



DEPARTMENT OF LABOR
DIVISION OF SAFETY AND HEALTH

Two World Trade Center

New York, N.Y. 10047

Union Carbide Corporation
Sterling Forest Research Center
P. O. Box 324
Tuxedo, New York 10987

Attention: Mr. C. J. Konnerth, Mgr.
Health, Safety &
Environmental Affairs

DATE: December 14, 1976

ADDRESS REPLY TO:
RADIOLOGICAL HEALTH UNIT

REFER TO:
MATERIALS LICENSE NO.

729 - 0322

REFERENCE NO. 3

ENCLOSED AMENDMENT NO. 4

PREVIOUS AMENDMENT NO. 1 AND DATE

COL APPLICATION NO. 11036
LR 0322

Dear Mr. Konnerth:

Enclosed herewith is an amendment (number indicated above) to the State of New York Radioactive Materials license assigned to your company to possess and use radioactive materials licensed therein pursuant to the State of New York Industrial Code Rule No. 38, "Radiation Protection" (12 NYCRR 38), as amended effective September 1, 1971.

Conditions as indicated therein have been added and/or amended in accordance with the referenced application, subject to said Code Rule.

Your attention is directed to Item B of our letter regarding the previous license amendment (numbered and dated as shown above). Future compliance with Section 38.7 is mandatory. Failure to do so will result in Departmental action pursuant to Sections 38.14 and 38.16 of said Code Rule. (Note: Disregard this part.)

Please contact us directly if you have any questions, or if we may be of further assistance to you concerning this matter.

Very truly yours,

CARL J. MATTEI, Director

JAM/mc
Enclosure

cc: Committee on Licensing

By John A. Miele
John A. Miele, Associate Radiophysicist

RADIOACTIVE MATERIALS LICENSE AMENDMENT

Pursuant to the Labor Law and Industrial Code Rule No. 38, and in reliance on statements and representations heretofore made by the licensee designated below, a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive material(s) designated below; and to use such radioactive materials for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders now or hereafter in effect of all appropriate regulatory agencies and to any conditions specified below.

Licensee		3. License Number	
1. Name	Union Carbide Corporation Sterling Forest Research Center	#Amend. No. 1	supersedes 'Amend. No. 2.
		729 - 0322	
2. Address	P. O. Box 324 Tuxedo, New York 10987	4. Expiration Date November 30, 1977	
		5a. Reference No. 3	b. Amendment No. *4

CONDITIONS

9. Authorized use (As itemized): In accordance with letter dated October 4, 1976
Radioactive Materials License No. 729 - 0322, Reference No. 2, is hereby amended as follows:

Wherever the words "U. S. Atomic Energy 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 "U. S. Nuclear Regulatory Commission" created by Federal Public Law 93-438 and Executive Order No. 11834.

Condition 4. Change of expiration date.

Condition 18.E. Change to read:

His letter dated October 4, 1976, signed by C. J. Konnerth, w
enclosed licensee financial balance sheet for year 1975.

Condition 19. New:

The licensee shall comply with Part 380 Rules and Regulations
of the New York State Department of Environmental Conservation

Date December 14, 1976

Date _____

JAN/mc

FOR THE NEW YORK STATE DEPARTMENT OF LABOR

by John F. Miele
John F. Miele, Assoc. Radiophysicist



DEPARTMENT OF LABOR
DIVISION OF SAFETY AND HEALTH

Two World Trade Center

New York, N.Y. 10047

DATE: May 14, 1976

ADDRESS REPLY TO:
RADIOLOGICAL HEALTH UNIT

REFER TO:
MATERIALS LICENSE NO. 729-0322

REFERENCE NO. *3

ENCLOSED AMENDMENT NO. 3

PREVIOUS AMENDMENT NO. AND DATE
- - - - *December 18, 1971

COL APPLICATION NO. 9993

LR 0322

Union Carbide Corporation
Sterling Forest Research Center
P. O. Box 324
Tuxedo, New York 10987

Attention: Mr. C. J. Konnerth

Dear Mr. Konnerth:

Enclosed herewith is an amendment (number indicated above) to the State of New York Radioactive Materials license assigned to your company to possess and use radioactive materials licensed therein pursuant to the State of New York Industrial Code Rule No. 38, "Radiation Protection" (12 NYCRR 38), as amended effective September 1, 1971.

Conditions as indicated therein have been added and/or amended in accordance with the referenced application, subject to said Code Rule.

Your attention is directed to Item B of our letter regarding the previous license amendment (numbered and dated as shown above). Future compliance with Section 38.7 is mandatory. Failure to do so will result in Departmental action pursuant to Sections 38.14 and 38.16 of said Code Rule.

Please contact us directly if you have any questions, or if we may be of further assistance to you concerning this matter.

Very truly yours,

CARL J. MATTEI, Director

FJB/mc
Enclosure

cc: Committee on Licensing

By Francis J. Bradley
Francis J. Bradley, Principal Radiophysicist

STATE OF NEW YORK
RADIOACTIVE MATERIALS LICENSE
AMENDMENT

Pursuant to the Labor Law and Industrial Code Rule No. 38, and in reliance on statements and representations heretofore made by the licensee designated below, a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive material(s) designated below; and to use such radioactive materials for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders now or hereafter in effect of all appropriate regulatory agencies and to any conditions specified below.

Licensee		3. License Number
1. Name	Union Carbide Corporation Sterling Forest Research Center	729-0322
2. Address	P. O. Box 324 Tuxedo, New York 10987	4. Expiration Date November 30, 1976
		5a. Reference No. b. Amendment No. 3 3

CONDITIONS

9. Authorized use (18.G.): In accordance with letter dated December 11, 1975
Radioactive Materials License No. 729-0322, Reference No. 3, is hereby amended as follows:

Condition 18.G. Documents added:

His letter dated December 11, 1975, signed by C. J. Konnerth, with attachment.

FOR THE NEW YORK STATE DEPARTMENT OF LABOR

by Francis J. Bradley
Francis J. Bradley, Principal Radiophysicist

Date May 14, 1976

FJR/mc



STATE OF NEW YORK
DEPARTMENT OF LABOR

DIVISION OF OCCUPATIONAL SAFETY AND HEALTH
Office of Occupational Health

Two World Trade Center
New York, N. Y. 10047

November 26, 1975

Union Carbide Corporation
Sterling Forest Research Center
P.O. Box 324
Tuxedo, New York 10987

Att: Mr. C.J. Konnerth, Manager
Health Physics Department
Radiation Safety Officer

Address Reply To:

Radiological Health Section

Refer To:

COL Application No. 9759

LR 0322

Dear Mr. Konnerth:

Enclosed herewith is Amendment No. 2 to State of New York Radioactive Materials License No. 729-0322, Reference No. 3, assigned to your company to possess and use radioactive materials licensed therein pursuant to the State of New York Industrial Code Rule No. 38, "Radiation Protection" (12 NYCRR 38), as amended effective September 1, 1971.

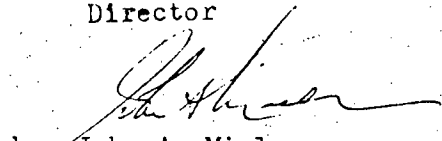
Conditions as indicated therein have been added and/or amended in accordance with the referenced application, subject to said Code Rule. Accordingly, Conditions 4 and 18.E. of this license dated December 18, 1974 are superseded.

Your attention is directed to Item B of our letter to license Amendment No. -- dated ---. Future compliance with Section 38.7 is mandatory. Failure to do so will result in Departmental action pursuant to Sections 38.14 and 38.16 of said Code Rule. (Note: Disregard this part.)

Please contact us directly if you have any questions, or if we may be of further assistance to you concerning this matter.

Very truly yours,

Carl J. Mattel
Director


by: John A. Miele
Associate Radiophysicist

JAM:gb

Enclosure

cc: Committee on Licensing

OHR-5 (7-74)

RADIOACTIVE MATERIALS LICENSE AMENDMENT

Pursuant to the Labor Law and Industrial Code Rule No. 38, and in reliance on statements and representations heretofore made by the licensee designated below, a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive material(s) designated below; and to use such radioactive materials for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders now or hereafter in effect of all appropriate regulatory agencies and to any conditions specified below.

<p style="text-align: center;">Licensee</p> <p>1. Name Union Carbide Corporation Sterling Forest Research Center P.O. Box 324</p> <p>2. Address Tuxedo, New York 10987</p>	<p>3. License Number 729-0322</p> <hr/> <p>4. Expiration Date November 30, 1976</p> <hr/> <table style="width: 100%;"> <tr> <td style="width: 50%;">5a. Reference No.</td> <td style="width: 50%;">b. Amendment No.</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">2</td> </tr> </table>	5a. Reference No.	b. Amendment No.	3	2
5a. Reference No.	b. Amendment No.				
3	2				

CONDITIONS

9. Authorized use (4; 18.E.) In accordance with letter dated September 19, 1975
729-0322
 Radioactive Materials License No. _____, Reference No. 3, is hereby amended as follows:

Condition 4. Change of expiration date.

Condition 18.E. Change to read:

His letter dated September 19, 1975, signed by C.J. Konnerth, with enclosed licensee financial annual report for year 1974.

Date November 26, 1975
JAM:gb

FOR THE NEW YORK STATE DEPARTMENT OF LABOR

by John A. Miele
 John A. Miele Associate Radiophysicist
 Carl J. Matal, Director



DEPARTMENT OF LABOR

DIVISION OF OCCUPATIONAL SAFETY AND HEALTH
Office of Occupational Health

Two World Trade Center
New York, N. Y. 10047

May 14, 1975

Union Carbide Corporation
Sterling Forest Research Center
P. O. Box 324
Tuxedo, New York 10987

Att: Mr. C. J. Konnerth
Health Physics Manager
Radiation Safety Officer

Address Reply To:

Radiological Health Section

Refer To:

COL Application No. 9158

LR 0322

Dear Mr. Konnerth:

Enclosed herewith is Amendment No. 1 to State of New York Radioactive Materials License No. 729-0322, Reference No. 3, assigned to your company to possess and use radioactive materials licensed therein pursuant to the State of New York Industrial Code Rule No. 38, "Radiation Protection" (12 NYCRR 38), as amended effective September 1, 1971.

Conditions as indicated therein have been added ~~XXXXXXXXXXXX~~ in accordance with the referenced application, subject to said Code Rule. ~~XXXXXXXXXXXX~~

Your attention is directed to Item B of our letter to license ~~XXXXXXXXXX~~ dated December 18, 1974. Future compliance with Section 38.7 is mandatory. Failure to do so will result in Departmental action pursuant to Sections 38.14 and 38.16 of said Code Rule.

Please contact us directly if you have any questions, or if we may be of further assistance to you concerning this matter.

Very truly yours,

JAM:rd

Jacqueline Messite, M. D.
Administrator

Enclosure

cc: Committee on Licensing

OHR-5 (7-74)

by: John A. Miele

Associate Radiophysicist

**RADIOACTIVE MATERIALS LICENSE
AMENDMENT**

Pursuant to the Labor Law and Industrial Code Rule No. 38, and in reliance on statements and representations heretofore made by the licensee designated below, a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive material(s) designated below; and to use such radioactive materials for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders now or hereafter in effect of all appropriate regulatory agencies and to any conditions specified below.

<div style="text-align: center; border-bottom: 1px solid black; margin-bottom: 5px;">Licensee</div> <div><div style="display: flex; justify-content: space-between;"><div style="width: 15%;">1. Name</div><div>Union Carbide Corporation Sterling Forest Research Center</div></div><div style="display: flex; justify-content: space-between; margin-top: 5px;"><div style="width: 15%;">2. Address</div><div>P. O. Box 324 Tuxedo, New York 10987</div></div></div>	<div style="border-bottom: 1px solid black; margin-bottom: 5px;">3. License Number <div style="text-align: center; margin-top: 5px;">729-0322</div></div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">4. Expiration Date <div style="text-align: center; margin-top: 5px;">November 30, 1975</div></div> <div style="display: flex; justify-content: space-between;"><div style="width: 45%;">5a. Reference No. <div style="text-align: center; margin-top: 5px;">3</div></div><div style="width: 45%;">b. Amendment No. <div style="text-align: center; margin-top: 5px;">1</div></div></div>
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CONDITIONS

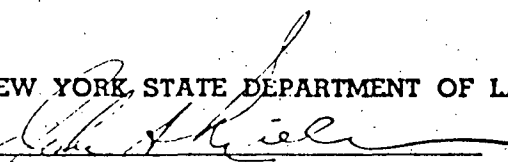
9. Authorized use (18.F.): In accordance with letter dated March 4, 1975
Radioactive Materials License No. 729-0322 Reference No. 3 is hereby amended as follows:

Condition 18.F. Documents added:

His letter dated March 4, 1975, signed by C. J. Konnerth, with attachment.

Date May 14, 1975
JAM:rd

FOR THE NEW YORK STATE DEPARTMENT OF LABOR

by 
John A. Miele, Associate Radiophysicist

FOR: J. Miele, M.D., Administrator

DEPARTMENT OF LABOR


 DIVISION OF OCCUPATIONAL SAFETY AND HEALTH
 Office of Occupational Health

 Two World Trade Center
 New York, N. Y. 10047

December 16, 1974

 Union Carbide Corporation
 Sterling Forest Research Center
 P.O. Box 324
 Tuxedo, New York 10967

 Att: Mr. C.J. Konnerth
 Health Physics Manager
 Radiation Safety Officer

Address Reply To:

Radiological Health Section

Refer To:

 COL Application No. 7794
 and 8857

LR 0322

Dear Mr. Konnerth:

Enclosed herewith is amended State of New York Radioactive Materials License No. 729-0322, Reference No. 3, assigned to your company to possess and use radioactive materials licensed therein pursuant to the State of New York Industrial Code Rule No. 38, "Radiation Protection" (12 NYCRR 38), as amended effective September 1, 1971. Reference No. 3 supersedes Reference No. 2 in its entirety.

IMPORTANT:

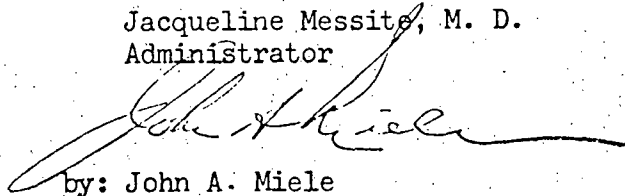
- A. This letter shall be retained with this license.
- B. Your attention is directed to Section 38.7 entitled "Security". The written request submitted to us for a waiver from filing a security bond pursuant to subdivision (c) has been approved, conditioned in the license, and accordingly, your company has fulfilled the requirements of this section at this time. Pursuant said Code Rule, this waiver shall be in effect during the entire period of your license. It follows that: (1) any changes in your company financial responsibility to assure reimbursement to the Industrial Commissioner pursuant to subdivision (c) which may affect our waiver approval must be brought to our attention immediately, and (2) pursuant to Section 38.11 entitled "Duration of Licenses", in addition to filing an application more than 30 days prior to the expiration date of your license for a renewal of the license, your company must file either a new security bond with us or comply with subdivision (c) of Section 38.7 which must be approved by the Industrial Commissioner. Should your company decide to seek a continuation of the waiver approval pursuant to subdivision (c), your company must provide us with a final audited balance sheet for the past year certified by a certified public accountant.

Pursuant to Section 38.25 of said Code Rule, you have been authorized to serve in the capacity of Radiation Safety Officer for the licensed company installation.

Please contact us directly if you have any questions, or if we may be of further assistance to you concerning this matter.

Very truly yours,

Jacqueline Messite, M. D.
Administrator



by: John A. Miele
Associate Radiophysicist

JAM:amd
Enclosure

cc: Committee on Licensing

RADIOACTIVE MATERIALS LICENSE

Pursuant to the Labor Law and Industrial Code Rule No. 38, and in reliance on statements and representations heretofore made by the licensee designated below, a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive material(s) designated below; and to use such radioactive materials for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders now or hereafter in effect of all appropriate regulatory agencies and to any conditions specified below.

<p style="text-align: center;">Licensee</p> <p>Name Union Carbide Corporation Sterling Forest Research Center P. O. Box 324 Address Tuxedo, New York 10987</p>	<p>3. License Number, *Ref. No. 3 supersedes Ref. No. 2 in its entirety 729-0322</p> <hr/> <p>4. Expiration Date November 30, 1975</p> <hr/> <p>5a. Reference No. b. Amendment No. *3 —</p>	
<p>Radioactive materials (element and mass number)</p> <p>Any Agreement Material between Atomic Nos. 1 and inclusive, except (1). Hydrogen 3</p> <p>Any Agreement Material between Atomic Nos. 3 and 83 inclusive, except Any Byproduct Material</p> <p>Any Byproduct Material Cobalt 60 Cobalt 60 Cesium 137 Promethium 147 Cerium 144 Strontium 90 Niobium 95 Gold 198</p> <p>Uranium 238</p> <p>Plutonium 232</p> <p>Polonium 210</p>	<p>7. Chemical and/or physical form</p> <p>A. Any (1). Any</p> <p>B. Unsealed solids (1). Irradiated metals and alloys (2). Irradiated components (3). Sealed sources (4). Unsealed sources (5). Sealed sources (6). Sealed sources (7). Sealed sources (8). Sealed sources (9). Sealed sources (10). Unsealed sources</p> <p>C. Any</p> <p>D. Any</p> <p>E. Po-Be sealed source (Monsanto Research Corp. Model MRC-N-SS-W-PoBe)</p>	<p>8. Maximum quantity licensee may possess at any one time</p> <p>A. 1,000 curies of each Agreement Material (see Condition 10) (1) 100 curies</p> <p>B. 1,000 curies of each Agreement Material (see Condition 10) (1). 25,000 curies (2). 25,000 curies (3). 50,000 curies (4). 10,000 curies (5). 50,000 curies (6). 25,000 curies (7). 25,000 curies (8). 25,000 curies (9). 25,000 curies (10). 5,000 curies</p> <p>C. 100 pounds</p> <p>D. 100 pounds</p> <p>E. One (1) source not to exceed 60 curies</p>

11-235
✓ is not
including this.

RADIOACTIVE MATERIALS LICENSE

3. License Number

739-0322

5a. Ref. No.

3

b. Amend. No.

CONDITIONS

9. Authorized use. (Unless otherwise specified, the authorized place of use is the licensee's address stated in Item 2 above.)

Conditions 6.A. to 6.D.

- (1). Research, development and processing for redistribution to authorized recipient
- (2). Manufacture of minigenerators containing the radioisotopes Cesium 137, Tin 113 and Strontium 90.

Condition 6.E.

Neutron activation analysis.

- 10. The total combined quantity of agreement material authorized in Conditions 8.A. and 8.B. shall not exceed 50,000 curies.
- 11. The licensee shall comply with the provisions of the State of New York Industrial Code Rule No. 38, "Radiation Protection" (12 NYCRR 38), as amended effective September 1, 1971.
- 12. The radioactive materials shall be used by, or under the supervision of, individuals designated by the licensee's Nuclear Safeguards Committee, Dr. J. Agresta, Chairman.
- 13. The licensee shall submit plans and specifications of the exhaust systems authorized in Condition 18.D. of this license, or any new systems, involving radioactive materials, to the Engineering Section of the Department's Division of Occupational Safety and Health for approval prior to installing the system, or making any alterations of or additions to any existing systems.
- 14.A. Each sealed source acquired from another person and containing byproduct material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas shall be tested for contamination and/or leakage prior to use. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, the sealed source shall not be put into use until tested.
- B. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to use or transfer as a sealed source. If the inspection or test reveals any construction defects or 0.005 microcurie or greater of contamination, the source shall not be used or transferred as a sealed source until it has been repaired and decontaminated.

STATE OF NEW YORK
RADIOACTIVE MATERIALS LICENSE

Page 3 of 2

3. License Number 729-0322

5a. Ref. No. 3 b. Amend. No.

CONDITIONS

- C. Each sealed source containing byproduct material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six months except that each source designed for the purpose of emitting alpha particles shall be tested at intervals not to exceed three months.
- D. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of the device in which the sealed source is permanently or semipermanently mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the Department.
- E. If the test required by Subsection A. or C. of this Condition reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with 12 NYCRR 38. A report shall be filed within five (5) days of the test with the Chief, Radiological Health Section, Division of Occupational Safety and Health, Office of Occupational Health, Two World Trade Center, New York, New York 10047, describing the equipment involved, the test results and the corrective action taken.
- F. Tests for leakage and/or contamination shall be performed by the licensee.
- 15. 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.
- 16. The licensee shall maintain complete and accurate records of surface and air concentrations in and outside the facilities where radioactive materials are possessed and used; the disposition and the quantity of radioactive materials in curies, or submultiples thereof and of each device, or parts thereof, containing radioactive materials sold and/or transferred; and prototype tests, quality controls and leak tests of sources, devices or parts thereof, in addition to those records set forth in Section 38.36 of 12 NYCRR 38.

3. License Number

3

5a. Ref. No.

b. Amend. No.

CONDITIONS

17. The licensee shall make available to employees using radioactive materials pursuant to Section 38.34 of 12 NYCRR 38, a current copy of the licensee's hazard report and safety regulations specified in Condition 18.C. of this license. The Code Rule and the manuals shall be followed and any changes affecting the radiation protection of persons, including changes in the licensee's Nuclear Safeguards Committee, shall be submitted to the Department for approval prior to issuance to personnel.
18. Except as specifically provided otherwise by this license, the licensee shall receive, possess, use and transfer radioactive materials in accordance with statements, representations and procedures contained in his application dated July 10, 1962 to the U. S. Atomic Energy Commission (USAEC), and applications dated September 8, 1967 and October 5, 1967, with attachments, and in related documents as follows:
 - A. His letters dated August 13, 1962 and September 21, 1962 to the USAEC, signed by D. B. Holzgraf, with attachments.
 - B. His letters dated October 30, 1962, July 28, 1962, November 11, 1963, July 14, 1964, March 18, 1966, January 3, 1967, September 8, 1967, October 5, 1967, October 23, 1967, November 30, 1967, January 29, 1968, March 28, 1968, April 29, 1969, March 10, 1970, July 22, 1970, May 5, 1971, July 28, 1971, December 9, 1971, December 4, 1972, February 14, 1974, February 22, 1974, August 8, 1974 and December 6, 1974(2), signed by C. J. Konnerth, with attachments.
 - C. Licensee's "Hazard Report For Radioactive Materials Laboratory", "Safety Regulations For Building No. 4", date revised November 15, 1973.
 - D. State of New York Department of Labor, Division of Industrial Hygiene Notice of Plan Approval No. P-855-72 dated August 3, 1972 and State of New York Department of Labor, Division of Occupational Safety and Health Notice of Plan Approval No. PA-901-74 dated June 5, 1974, and New York State Department of Health Exemption to 16.7(b)(1) of Part 16 of the New York State Sanitary Code dated June 1, 1968.

3. License Number

5a. Ref. No. 3

b. Amend. No. --

CONDITIONS

- E. His letter dated November 25, 1974, signed by C. J. Konnerth, with enclosed Licensee financial balance sheet for year 1973.

FOR THE NEW YORK STATE DEPARTMENT OF LABOR

by

John A. Miele, Associate Radiophysicist

FOR: Jacqueline Messite, M. D., Administrator

December 18, 1974

Date

JAM:rd