

U. S. ATOMIC ENERGY COMMISSION
BYPRODUCT MATERIAL LICENSE

Page 1 of 2 Pages

Pursuant to the Atomic Energy Act of 1954 and Title 10, Code of Federal Regulations, Chapter 1, Parts 30, 32, 33, 34, and 35, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, own, possess, transfer and import byproduct material listed below; and to use such byproduct material for the purpose(s) and at the place(s) designated below. This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, and is subject to all applicable rules, regulations, and orders of the Atomic Energy Commission now or hereafter in effect and to any conditions specified below.

| | | |
|---|-------------------------------------|---|
| Licensee | | |
| 1. Mobil Research and Development Corp. Research Department Central Research Division | | 3. License number 29-00505-15 |
| 2. P. O. Box 1025 Princeton, New Jersey 08540 | | 4. Expiration date July 31, 1980 |
| | | 5. Reference No. |
| 6. Byproduct material (element and mass number) | 7. Chemical and/or physical form | 8. Maximum amount of radioac- tivity which licensee may possess at any one time |
| A. Hydrogen 3 | A. Any | A. 1 curie |
| B. Carbon 14 | B. Any | B. 100 millicuries |
| 9. Authorized use | | |
| A. and B. Laboratory research. | | |

CONDITIONS

Wherever the words "Atomic Energy Commission" or "Commission" appear in this license, except where the context of their use refers to a fact or event prior to January 19, 1975, they mean the Nuclear Regulatory Commission created by Public Law 93-438 and Executive Order No. 11834.

10. Byproduct material shall be used only at Mobil Technical Center, Central Research Division, Pennington-Rocky Hill Road, Pennington, New Jersey.
11. The licensee shall comply with the provisions of Title 10, Chapter 1, Code of Federal Regulations, Part 19, "Notices, Instructions and Reports to Workers; Inspections" and Part 20, "Standards for Protection Against Radiation."
12. Byproduct material shall be used by, or under the supervision of, Louis Deane Rollmann, Ph.D.

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| Licensee | | 03011243 |
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BYPRODUCT MATERIAL LICENSE

Supplementary Sheet

License Number 29-00505-15

(continued)

CONDITIONS

13. The licensee shall not use byproduct material in or on human beings or in field applications where activity is released except as provided otherwise by specific condition of this license.
14. Individuals involved in operations which utilize, at any one time, more than 100 millicuries of Hydrogen 3 in a non-contained form, other than metallic foil, shall have bioassays performed within one week following a single operation and at weekly intervals for continuing operations.
15. Except as specifically provided otherwise by this license, the licensee shall possess and use byproduct material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in application dated April 1, 1975 and letters with attachments dated June 13, 1975 and June 27, 1975.

For the U.S. Nuclear Regulatory Commission

For the U.S. Atomic Energy Commission

CRB 7/10/75

7/10/75

Original Signed By

NATHAN E

Materials Branch

by

Directorate of Licensing
Washington, D. C. 20545

20555

ate JUL 10 1975

Begin July 15, 1975
on receipt of
license. Notebook
90137

Record book
License No. 29-00505-15
Expires July 31, 1980

2503

Materials disposition:

Enter all purchases and disposal of samples
Maintain cumulative record of radioactive
materials on hand. Authorized; 1 curie
tritium, 100 mC carbon-14.

Radiation monitoring:

Wipe smear records of work surfaces and of
any accidental spill areas.

When project is active, wipe 3 in. sq. surface
of hoods with 1 in. sq. towel. Place in 15 cc
scintillation cocktail and count. Required
once a week.

Urine sample, diluted 10-fold, required after
handling over 100 mC tritium in a
non-contained form.

Safety notes:

No smoking, food, beverages in work areas.
No mouth pipetting; preferably all work in hoods.
Waste in metal containers in hood.

B/6

Materials Disposition

Radiation Monitoring

Radiological Safety Procedures

The practices below have been compiled for and are to be observed by any person working with C^{14} or tritium-containing samples of up to one millicurie. Specified are (1) a log book, (2) monitoring procedures for contamination, and (3) safe laboratory techniques.

- (1) A log book is to be maintained which will contain a record of purchases and disposal of labelled samples, the results of monitoring tests for contamination, and a description of any accidents which might occur.
- (2) Work surfaces actively used in these experiments are to be monitored for contamination once a week or after any spillage. Said monitoring will be conducted by wiping a 3 inch square section in the middle of the work surface with a one inch square towel, placing the towel in a scintillating solution and counting. If a counting level greater than that observed at the outset of the experiments is found, the work area will be washed until the contamination is removed, as indicated by a repeated wipe test.
- (3) Special precautions are to be observed with these samples to prevent inhalation or drinking. Thus, no smoking, no food, no beverages are allowed near the designated work areas. Pipetting is to be done with suction bulbs, not by mouth; sample preparation is to be done in the designated hoods. Waste materials are kept in metal containers in a hood until picked up for disposal. All containers for radioactive material are prominently labelled.