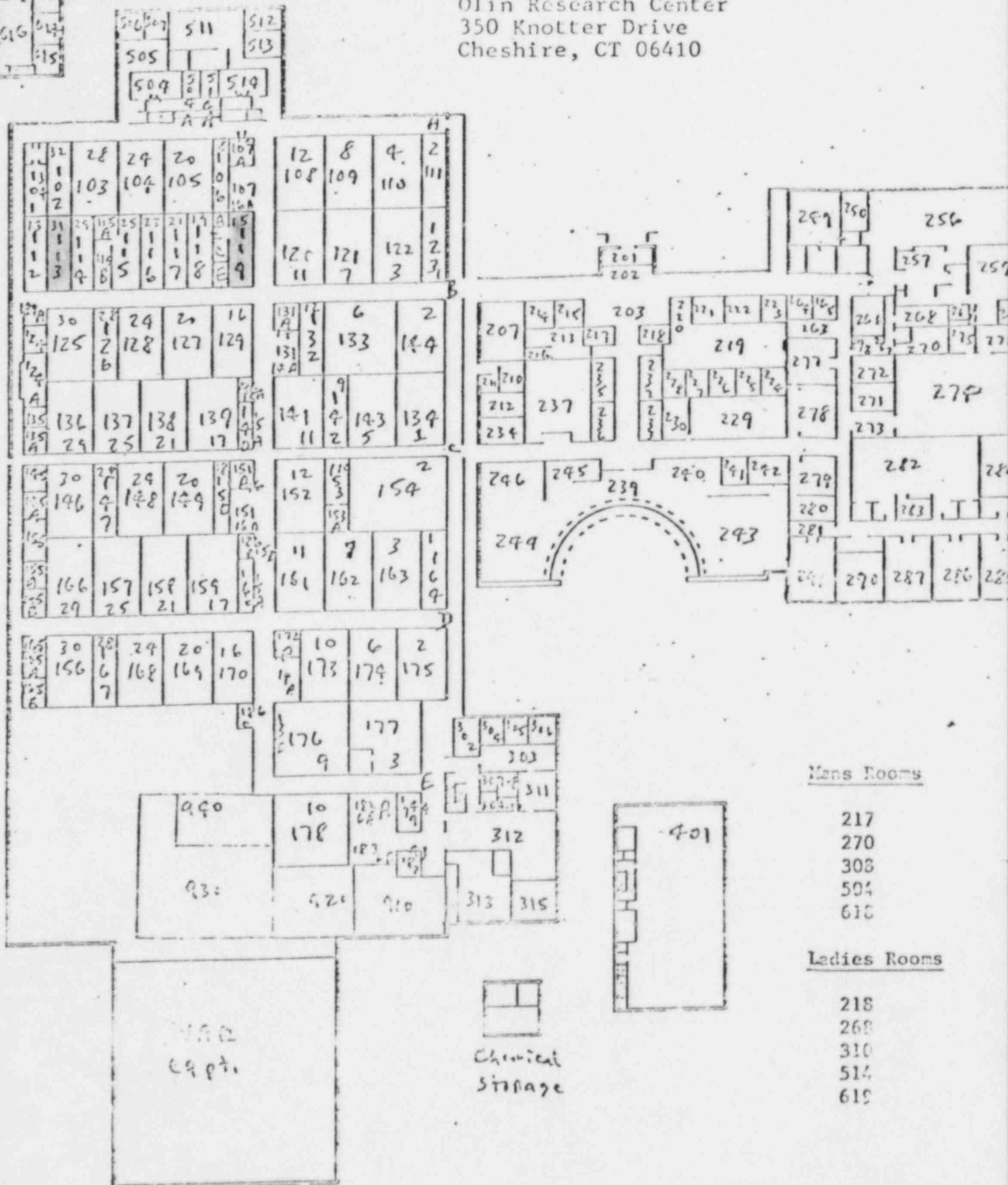
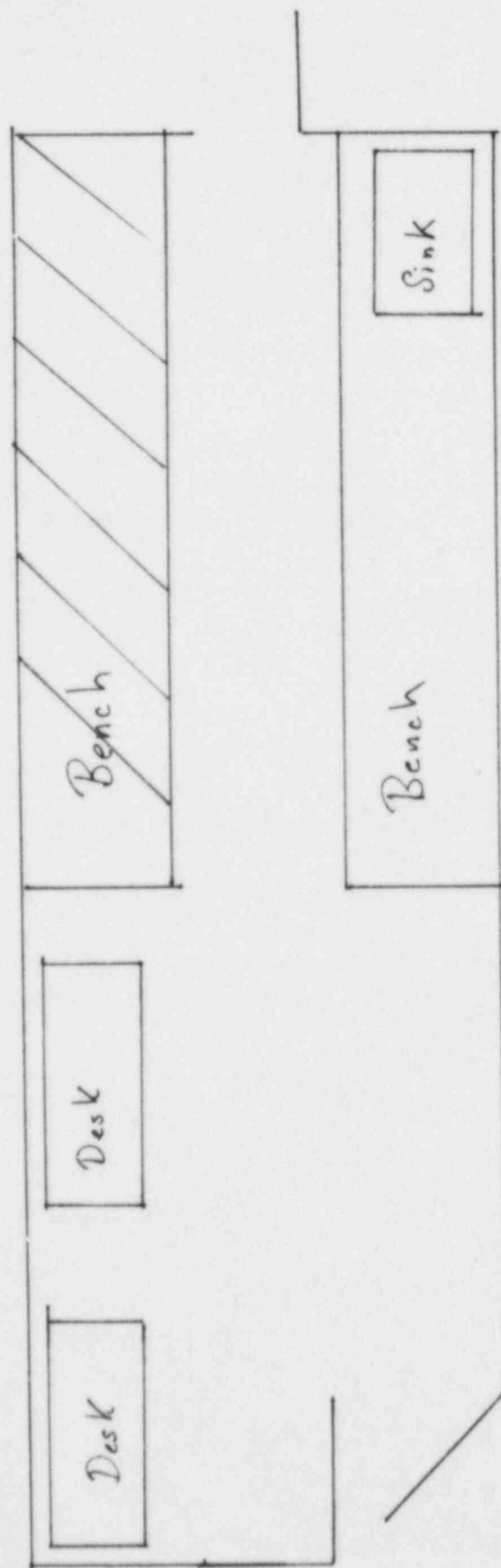


FIGURE 2

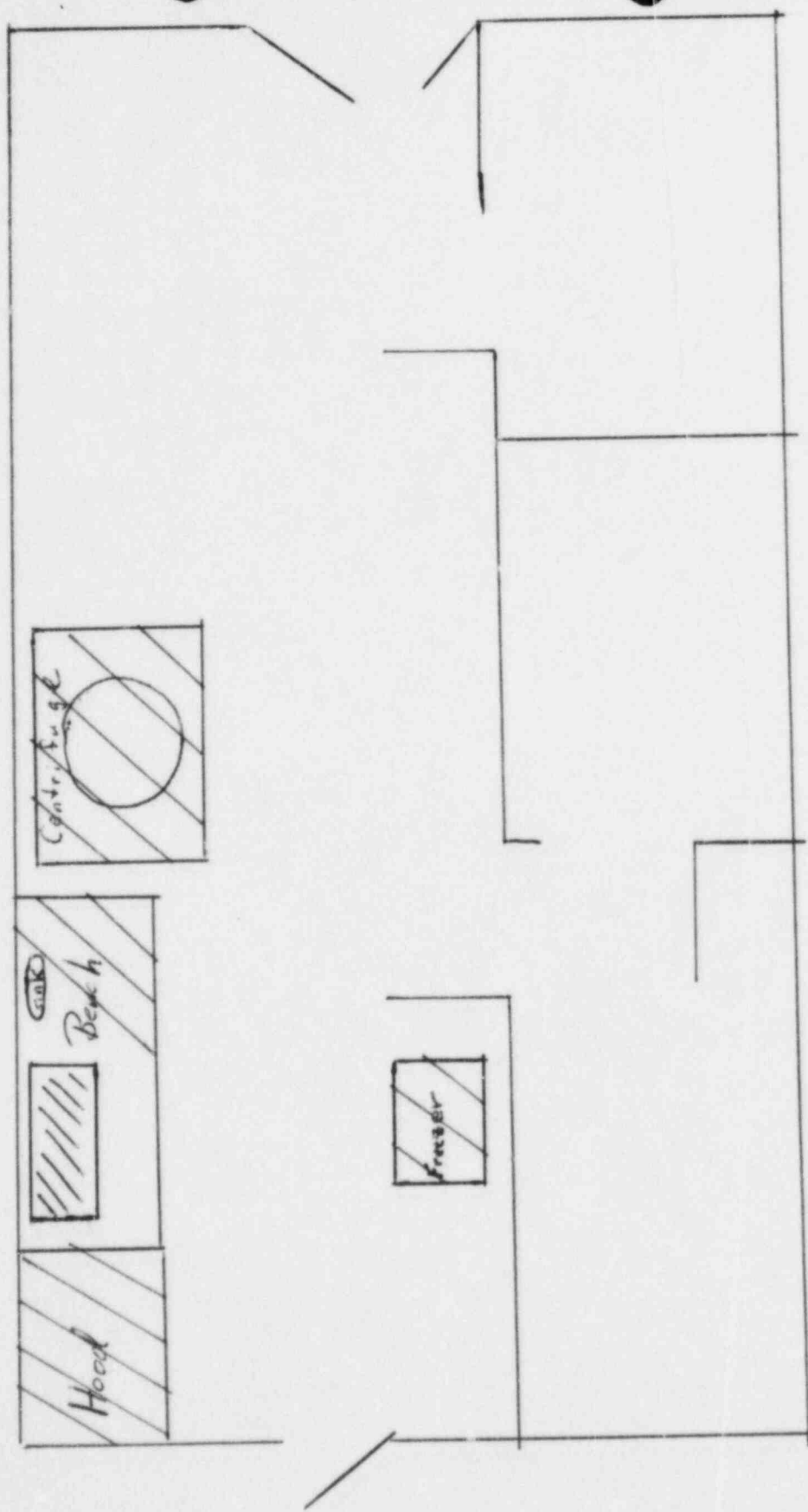
Rm B31



"Cross hatched areas indicate where isotopes will be used"

FIGURE 3

Rm B15



"Cross hatched areas indicate where isotopes will be used or stored."

BETWEEN: William O. Miller, Chief  
License Fee Management Branch  
Office of Administration -

John E. Glenn, Chief  
Nuclear Materials Section B  
Division of Engineering and  
Technical Programs

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED

Applicant/Licensee: Olin Research Center  
Application Dated: 6/18/85  
Control No.: 03997  
License No.: 06-08166-02

2. FEE ATTACHED

Amount: \$ 120.00  
Check No.: 0289270

3. COMMENTS

Signed Brenda Platchuk  
Date 6/25/85

03620

B. LICENSE FEE MANAGEMENT BRANCH

1. Fee Category and Amount: 3m \$120 12/87
2. Correct Fee Paid. Application may be processed for:
- Amendment ✓
- Renewal \_\_\_\_\_
- License \_\_\_\_\_

Signed D. Jackson  
Date 7/10/85



"SECTION COPY"

**Olin** CHEMICALS  
120 LONG RIDGE RD., P.O. BOX 1355, STAMFORD, CT 06904-1355

289270

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WACHOVIA BANK  
AND TRUST COMPANY, N.A.  
66-35  
531

DATE	AMOUNT	DOLLARS	CENTS
JANUARY 30, 1965	*****120	120	00

AMOUNT

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\*\*\*\*\*120

JANUARY 30, 1965

DOLLARS

CENTS

PAY TO THE ORDER OF

U S NUCLEAR REGULATORY  
COMMISSION

WASHINGTON

DC 20555

OLIN CORPORATION

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