

Medi-Physics, Inc.
340 Kingsland Street
Nutley
New Jersey 07110
(201) 235-5000

December 13, 1984

U.S. Nuclear Regulatory Commission
Washington, D.C. 20055

Gentlemen:

This is an application for withholding of a document contained in the license transfer application for Special Nuclear Material License No. SNM-639 in the matter of Union Carbide Corporation. This application is made pursuant to 10 CFR Section 2.790. The document to be withheld is Attachment 1 to the application. Attachment 1 contains privileged and confidential financial information related to Medi-Physics, Inc., and its wholly-owned subsidiary, Cintichem, Inc., the license transferee. The affidavit accompanying this application contains a full statement of the reasons this information should be withheld from public disclosure.

Sincerely,

A handwritten signature in dark ink, appearing to read "Lido L. Puccini", written in a cursive style.

Lido L. Puccini
Secretary

LLP:lg
Enclosures

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION


In The Matter Of:) Docket No. 70-687
)
) Special Nuclear Material
UNION CARBIDE CORPORATION) License No. SNM-639
(Sterling Forest Research Reactor))

AFFIDAVIT OF LIDO L. PUCCINI

I, Lido L. Puccini, affirm under penalty of perjury that the following is true and accurate to the best of my knowledge, information and belief and is based on my personal knowledge or on information contained in the records of Medi-Physics Inc., a Delaware corporation, and Cintichem, Inc., a Delaware corporation.

1. I am secretary of Medi-Physics, Inc., and its wholly-owned subsidiary, Cintichem, Inc., which, along with Union Carbide Corporation (UCC), a Delaware corporation, requests that the Special Nuclear Material License for the Sterling Forest Research Reactor be transferred from UCC to Cintichem for the purpose of continued ownership and operation of the Sterling Forest Research Reactor by Cintichem.
2. This affidavit is in support of the attached application for withholding of documents contained in the license transfer application for Special Nuclear Material License SNM-639 in the matter of Union Carbide Corporation.
3. Medi-Physics, Inc. and Cintichem, Inc., are privately held corporations.
4. The financial information on Medi-Physics, Inc. and Cintichem, Inc. contained in Attachment 1 to the license transfer application has been held in confidence by the owner companies.

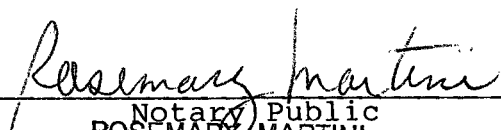
5. The financial information in Attachment 1 is customarily held in confidence by privately-held companies to protect their competitive market position.
6. The information has been submitted to and received by the Commission in confidence.
7. The financial information in Attachment 1 is not available in public sources and is not known to competitors of Medi-Physics, Inc. and Cintichem, Inc.
8. Release of the data in Attachment 1 could result in a competitive advantage to other firms in the pharmaceutical manufacturing market, thereby substantially harming the market position of Medi-Physics and Cintichem.
9. This information could not be properly acquired by others.


Lido L. Puccini
Secretary, Cintichem, Inc.

December 13, 1984

STATE OF NEW JERSEY)
) ss:
COUNTY OF ESSEX)

Before me, a Notary Public for the County of Essex, personally appeared Lido L. Puccini who, being duly sworn, stated that he is Secretary of Cintichem, Inc., that he has read the foregoing "Affidavit of Lido L. Puccini", and that the information and statements contained therein are true and correct to the best of his knowledge and belief.


Notary Public
ROSEMARY MARTINI
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires May 11, 1986
My Commission Expires: 5-11-86

COST ESTIMATE FOR DECOMMISSIONING
NUCLEAR FACILITIES AT STERLING FOREST

An estimate of the cost of decommissioning the nuclear facilities (Reactor and Hot Lab) at Sterling Forest are as follows:

In order to make this first approximation, the following assumptions are made:

- a. Licensee continues to occupy the Sterling Forest site.
- b. The Reactor and Hot Lab buildings remain intact.
- c. The USNRC, N.Y.S. Dept. of Health, N.Y.S. Dept. of Environmental Conservation, U.S. Dept. of Environmental Protection and Sterling Forest Corporation agree to our proposal for decommissioning.

At present there are two alternatives in decommissioning the facilities. The one chosen will depend ultimately on the final utilization of the site. These alternates are:

Alternate A

Complete closure of the facility whereby a "delicensing" could be accomplished. It is proposed that this would be accomplished by dismantling and decontaminating the facility so that there would be no radiological hazard to the environment as defined by the responsible regulatory authorities. It is proposed that this condition be accomplished by segregating contaminated facilities from the environment or cleaning them up. This decommissioning would result in the unrestricted availability of these two buildings or the site for whatever purpose is deemed desirable.

Alternate B

Maintaining the nuclear utilization capabilities of the facilities under a byproduct materials license. There would have to be restricted access to the buildings under this condition but the buildings could be used for other purposes provided the basic structures did not have to be altered.

Cost Estimate for Decommissioning
Nuclear Facilities at Sterling Forest

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The cost approximations in 1983 dollars for these alternatives are as follows:

Alternate A
"Delicense"

PHASE I

- a. Conduct Survey (radiological)
- b. Promulgate Decommissioning Plan.
- c. Prepare Hazards Summary Analysis
and submit to NRC and N.Y.S..
- d. Obtain approval to proceed.

It is estimated that this phase could
require 6 calendar months at about
60 percent of present staff.

Based on current experience in
operational expenses, this would
amount to ä \$450,000.

PHASE II

Fuel Shipment \$82,000
Fuel Reprocessing \$530,000

Disposal of Low Level
Waste (25 truck loads) \$855,000
and Large Quantity
Waste (20 truck loads)

Dismantle Decon Room and
Prepare for Burial \$12,000

Dismantle Stack and
Prepare for Burial \$12,000

Dismantle Filter Bank
and Prepare for Burial \$12,000

Dismantle Storage Tank
and Prepare for Burial \$12,000

Dismantle Pump Room and
Disconnect Piping to
Environment \$23,000

Decon Pool \$35,000

Alternate B
Standby "Byproduct License"

Same As Alternate A

3 Months Time Required

At a cost of ä \$250,000

Fuel Shipment ä \$80,000
Reprocessing \$530,000

PHASE II

Maintain facility under
Byproduct possession license.

Minimum staff
2 man/year \$80,000

Minimum Utili-
ties/Years \$300,000

Cost Estimate for Decommissioning
Nuclear Facilities at Sterling Forest

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Alternate A
"Delicense"

PHASE II

Decon Hot Cells	\$35,000
Disconnect Piping to Process Drain Tanks and Bury	\$12,000
Labor and Utilities for Phase II, Assume 1/2 Staff 18 Months	\$730,000
Cost of Final Radio- logical Survey Depending Upon Regulatory Require- ments.	\$230,000

Total cost of decommissioning
Alternate A:

Phase I	\$450,000
Phase II	\$2,350,000
Phase III	<u>\$230,000</u>
	\$3,030,000

Alternate B
Standby "Byproduct License"

PHASE II

Total cost of decommissioning
Alternate B:

Phase I	\$860,000
Phase II	\$380,000
	<hr/>
	\$1,240,000 (Year 1)
	\$350,000/ Year Thereafter (Utilities plus 1 H.P. Man)

An inventory of uranium exists which serves as fuel for the reactor and as target material for isotope production. The scrap value of this inventory is estimated to be \$1 million. Without considering other recoverable assets the estimated net decommissioning cost will be \$2 million. The net cost for placing the plant into standby status will be \$240,000.

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OPERATING AGREEMENT - UNION CARBIDE
SUBSIDIARY B AND CINTICHEM, INC.

OPERATING AGREEMENT

April 10, 1981

BETWEEN

UNION CARBIDE CORPORATION

AND

CINITCHEM, INC.

BC

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OPERATING AGREEMENT

OPERATING AGREEMENT dated April 10, 1981 by and among UNION CARBIDE CORPORATION (hereinafter called "Operator"), a New York corporation having an office at 270 Park Avenue, New York, New York 10017, and CINTICHEM, INC. (hereinafter called "Company A"), a Delaware corporation having an office at Long Meadow Road, Tuxedo, New York 10987, which is a wholly-owned subsidiary of Medi-Physics, Inc., a Delaware corporation having an office at 340 Kingsland Street, Nutley, New Jersey 07110 (hereinafter called "Medi-Physics").

W I T N E S S E T H:

WHEREAS, by Deed of even date herewith Operator has granted and conveyed to Union Carbide Subsidiary B, Inc., a Delaware corporation which is a wholly owned subsidiary of Operator (hereinafter called "Company B"), all right, title and interest in approximately 100 acres of land, together with the buildings and improvements located thereon, situated along Long Meadow Road (also known as Long Swamp Road) in the Town of Tuxedo, County of Orange and State of New York more fully described in Exhibit A hereto (hereinafter called the "Plant Site");

WHEREAS, Operator is the operator of Buildings 1 and 2 located on the Plant Site together with the nuclear reactor and related equipment (hereinafter called the "Plant") title to which has been conveyed by Operator to Company B, which Plant has heretofore been operated for the benefit of a certain Nuclear Products business formerly owned by Operator and now owned by Company A; and

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WHEREAS, pursuant to a Stock Sale Agreement dated the date hereof and executed contemporaneously herewith between Operator and Medi-Physics (hereinafter called the "Stock Sale Agreement"), all of the issued and outstanding capital stock of Company A was conveyed by Operator to Medi-Physics; and

WHEREAS, it is intended that Company A shall have the benefit of the entire output of the Plant at the sole cost and risk of Company A (except as provided in Article 8(d) hereof); and

WHEREAS, it is intended that Operator shall operate the Plant and, insofar as required by law, the Plant Site, for the benefit and at the sole cost and risk of Company A [except as provided in Article 8(b)], in accordance with applicable governmental requirements and with licenses held by Operator that are requisite or relevant to such operation, with Operator retaining possession of, and sole, complete and total operating control of, the Plant, but with Company A entitled for commercial purposes (a) to determine the output quantity of each product of the Plant and (b) to market and distribute the products of the Plant, all in accordance with the terms and conditions of this Agreement and the Stock Sale Agreement and subject to Operator's existing contractual commitments relating to the NPD business;

NOW THEREFORE, the parties hereto agree as follows:

1. Plant Operation.

During the Term of this Agreement (as hereinafter defined), Operator shall operate the Plant to produce the products of the Plant listed in Exhibit B hereto and any other radioisotopes

suitable for medical application for which Operator feels in good faith it possesses sufficient technical competence and which can be safely produced (hereinafter called the "Products") for the exclusive commercial benefit of Company A. All activities within the Plant, including but not limited to security and safety in the area around the Plant and the disposition of radioactive by-product waste, shall be solely performed or provided for by Operator. Company A shall designate the quantity of each of the Products to be produced by Operator and the schedule of such production, subject to the terms of this Agreement and Operator's existing contractual commitments.

2. Supply of Materials and Services.

(a) The provision of all services and materials required in Operator's opinion for Plant operations, except as provided in Article 2(c) hereof, shall be arranged by Operator when and as, in the opinion of Operator, the same are required.

(b) The materials, services and facilities listed in Exhibit C hereto shall be supplied by Operator to Company A when and as requested by Company A.

(c) The materials, services and facilities described in Exhibit D hereto shall be supplied to Operator for Plant operations by Company A or Company A shall make all arrangements for such supply by third parties. Company A shall also supply those facilities and utility services described in Exhibit D for the operation of Buildings 3 and 4 as shown on Exhibit B.

Company A shall have full possession and control of (i) Building 5 (including all machinery and equipment located therein and all appurtenant service lines thereto and therefrom) as shown on Exhibit B, subject to the provisions of Article 5(a) hereof, (ii) any non-radioactive storage and maintenance buildings upon the Plant Site and, (iii) all utility lines and other common facilities used to provide to the Plant Site, or any part thereof, any facilities and utility services as described in Exhibit D. At its sole cost and expense, Company A shall be liable to maintain the aforesaid buildings, utility lines and other common facilities in good working order and repair and to perform all necessary maintenance and replacement thereof.

(d) Operator shall have the right and obligation from time to time during the Term of this Agreement to make such reasonable alterations, repairs, additions, or capital improvements in or to the Plant or any part thereof as it, in its sole discretion, deems (i) necessary or appropriate to the safe, secure, and proper operation thereof, (ii) required by Governmental Requirements (as hereinafter defined); (iii) required to fulfill its commercial obligations to Company A pursuant to this Agreement; or (iv) required as a result of damage caused by an act of force majeure; provided, however, that Operator shall give prompt prior written notice thereof to Company A.

3. Cost of Plant Operations.

(a) Since Plant operations are being conducted for the sole economic benefit of Company A, all costs and expenditures (including taxes and capital expenditures) of any kind or character

incurred by Operator or Company B arising out of the Plant, the Plant Site, or Plant operations, or otherwise provided for in this Agreement (hereinafter called "Subject Expenses"), including but not limited to, costs arising from ownership of the Plant, taxes, from insurance coverage thereof which Company A or Operator may elect to put into effect (including nuclear liability insurance), from alterations, repairs or capital improvements to the Plant pursuant to Article 2(d), from Plant operations and production of the Products (including the salary, pension and other benefit plan expenses and any other costs respecting employees of Operator including those employees to be transferred to Company B and/or Company A as soon as applicable regulations permit and required licenses are obtained), or from Decommissioning as provided in Article 9, except as otherwise provided in Article 8(b) hereof, shall be for the sole account of Company A. Company A shall reimburse, indemnify and hold Operator harmless for any and all such costs and expenses of any kind incurred by Company B (except as provided in Article 8[b] hereof).

(b) Operator shall at all times conduct Plant operations in as efficient a manner as is practicable and shall use its best efforts to avoid unnecessary costs and expenditures in relation to such operations.

(c) Operator shall provide monthly in advance to Company A a detailed estimate of Subject Expenses for such month to be incurred pursuant to Article 3(a), and Company A shall deposit with Operator monthly in advance a sum equal to such estimate. Promptly

and permits in effect pursuant to Article 5(b), but also (iv) the obligation provided in Article 3(b), take the action taken or proposed to be taken by Operator.

(e) Promptly following the execution of this Agreement as to the balance of calendar year 1981, and in advance of each calendar year thereafter during the Term hereof, Company A and Operator shall cooperate in the development of a business budget for Company B which shall estimate the cost of Subject Expenses for the relevant year. Since such budget will be affected by subsequent events and conditions, Operator shall not be liable in any way for failure to meet such budget; however, Operator shall use its best efforts to conduct Plant operations in accordance with such budget, subject to any variances that Operator, in its sole discretion, deems necessary or appropriate to the safe, secure and proper operation of the Plant or required by Governmental Requirements.

(f) Semi-annually on dates to be specified during the Term of this Agreement, Company A shall pay to Operator as reimbursement for Operator's indirect costs of operating the Plant, including but not limited to home office general and administrative overhead costs, a fee equal to Four and One Half Percent (4-1/2%) per annum for the first three (3) years and Seven and One Half Percent (7-1/2%) per annum for the last three (3) years of the actual Operating Expenditures of Operator (as hereinafter defined). Such Operating Expenditures shall include but not be limited to all costs of raw materials, utilities, labor, overhead, quality control, waste storage, transportation and disposal and all other expenses normally

following each month, Operator shall provide to Company A a detailed schedule of its actual Subject Expenses for such month, and the differential between the advance from Company A and the actual Subject Expenses shall be promptly settled by payment between the parties as appropriate. That portion of the actual Subject Expenses respecting employees (including but not limited to, salary, pension and other benefit plan expenses) shall be determined by Operator in a manner which is consistent with the methods used by Operator generally to allocate among its operating components the types of costs and expenditures which are included in such portion.

(d) At any time and from time to time during the Term of this Agreement, Company A may dispute the necessity for any actions, taken or proposed to be taken by Operator pursuant to this Agreement, or the costs incurred or to be incurred therefor. In the event of such a dispute the parties shall discuss the same in good faith to attempt to resolve the dispute. In the event of failure to resolve the dispute or in the event Operator believes it necessary to take action before discussions with Company A take place, Operator shall take such action as it in its sole discretion deems necessary. The standard for resolving any such disputes either in discussions between the parties or in any legal action which Company A may choose to initiate shall be the standard of the "reasonable man", i.e., would a reasonable prudent man under the obligations of Operator at law and pursuant to this Agreement, with responsibility for (i) the safe and secure operation of the Plant, (ii) Governmental Requirements, and (iii) for maintaining its licenses

included in cost accounting for cost of goods sold and actually incurred by Operator.

(g) In order to permit Operator to discharge ~~its~~ responsibilities hereunder during the term of this Agreement, Company A, at its sole cost and expense, shall make available to Operator for use by Operator's supervisory personnel two offices in Building 4, together with adequate secretarial, telephone and other necessary clerical services.

4. Supply of Products.

(a) The Products of the Plant shall be supplied by Operator to Company A when and as produced at no cost to Company A beyond the Subject Expenses and other amounts payable under Article 3.

(b) Operator shall use its best efforts to produce the Products when and as required by Company A in compliance with the specifications designated by Company A. It is understood however, that Operator shall not be liable to Company A in any manner whatsoever for the partial or total failure to supply Products, the failure to meet delivery schedules, or the supply of Products not meeting specifications, or for any other acts or failures to act in regard to the supply of Products, except for an unjustified intentional refusal to supply Products. Except as set forth herein, THERE ARE NO EXPRESS WARRANTIES BY OPERATOR AS TO PRODUCTS AND NONE SHALL BE IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY AND WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

5. Governmental Responsibilities.

(a) Operator shall at all times conduct Plant operations in accordance with the Atomic Energy Act of 1954, as amended, and the rules and regulations thereunder and its licenses to operate the Plant and to possess the "Special Nuclear Material" required to fuel the Plant, and all other federal, state and local laws, regulations, rules, orders, decrees, directives, licenses and permits which may apply to the Plant, Plant operations or Company B (hereinafter called "Governmental Requirements"). Operator through its employees shall at all times have possession of and sole, complete and total control over the Plant, the Plant Site and Plant operations, as required to comply with Governmental Requirements and the safe and secure operation of the Plant, including without limitation the right to determine the activities which may be conducted on the Plant Site and the right at any time to exclude or remove personnel or property therefrom.

(b) Operator shall use its best efforts at all times to obtain and maintain in effect all licenses and permits required for Company B to own the Plant, and for Operator to operate the Plant, conduct Plant operations and possess radioactive materials, and not to restrain the operations of Company A as heretofore conducted, subject to Article 6 hereof.

(c) In order to comply with Governmental Requirements, it may be necessary for Operator to own or lease and/or operate certain additional facilities of Company A located upon the Plant Site, and the parties agree to make such other and further reasonable and

necessary agreements or amendments to this Agreement and to take such other action as may be necessary from time to time to satisfy such requirements at no cost to Operator.

6. Radioactive Materials.

Until such time as the radioactive materials licenses as described in Article 7 hereof have been issued or transferred to Company A (hereinafter called the "Interim Period"), Operator will supervise all activities of Company A's employees when such employees are in the radiation controlled areas in Building 4, as such building is designated in Exhibit A, or otherwise involved in the transfer, receipt, possession or use of any radioactive material. While in the radiation controlled areas in Building 4, Company A employees shall be limited to activities which are directly related to the manufacture of the "CINTICHEM^R" Generator product line and/or the research and development of radiopharmaceuticals. An employee of Operator knowledgeable in the safe handling and use of radioactive materials will be present on site at all times during which radioactive materials are being handled by Company A employees in Building 4 and shall have complete authority to supervise and direct the manner and methods for handling such material and for establishing and enforcing safety procedures with respect thereto. Such authority shall include the right (i) to exclude personnel from the area where radioactive materials are being used, (ii) to have exclusive possession of all means of access to radioactive material storage areas (iii) to determine which of the employees of Company A are qualified by

training and experience to work with radioactive materials, (iv) to establish training and refresher courses for Company A employees in the safe use and handling of radioactive materials, and (v) to require Company A to make such changes in equipment and/or procedures as are necessary, in the opinion of Operator's Radiation Safety Officer, to comply with the terms of Operator's Radioactive Materials Licenses as required to operate the Plant.

7. Transfer of Franchises, Permits, Licenses and Other Rights and Privileges.

(a) Company A will use its best efforts with the full assistance and cooperation of Operator to obtain as soon as possible for Company A or a third party purchaser of Company B all of the franchises, permits, licenses and approvals presently held in the name of Operator which can legally reside in Company A and may be required to allow Company A to perform all of the operations currently conducted at the Plant, without the supervision and/or assistance of Operator. Such obligation shall include, but not be limited to, the following actions:

(i) Promptly following the execution of this Agreement, Company A will apply to the New York State Department of Labor requesting, at Operator's option, either the transfer to Company A of Operator's Radioactive Materials Licenses Nos. 729-0322 and 2123-0322 MD or the issuance of new radioactive materials licenses in the name of Company A.

(ii) Promptly following the execution of this Agreement, Company A will apply to the Nuclear Regulatory Commission requesting at Operator's option either the transfer

of that portion of Operator's existing Special Nuclear Materials License No. 639 relating to operations conducted in Building 2, to Company A, or requesting the issuance of a new Special Nuclear Materials License in the name of Company A relating to the operations conducted in Building 2.

(iii) Company A and Operator shall seek to have the consent order issued to Operator on September 18, 1978 by the New York State Department of Environmental Conservation rescinded and air emission permits issued to the appropriate companies.

(b) During the Interim Period, Company A and Operator shall use their best efforts to maintain in force all necessary franchises, permits, licenses and other rights and privileges necessary to continue the operations presently conducted at the Plant.

(c) With respect to Operator's Radioactive Materials License No. 2123-0322MD, it is understood that during the Interim Period Operator shall continue to distribute, in Operator's own name, the "CINTICHEM"^R line of generator products and continue to be registered as a drug manufacturer and maintain new drug applications with the U.S. Food and Drug Administration for such products. All costs associated with the production and distribution of the "CINTICHEM"^R line of generator products and all income received therefrom shall be for the account of Company A.

8. Risks of Operation.

(a) Except as expressly provided in Article 8(b) hereof or in the Stock Sale Agreement, Company A hereby assumes and shall

be liable for, and shall hold harmless and indemnify Operator in connection with, any and all loss, costs, expenses, risks and liabilities of any kind or nature associated with the operation and ownership of the Plant and any licenses which may be required therefor, to the extent said loss, costs, expenses, risks and liabilities are not reimbursed by Operator's insurance.

(b) Notwithstanding the provisions of Article 8(a), no indemnification to Operator shall be required, and Operator assumes and shall be liable for, and shall hold harmless and indemnify Company A and Company B in connection with, any claims of accident, injury or illness to employees of Operator, employees of Company A, or third parties, or damage to property of Company A and Company B, including but not limited to the Plant, Plant Site and/or the property of Company A, Operator and/or third parties, which are caused by or result solely from the proven negligent acts or omissions of those employees of Operator holding the titles listed in Exhibit E hereto (hereinafter called "Managerial Negligence").

(c) Except for such damages which shall have been properly paid by a party hereto to a third party for which indemnity is otherwise due pursuant to this Article 8, neither party shall in any event be liable to the other for special, indirect or consequential damages, whether or not resulting from the negligence of such party.

(d) Operator shall purchase and maintain insurance with reputable companies and in amounts and coverage reasonably acceptable to Company A as follows:

- (i) Nuclear Liability,
- (ii) Workers' Compensation and Employers Liability,
- (iii) Comprehensive General Liability including but not limited to Products, Contractual and Personal Injury,
- (iv) Automobile Liability,
- (v) Property Damage,
- (vi) Employee Dishonesty

and other insurance as may be required by Company A. Operator will provide Company A with full and complete copies of those insurance policies specific to the NPD business and not part of Operator's general insurance program, including any changes thereto. Operator shall provide summaries of Operator's general insurance policies and evidence reasonably satisfactory to Company A that the same are in full force and effect. In the event Operator is unwilling or unable to obtain or maintain such insurance coverage, Company A may obtain and maintain the same. The cost of Operator's insurance shall be deemed a Subject Expense of Company B or separately reimbursed to Operator, as the case may be. At Company A's request, Operator shall include Company A as an additional named insured under Operator's insurance.

9. Decommissioning.

Upon the expiration of the Term of this Agreement or earlier termination for any reason, or in the event that for any reason

whatsoever Operator is required by Governmental Requirements to decommission the Plant, Operator shall commence to dismantle, decommission and liquidate the Plant in accordance with all Governmental Requirements, to dispose of radioactive materials and any other materials, equipment or waste, and to terminate the employees of Operator when their services are no longer required (hereinafter called "Decommissioning"). All costs and expenses of any kind related to Decommissioning, including without limitation, the cost of Operator's employees, contractors, material suppliers, and severance costs in accordance with Operator's policies and plans in effect at such time, shall be for the sole account of Company A and shall be paid for by Company A or advanced to Operator in the same manner as provided in Article 3(c); provided nowever, that in the event Decommissioning is required within the first three (3) years of this Agreement solely as a result of Managerial Negligence, Operator shall bear the aforesaid costs and expenses.

10. Additional Covenants of Operator.

(a) Operator will give Company A, its counsel, accountants and authorized representatives full access during normal business hours to all of the books, tax returns, contracts, minute books, corporate records, and financial, regulatory and other records of Company B, and will give a mutually acceptable firm of certified public accountants designated by Company A access to such records of Company B as are reasonably necessary for the verification of the amount of Subject Expenses billed to Company A. Any examination thereof shall be made in a manner which will not unreasonably

interrupt or interfere with the ordinary course of Operator's business.

(b) Operator will give to Company A prompt notice of any development materially affecting the Plant and shall consult with Company A with respect thereto.

(c) Operator will operate the Plant in the normal course of business, substantially as carried on prior to the date of this Agreement, and will not make any material disposition of any of its assets comprising the Plant, except in the regular course of its business as provided herein.

(d) Except as otherwise provided for or contemplated herein, Operator will not make or become a party to any new contract or commitment concerning the supply to the Plant of materials or services or the disposition of the Products, except as are currently in force or are required for operating the Plant or production of Products in the ordinary course of Company B's business, without securing the prior written approval of Company A.

(e) Operator will not authorize, issue or sell any shares of the capital stock or any other securities of Company B or become obligated to do so, without the prior written approval of Company A or as may be permitted under the Stock Sale Agreement.

(f) Operator will not permit the amendment of the Certificate of Incorporation or Bylaws of Company B unless consented to in writing by Company A, except to change its name to a mutually acceptable substitute not containing any reference to "Union Carbide".

(g) Without the prior written consent of Company A, except as permitted by this Agreement or the Stock Sale Agreement, Operator will not pay or agree to pay any unreasonably large severance pay to any employee of Operator or Company B the costs of which are payable by Company A hereunder, nor will it materially increase or agree to increase the compensation it pays to such employees or adopt any fringe benefits other than such as are applicable to all of Operator's or Company B's employees.

(h) Operator shall take all reasonable actions to maintain an adequate staff of competently trained employees assigned to operate the Plant. Operator shall not hire additional employees for the Plant the costs for which are payable by Company A hereunder except to fill presently existing positions which may subsequently be vacated or upon demonstration of need for increased labor force to Company A or as required in Operator's sole discretion by Governmental Requirements or for the safe and secure operation of the Plant, or except where Company A consents in writing.

(i) Operator will exert its best efforts to preserve and protect Company B's assets intact and to assist Company A to preserve any favorable relationships with any of the suppliers or customers of Company A.

(j) Operator will not declare or pay any dividend on or make any other distribution upon, any shares of Company B capital stock outstanding as of the date of this Agreement, or permit Company B to purchase, retire or redeem any such shares without the prior written consent of Company A.

(k) Operator will not enter into any negotiations or transactions or participate in any negotiations or transactions with any entity regarding the ultimate disposition of the common stock or assets of Company B on behalf of Company A or pursuant to its right under Article 1.2(c) of the Stock Sale Agreement without the prior written consent of Company A, within the first 3 years of this Agreement, which consent shall not be unreasonably withheld, and thereafter upon prior notice to Company A. Operator agrees to cooperate fully with Company A in any negotiations that may ensue.

In connection with the covenants set forth in this Article, wherever the consent or approval of Company A is required, such consent or approval shall not be unreasonably withheld.

11. Term.

(a) The term of this Agreement shall commence on the date hereof, and shall continue in effect for a period of six (6) years thereafter, provided however that this Agreement shall automatically terminate at such earlier time as Operator makes a conveyance of the Company B Shares as required or as permitted under Article 1.2 of the Stock Sale Agreement, or at such earlier time as Company A exercises its unconditional right to terminate this Agreement upon One Hundred and Eighty (180) days written notice to Operator.

(b) Operator shall have the right to terminate this Agreement on One Hundred and Eighty (180) days written notice or within the period specified in Article 11(c) below, whichever is shorter, to Company A, in the event Hoffmann-La Roche Inc. sells, transfers or assigns any shares or the rights thereto in:

Medi-Physics, Inc., or Medi-Physics, Inc., sells Company A or the business of Company A to an unaffiliated third party.

(c) In the event either Company A or Operator exercises its rights to terminate this Agreement pursuant to 11(b), Operator shall continue to operate the Plant pursuant to the terms and conditions of this Agreement for up to six (6) additional months beyond the thereindescribed sale or until the third party purchaser obtains all applicable licenses and approvals required to own and operate the Plant pursuant to the Atomic Energy Act of 1954, as amended, whichever occurs first. Notwithstanding the above, in no event shall Operator be obligated in any way to operate the Plant beyond the six (6) year Term of this Agreement specified in Article 11(a).

(d) Upon any termination of this Agreement except upon a conveyance of the common stock of Company B to a third party purchaser pursuant to Article 1.2 of the Stock Sale Agreement, the provisions of this Agreement shall survive and remain in full force and effect until such time as Decommissioning has been completed to Operator's satisfaction, provided that Operator's obligations to produce Products for Company A shall cease upon such termination.

12. Equitable Relief.

The parties acknowledge that in the event of Operator's breach of conditions and covenants contained in Articles 2(b), 2(d), 5(b), 9 or 10 or Company A's breach of Article 2(c) or 5(c), monetary damages would be inadequate to remedy the irreparable harm suffered by the aggrieved party, and therefor, notwithstanding any provisions

for relief at law, the parties agree that equitable relief may be granted by a court of competent jurisdiction.

13. Force Majeure.

. Either party hereto shall be relieved from liability hereunder for failure to perform any of the obligations arising hereunder, except the payment obligations, for the time and to the extent such failure to perform is occasioned by voluntary or involuntary compliance with any law, order, regulation or any requirement of any Governmental authority or shortage or breakdown or other failure of facilities used for providing a service, or shortages, delay or inability to obtain labor, power, fuel or transportation, or by acts of God or by acts of public enemy, or by strikes, lockouts, or any other industrial disturbances, riots, floods, hurricanes, fire explosions, or any other cause or causes of any kind or character, reasonably beyond the control of the party failing to perform whether similar to or dissimilar from the enumerated causes above.

14. Indemnification.

In the event of any claim for indemnity pursuant to Articles 3 or 8 of this Agreement, the party to be indemnified shall give the other party prompt written notice thereof and shall permit such party to assume the defense of any such claim or any litigation resulting from such claim. Failure to notify the indemnified party within sixty (60) days after such notice thereof shall have been given of an election to defend, shall be deemed a waiver by the other party of its right so to defend such claim. If the indemnifying party shall elect to defend any such claim, such

defense shall be conducted by such counsel as shall be selected by such party at its expense. The indemnified party shall cooperate fully to make available to the other party all pertinent information under its control or relating to any such claim. If the other party fails to defend such claim, the indemnified party may defend such claim or settle it, if it is deemed advisable by the indemnified party, at the other party's expense and, in connection therewith, the other party shall cooperate fully and make available to the indemnified party all assistance, pertinent information and personnel under its control or relating thereto.

15. Independent Contractors.

Each of the parties shall be deemed to be independent contractors in the performance of its obligations hereunder.

16. Assignment.

This Agreement shall be binding upon, and inure to the benefit of, the parties hereto and their respective successors, legal representatives and permitted assigns. No assignment of any rights or delegation of any obligations provided for hereunder may be made by any party hereto without the express written consent of the other party hereto, except that Operator may at any time assign this Agreement to Company B at such time as Company B holds the licenses required for it to perform this Agreement, and Company A may at any time upon prior written notice assign the rights and obligations under this Agreement to Medi-Physics, Inc.

17. Governing Law.

The validity, interpretation, and performance of this Agreement shall be governed by the laws of the State of New York-applicable to agreements made and to be performed entirely in that state.

18. Notices.

Any notices or communications permitted or required hereunder shall be deemed sufficiently given if sent by United States Postal Services, certified mail, postage prepaid, return receipt requested, addressed to the respective parties at the following addresses:

Prior to January 1, 1982

Union Carbide Corporation
270 Park Avenue
New York, New York 10017

Attention: Secretary

Commencing January 1, 1982

Union Carbide Corporation
Old Ridgebury Road
Danbury, Connecticut 06817

Attention: Secretary

If to Company A:

Cintichem, Inc.
c/o Medipysics, Inc.
340 Kingsland Street
Nutley, New Jersey 07110

Attention: President

19. Entire Agreement.

This Agreement contains the entire agreement between the parties hereto with respect to the subject matter hereof and there are no representations, warranties, undertakings, or agreements, other than those expressly set forth herein.

IN WITNESS WHEREOF, each of the parties hereto has executed this Agreement as of the date first above written.

CINTICHEM, INC.

By 

Title

President 11P

UNION CARBIDE CORPORATION

By 

Title

Senior Vice President 11P

LIST OF EXHIBITS

TO

THE OPERATING AGREEMENT

DESIGNATION

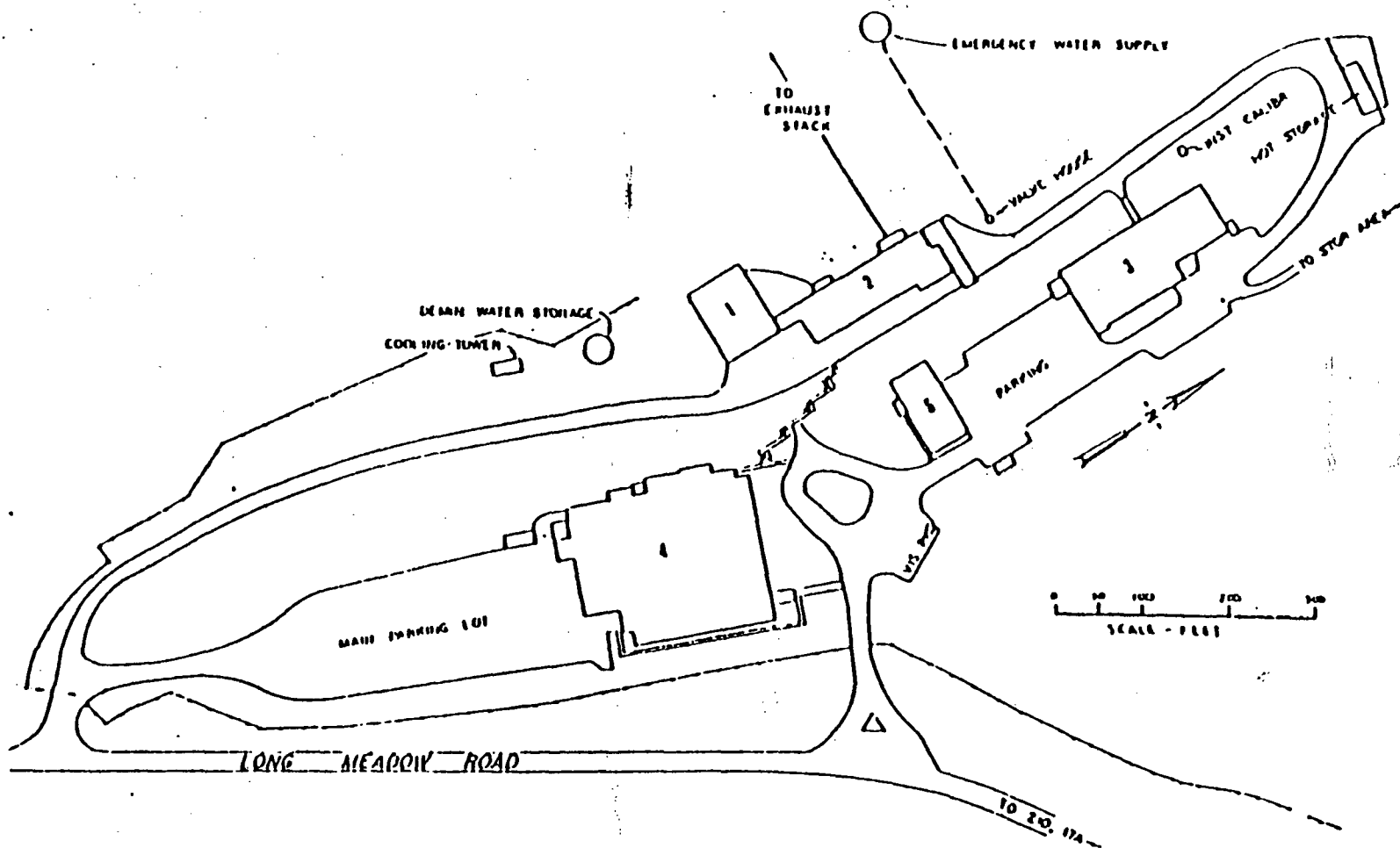
TITLE

Exhibit A	Site Plan/Designation of Buildings
Exhibit B	List of Products
Exhibit C	List of Materials, Services and Facilities to be Supplied by Operator to Company A
Exhibit D	List of Materials, Services and Facilities to be Supplied or arranged by Company A to Operator
Exhibit E	List of Managerial Titles

EXHIBIT A

Site Plan/Designation of Buildings

The site plan and designation of buildings is attached hereto as Exhibit A.



PARTIAL SITE PLAN SHOWING LOCATION OF BUILDINGS 1-5

Catalog Number
I-125-P-1

HALF-LIFE 59.7 days

CHEMICAL FORM NaI in NaOH - pH 8-11 (no reducing agent)

CONCENTRATION > 25 mCi/ml (> 100 mCi/ml on request)

TOTAL SOLIDS < 0.1 mg/mCi

SPECIFIC ACTIVITY Carrier-free

RADIONUCLIDE PURITY > 99.9% (exclusive of ^{126}I ; ^{126}I < .05%)

SHIPPING DAYS Daily

PRICE

100 mCi	S 190
200 mCi	310
500 mCi	670

NOT FOR HUMAN USE IN PRESENT FORM



RadioChemicals

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

Catalog Number
I-125-P-2

HALF-LIFE	59.7 days
CHEMICAL FORM	Nal in NaOH - pH 8-11 (no reducing agent)
CONCENTRATION	> 300 mCi/ml
TOTAL SOLIDS	< 0.1 mg/mCi
SPECIFIC ACTIVITY	1.7×10^4 Ci/gm (> 98% ^{125}I)
RADIONUCLIDE PURITY	> 99.9% (exclusive of ^{126}I , < .05%)
SHIPPING DAYS	Monday and Thursday (freshly processed for every other Monday) Routine shipping schedule available on request.
PRICE	1 - 2 mCi S 30
	3 mCi 35
	4 mCi 40
	5 mCi 45
	10 mCi 65
	15 mCi 85
	25 mCi 105
	50 mCi 150

NOT FOR HUMAN USE IN PRESENT FORM



RadioChemicals

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

Iodine-131

Catalog Number
I-131-P-1

HALF-LIFE	8.065 days
CHEMICAL FORM	NaI in 0.05N NaOH (no reducing agent)
CONCENTRATION	> 50 mCi/ml (> 500 mCi/ml on request)
TOTAL SOLIDS	< 0.1 mg/mCi
SPECIFIC ACTIVITY	Carrier-free
RADIONUCLIDE PURITY	> 99.9% (exclusive of ¹²⁹ I)
SHIPPING DAYS	Daily
DECAY CREDIT	Four days from day of shipment
PRICE	100 mCi S 42 200 mCi 54 500 mCi 90 1000 mCi 150

NOT FOR HUMAN USE IN PRESENT FORM



RadioChemicals

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

Catalog Number
I-131-P-2

HALF-LIFE	8.065 days
CHEMICAL FORM	NaI in 0.05N NaOH (no reducing agent)
CONCENTRATION	> 500 mCi/ml
TOTAL SOLIDS	< 0.1 mg/mCi
SPECIFIC ACTIVITY	3×10^4 Ci/gm (25% ^{131}I)
RADIONUCLIDE PURITY	> 99.9% (exclusive of ^{129}I)
SHIPPING DAYS	Thursday
DECAY CREDIT	Four days from day of shipment
PRICE	2 - 20 mCi S 30
	25 mCi 32.50
	30 mCi 35
	40 mCi 40
	50 mCi 45
	100 mCi 70

NOT FOR HUMAN USE IN PRESENT FORM



RadioChemicals

Union Carbide Corporation
Sterling Forest Laboratory
P.O. Box 324
Troy, New York 12067

Fission Produced Molybdenum-99

Catalog Number
MO-99-P-7

HALF-LIFE	66 hours
CHEMICAL FORM	Na_2MoO_4 in dilute NaCl solution pH 5 ± 0.5
CONCENTRATION	> 200 mCi/ml (1200 - 1400 mCi/ml at shipping time is usual)
SPECIFIC ACTIVITY	> 10^4 Ci/gm
SHIPPING DAY	Daily
DECAY CREDIT	5 days from day of shipment
PRICE	100 mCi S 73 200 mCi 96 300 mCi 119 400 mCi 142 500 mCi 165 1000 mCi 280

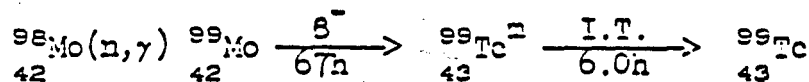
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RadioChemicals
Union Carbide Corporation
Sterling Forest Laboratory
P.O. Box 324

MOLYBDENUM-99 - P-2 - UNPROCESSED

Production Method:



$$\sigma = 0.51\text{b}$$

$$f = 0.2376$$

Radiations:

	<u>Beta (${}^{99}\text{Mo}$)</u>	<u>Gamma (${}^{99}\text{Mo}$)</u>
(MeV)	0.45 (14%)	0.041
	0.87 (~1%)	0.181
	1.23 (85%)	0.372
		0.740
		0.780
	<u>Beta (${}^{99}\text{Tc}^m$)</u>	<u>Gamma (${}^{99}\text{Tc}^m$)</u>
	< 0.03% primary β^-	0.140

Summary of Method:

Molybdenum trioxide (MoO_3) or molybdenum metal powder is contained in a welded aluminum capsule and irradiated in a neutron flux to produce ${}^{99}\text{Mo}$. The ${}^{99}\text{Mo}$ has a half-life of 67.0 hours and as it is formed it decays to ${}^{99}\text{Tc}^m$ by beta emission, which increases in activity until a state of transient equilibrium is reached. After irradiation, the target is transferred from capsule to the primary shipping container.

BUSINESS CONFIDENTIAL

Approved

[Signature]
11/1

ENCAPSULATION

There are two sizes of capsules used for irradiating MoO_3 to produce this product:

- (a) $3/4$ " O.D., .035" wall and 20" long aluminum, containing 150 gm MoO_3 or 200 gm Mo metal powder.
- (b) $3/4$ " O.D., .020" wall and $3-1/4$ " long aluminum, containing 30 gm MoO_3 or 40 gm Mo metal powder.

Both capsules are cleaned and degreased by placing them in an ultrasonic bath containing trichloroethylene for at least 5 minutes. They are removed from the bath, rinsed with acetone and dried in an oven. Each capsule is inspected to insure that it does not contain any particles of loose metal. Each capsule is inscribed with the identification mark, " MoO_3 " for molybdenum trioxide, or "X" for molybdenum metal powder, and the capsule number.

The appropriate amount (30 gm ± 0.5 or 150 gm ± 0.5) of molybdenum trioxide, which has been dried in an oven at 110°C for at least 4 hours just prior to weighing, or (40 gm ± 0.5 or 200 gm ± 0.5) of molybdenum metal powder, is weighed on a beam balance using a clean weighing paper for each amount and is quantitatively transferred to a prepared capsule. The top of each capsule is wiped clean with a Kimwipe type 900S tissue, and covered with a plastic bag to prevent contamination. The capsules are stored in a desiccator until ready to be welded. Each capsule is placed in an aluminum heat sink to a point slightly above the level of the powder and is sealed by welding the plugged open end. The integrity of the weld is determined by subjecting the capsule, immersed in water, to a partial vacuum of at least 27" of Hg. The sealed capsule is annealed in a muffle furnace at 325°C for 4-6 hours. Each capsule is leak checked in the same manner as stated above before it is loaded into the reactor for irradiation.

IRRADIATION AND YIELD

The product required for Friday is produced by irradiating the $3-1/4$ " long capsule in the C7 isotope stringer, E or I stack, for one cycle (100 hrs). Typically, in a $3/4$ " O.D. x $3-1/4$ " long capsule 30 gm of MoO_3 yields about 6 curies of ^{99}Mo and 40 gm of Mo metal yields about 12 curies of ^{99}Mo as of 1300 Sunday. The product required for processing at times during the reactor operating cycle is produced by irradiation of the 20" long capsules in available in-core sample positions; e.g., F5 or C9. Typically, 150 gm of MoO_3 in a $3/4$ " capsule irradiated at a flux of 3.5×10^{13} n/cm²/sec yields from 12-35 curies, and 200 gm of Mo metal powder in a $3/4$ " capsule yields 24-70 curies, depending upon what day it is removed from the core.

BUSINESS CONFIDENTIAL

Approved 

POST-IRRADIATION PROCESSING

The following steps are performed in a hot cell:

1. The capsule is identified and its number recorded. It is then vibrated to settle the powder and opened by cutting with a tubing cutter.
2. The target is then emptied into a wide mouth polyethylene bottle. This is the primary shipping container.
3. Before shipping, the powder is monitored with a Victoreen to obtain an estimate of total radioactivity.

RAW MATERIAL

Molybdenum Trioxide (MoO_3) - Reagent grade powder, meets A.C.S. specifications, Matheson, Coleman and Bell No. MX1600 or equivalent.

Molybdenum Metal Powder - (-325 mesh) 99.99% pure Apex Industries, catalog No. 1138 supplied with spectrographic analysis report, or equivalent.

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Phosphorus-32

Catalog Number
P-32-P-2

HALF-LIFE	14.3 days
CHEMICAL FORM	H ₃ PO ₄ in 1N HCl (> 90% ortho phosphate)
CONCENTRATION	>10 mCi/ml (up to 100 mCi/ml on request)
SPECIFIC ACTIVITY	Carrier-free
RADIONUCLIDE PURITY	>99% (³² P < 1%)
TOTAL SOLIDS	< 0.05 mg/mCi
SHIPPING DAYS	Daily
DECAY CREDIT	Four days from day of shipment
PRICE	1-20 mCi S 40 50 mCi 70 100 mCi 105 200 mCi 160 500 mCi 275 1000 mCi 450

NOT FOR HUMAN USE IN PRESENT FORM



RadioChemicals

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

Catalog Number
SN-113-P-1

HALF-LIFE 115 days

CHEMICAL FORM SnCl_4 in 4N HCl

CONCENTRATION > 30 mCi/ml

SPECIFIC ACTIVITY > 1.2 mCi/mg (enriched target)

RADIONUCLIDE PURITY > 99% (exclusive of ^{113}mIn daughter)

SHIPPING DAYS Daily

PRICE	1 mCi	S 35
	2 mCi	60
	5 mCi	125
	10 mCi	250
	25 mCi	500

NOT FOR HUMAN USE IN PRESENT FORM



RadioChemicals
Union Carbide Corporation
Sterling Forest Laboratory
P.O. Box 324
Tuxedo, New York 10987

Tin-113/Indium-113^m Generator

Catalog Number
SN-113-C-Z1

DESCRIPTION	¹¹³ Sn/ ^{113m} In generators produce ^{113m} In by decay of ¹¹³ Sn. The indium is obtained by eluting the generator with dilute hydrochloric acid solution. Sterilization of the product can be achieved by autoclave or filtration.	
HALF-LIFE	115 days - ¹¹³ Sn; 99.3 min. ^{113m} In	
CHEMICAL FORM OF ^{113m} In	Indium ion (In ³⁺) in HCl	
YIELD	> 90% of the theoretically available ^{113m} In	
ELUTING SOLUTION	5-25 ml of dilute HCl (pH 1.6) depending on generator size.	
RADIONUCLIDE PURITY	> 99.98% ^{113m} In, <0.02% ¹¹³ Sn	
SHIPPING CONTAINER	Non-returnable container. (Generator must be used in container or other suitable shield).	
SHIPPING DAY	Within three weeks of order	
PRICE	5 mCi generator	\$ 300
	10 mCi generator	400
	25 mCi generator	700
	50 mCi generator	1,200
	100 mCi generator	2,200
	Other sizes quoted on request	

NOTE: The product solution is not tested for sterility prior to shipment, although the eluate is tested for pyrogenicity. The generator is not a sealed unit.

NOT FOR HUMAN USE IN PRESENT FORM



RadioChemicals

Union Carbide Corporation

Catalog Number
Xe-133-P-1
(in returnable cylinders)

HALF-LIFE.....	5.25 days	
CHEMICAL FORM.....	Elemental Xe in air (> 75% Xe)	
CONCENTRATION.....	> 1 Ci/cc at STP	
SPECIFIC ACTIVITY.....	> 10^4 Ci/gm Xe (no carrier added)	
RADIONUCLIDE PURITY.....	> 99.5% Xe-133 and Xe-133m < 0.01% I-131	
SHIPPING DAYS.....	DAILY (Orders must be placed by noon of the day preceding shipment. For orders of more than 10 Ci, two days' notice is required.)	
DECAY CREDIT:.....	Noon two days from day of shipment. (Friday shipments calibrated for noon the following Monday.)	
PRICE.....	\geq 3 Ci	\$60/Ci

NOT FOR HUMAN USE IN PRESENT FORM



RadioChemicals

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

Xenon-133

Catalog Number
Xe-133-P-2
(in glass ampules)

HALF-LIFE.	5.25 days
CHEMICAL FORM.	Elemental Xe gas in air (> 75% Xe)
CONCENTRATION.	> 500 mCi/cc at STP
SPECIFIC ACTIVITY.	> 10 ⁴ Ci/gm Xe (no carrier added)
RADIONUCLIDE PURITY.	> 99.5% Xe-133 and Xe-133m < 0.01% I-131
SHIPPING DAYS.	DAILY (Orders must be placed by noon of the day preceding shipment)
DECAY CREDIT.	Noon two days from day of shipment. (Friday shipments calibrated for noon the following Monday.)
PRICE.	1000 mCi \$150 2000 mCi \$210
PACKAGING CHARGE.	There will be a packaging charge of \$25 for each ampule shipped. No more than 2,000 mCi will be shipped in one ampule.

NOT FOR HUMAN USE IN PRESENT FORM



RadioChemicals

Union Carbide Corporation
Sterling Forest Laboratory
P.O. Box 324

NEUTRON TRANSMUTATION DOPING OF SILICON SERVICES

The customer prescribes specifications with each order.

Neutron Irradiation Services

Neutron irradiations are performed in the Union Carbide Nuclear Reactor (UCNR), a light-water-moderated and cooled reactor fueled with highly enriched uranium. The UCNR operates weekly at a power level of 5 megawatts affording a wide range of neutron fluxes up to 1×10^{14} n/cm²/sec.

All samples to be irradiated must be fully described prior to irradiation and each sample must be evaluated for possible hazards to personnel or equipment. This evaluation is usually done by UCNR staff personnel with the assistance of the irradiation sponsor. This evaluation and approval in most cases can be accomplished in a few days. However, approval of complicated or hazardous irradiations requiring auxiliary control or safety equipment will take longer.

Samples to be irradiated must be sealed in quartz or 2S aluminum for irradiation in the reactor core or in polyethylene for irradiation in the pneumatic conveyor system. The encapsulation is performed in general by UCNR personnel. Irradiation may produce physical and chemical changes in sample materials, particularly organic materials, which sometimes cannot be anticipated. Union Carbide does not accept responsibility for damage to samples as a result of irradiation.

The price of neutron service irradiations varies with sample size, neutron flux, duration and complexity of irradiation. Price quotations can easily be obtained by telephone or mail from UCNR operation's personnel.



**Nuclear Products
And Services**

Union Carbide Corporation

EXHIBIT C

List of Materials, Services and Facilities to be Supplied by Operator to Company A

1. Health Physics/Environmental Services
 - a. Film badge and dosimeter monitors
 - b. Routine surveys
 - c. Effluent monitoring and reporting
 - d. Emergency support services
 - e. General safety program (OSHA)
 - f. EPA/DEC regulatory affairs
2. Hazardous Waste Disposal Services (Radioactive & Other)
 - a. Storage
 - b. Labeling and monitoring for shipment
 - c. Burial services
 - d. Incineration
3. Liquid Waste Disposal Services
 - a. Water evaporation
 - b. Solidification of concentrated radioactive liquids
 - c. Storage and monitoring for release to environment
4. Technical Services
 - a. Radiopharmaceutical dose calculations
 - b. Nuclear/Chemical engineering services as requested
5. Manipulator Maintenance
 - a. Parts inventory
 - b. Repair and routine maintenance

EXHIBIT C (Continued)

6. Quality Assurance Services on Uranium Accountability
7. Radiochemical Products & Services
 - a. Isotopes for pharmaceutical production
 - b. Isotopes for research and development
 - c. Hot cell services
 - d. Reactor services

EXHIBIT D

List of Materials, Services and Facilities to be Supplied or Arranged by Company A to Operator

FACILITIES AND UTILITY SERVICES

1. Electricity
2. Steam
3. High Pressure Air
4. Hot and Chilled Water for Air Conditioning
5. Natural Gas and Gasoline
6. Domestic Hot and Cold Water and Demineralized Water (for
Nuclear Reactor Purposes)
7. Sanitary Waste Disposal
8. Liquid Process Waste Piping, Hold Tanks, Hold Tank
Monitoring and Dumping
9. Trash Disposal and Janitorial Service
10. Landscaping and Ground Maintenance, Road Service, Parking,
Snow Removal, Storm Drain Maintenance
11. Fire Protection, Including Maintenance of Fire Main,
Hydrants and Sprinkler Service
12. Telephone Service and Equipment Maintenance
13. Plant Site Security, Including Guards During Non-Business
Hours and Maintenance of all Fencing
14. On and Off Plant Site Environmental Monitoring Pursuant to
Governmental Requirements. Company A Shall Also Provide
the Aforesaid facilities and utility services for the
Operation of Buildings 3 and 4 as shown on Exhibit B

SERVICES

1. Purchasing
2. Cost Accounting and Reports:
 - a. Sales (shipment) reports
 - b. Cost summary sheets

EXHIBIT D (continued)

- c. Inventory reports
- d. Monthly cost analysis
- e. Monthly O&R
- 3. Order Entry
- 4. Traffic & Distribution
- 5. General Maintenance
 - a. Electricians/electronics
 - b. Carpenter
 - c. Machine shop
 - d. Mechanical/electrical engineering
 - e. Maintenance of drawings
 - f. General maintenance parts inventory and equipment
- 6. Employee Relations (except salary)
- 7. Warehousing/Materials Handling
- 8. Stockroom
- 9. Cafeteria
- 10. Library
- 11. Site Security
 - a. Fire watch
 - b. Emergency response to intrusion
 - c. Surveillance during shutdown periods
- 12. Switchboard, Receptionist, Qwip, Copying, Mail and Audio Visual Services
- 13. Word Processing
- 14. Professional Development Training
- 15. FDA Regulatory Affairs

EXHIBIT D (continued)

16. Travel Services
17. Computer Services (time sharing terminals & telephone lines)
18. Analytical
 - a. Reagent preparation
 - b. NTD measurements
 - c. Uranium measurements for calibration of Q.C. systems
 - d. Miscellaneous analytical work
19. Quality Control
 - a. Assay of radiochemical product
 - b. Assay of Uranium process materials and inventory
 - c. Miscellaneous radiometric assays for Reactor & Hot Lab
(i.e., Uranium in pool water and custom isotopes)

EXHIBIT E

List of Managerial Titles

Business Manager, Radiochemicals

Manager, Health, Safety, and Environmental Affairs

Manager, Nuclear Operations

*Supervisor, Radiochemical Production

Manager, Radiochemicals Process Engineering

Senior Development Scientist

*To be deleted from list effective date of transfer to
Cintichem, Inc. upon obtaining of Special Nuclear Materials
License.