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OAK RIDGE NATIONAL LABORATORY
OPERATED BY MARTIN MARIETTA ENERGY SYSTEMS, INC.

POST OFFICE BOX X
OAK RIDGE, TENNESSEE 37831
January 22, 1988

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Mr. Joseph A. Lenhard, Assistant Manager
Energy Research and Development
Department of Energy, Oak Ridge Operations
Post Office Box E
Oak Ridge, Tennessee 37831

Dear Mr. Lenhard:

Enclosed is a copy of a report by P. C. Srivastava, covering his recent foreign travel to India. The enclosed report is unclassified and does not contain proprietary data.

Sincerely,

P. J. Walsh

for
Herman Postma
Director

HP:1a

Enclosure

cc: A. R. Hawthorne
F. F. Knapp, Jr.
C. R. Richmond
P. C. Srivastava
P. J. Walsh
File - RC

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**COVER SHEET
FOR TRIP REPORTS SUBMITTED TO THE
OFFICE OF ENERGY RESEARCH**

Destination(s) and Dates for
Which Trip Report Being Submitted: 11/2/87-12/29/87 - India (Lucknow,
New Delhi, Bombay, Jaipur)

Name of Traveler: P. C. Srivastava

Joint Trip Report Yes
 No

If so, Name of Other Traveler(s): _____

OAK RIDGE NATIONAL LABORATORY

OPERATED BY MARTIN MARIETTA ENERGY SYSTEMS, INC.
POST OFFICE BOX X, OAK RIDGE, TENNESSEE 37831

ORNL
FOREIGN TRIP REPORT

ORNL/FTR-2797

DATE: January 14, 1988

SUBJECT: Report of Foreign Travel of P. C. Srivastava, Nuclear Medicine Group, Health and Safety Research Division

TO: Herman Postma

FROM: P. C. Srivastava

PURPOSE: The purpose was to undertake a TOKTEN Distinguished Scientist Award assignment sponsored by the United Nations Development Programme (UNDP) in cooperation with the Council of Scientific and Industrial Research (CSIR) of India to conduct research in the areas of nucleosides and protein labeling agents at the Central Drug Research Institute (CDRI), Lucknow, and to help research scientists develop chemotherapeutic drugs in India.

SITES

VISITED:	11/2/87 12/28-29/87	United Nations Development Office and Council of Scientific and Industrial Research Office, New Delhi, India	Dr. P. N. Pathak Dr. Indradev Dr. D. N. Misra
	11/2/87	All India Institute of Medical Sciences, New Delhi, India	Dr. S. K. Sharma
	11/3-17/87 11/21-12/13/87 12/18-27/87	Central Drug Research Institute, Lucknow, India	Dr. M. M. Dhar Dr. D. S. Bhakuni Dr. C. M. Gupta Dr. R. P. Singh
	11/18-20/87	University of Rajasthan, Jaipur, India	Dr. R. C. Mehrotra
	12/14-17/87	Bhabha Atomic Research Center, Bombay, India	Dr. R. S. Mani
	12/28/87	Ranbaxy Laboratories, Ltd., New Delhi, India	Dr. J. M. Khanna

Access to the information in this report is limited to those indicated on the distribution list and to U.S. Government Agencies and their Contractors.

ABSTRACT: The traveler received a Distinguished Scientist Award (TOKTEN) by the UNDP, in cooperation with CSIR of India, to conduct research at CDRI, Lucknow, the host institution, and to interact with and advise Indian scientists in the areas of his research expertise. Work at CDRI provided the traveler with the opportunity to pursue research projects originally developed at the Oak Ridge National Laboratory (ORNL). His work at CDRI consisted of syntheses of imidazole nucleosides, iodination reactions of nucleosides, synthesis of a bifunctional bismaleimide protein labeling agent, coordination of protein labeling studies with the Membrane Biology Group of CDRI, and initiation of several new collaborative research projects at CDRI. In addition, as a part of the CSIR-UNDP, the traveler visited several academic and industrial research institutions in India, delivered five seminars describing various aspects of radiopharmaceutical development at ORNL, and interacted extensively with scientists in India on current drug and radiopharmaceutical development technologies in India and abroad.

ASSIGNMENT AT THE CENTRAL DRUG RESEARCH INSTITUTE, LUCKNOW

The main aim of the UNDP-TOKTEN Award, in cooperation with CSIR, is to invite distinguished scientists for limited periods to participate in well defined projects and programs supporting India's development endeavors, leading to transfer of knowledge, special skills, or techniques. The traveler worked for approximately six weeks at CDRI, the host institution, at the invitation of Dr. M. M. Dhar, the director of CDRI.

CDRI, a national laboratory under CSIR, was established in 1951 to carry out research in the field of drugs and pharmaceuticals. CDRI is a multidisciplinary research center in biological sciences including biochemistry, medicinal chemistry, and membrane biology. The research and development program of CDRI is organized into 16 research divisions involving both basic and applied research.

The search for a new drug starts with the generation of a biologically active compound. Such a compound is obtained either by chemical synthesis or by isolation from natural sources. About 600 newly synthesized compounds, extracts of 200 plants and 50 marine flora/fauna are screened every year using about 90 in vitro/in vivo tests.

Synthetic compounds and plant fractions/constituents found to be active are selected for detailed chemical and biological studies. Compounds chosen for development as drugs are further investigated for process development, quality control, toxicology and pharmacokinetics. Clinical trials of promising compounds are undertaken in collaboration with the State Medical and Health Directorate and various medical institutions after clearance for each stage of clinical trials from the Drugs Controller (India).

Basic research at CDRI forms an integral component of each project area and is oriented to provide leads for development of new drugs and vaccines and to generate new knowledge. Areas studied include parasitic diseases, characterization of protective antigens, membrane structure and function, synthesis of novel immunomodulators, ligand-receptor interactions, and adrenergic mechanisms in cardiovascular and nervous systems, etc.

The excellent facilities at CDRI provided the traveler with an opportunity to pursue research projects developed at ORNL, as described below. In addition, the traveler also had the opportunity to meet and discuss projects of joint interest with several CDRI investigators.

A. Synthesis and Iodination Studies of Nucleosides

The traveler recently initiated research at ORNL resulting in a proposal for synthesis of radiolabeled nucleoside probes for tumor diagnosis. Under the supervision of Drs. R. P. Singh and D. S. Bhakuni, CDRI has a group of approximately ten investigators, including Ph.D. students and postdoctoral fellows, working in the area of nucleosides as potential chemotherapeutic agents. The traveler worked with this group to pursue and complete the synthesis of an imidazole nucleoside precursor for iodination. The model iodination studies of the nucleoside substrate were performed using iodine monochloride (I-Cl), a well-known reagent used for electrophilic iodination of aromatic moieties. The products of this synthesis were characterized by chromatography, nuclear magnetic resonance, mass spectroscopy, elemental analyses and melting point. It was confirmed that the I-Cl reaction of the model nucleoside provided a chlorinated imidazole nucleoside instead of the expected iodinated imidazole nucleoside. The reaction may have important implications in I-Cl iodination of proteins involving histidine residues, which are imidazole derivatives. This peculiar reaction demonstrates the departure of I-Cl from its normal iodinating behavior, and a plausible mechanism of chlorination has been outlined in a manuscript which will be submitted for publication.

B. Synthesis, of N,N'-ortho-phenylenedimaleimide (OPDM)

The radiiodinated maleimide agent developed by the traveler at ORNL is currently being evaluated for labeling platelets and antibodies in collaboration with several investigators. The traveler continued this work during the tenure of his assignment at CDRI, where he synthesized OPDM. Currently, both the traveler and researchers at CDRI are pursuing applications of OPDM. The agent is being evaluated by CDRI for cross-linking proteins to study membrane changes in erythrocytes of malaria-infected animals. These studies are being performed in collaboration with Dr. C. M. Gupta and his group (vide infra).

C. Collaborative Studies

The work initiated by the traveler at CDRI will be continued in collaboration with CDRI investigators. The traveler, while at CDRI, effectively collaborated with Dr. R. P. Singh and his group, who he advised of the various synthetic aspects of nucleoside chemistry. The traveler has extensive experience in the nucleoside area and recently submitted a chapter dealing with the chemistry of nucleosides and nucleotides to be published by Plenum Press. Dr. R. P. Singh and his group will pursue the syntheses of naturally occurring nucleoside analogues with functional groups appropriate for fluorination. The nucleoside substrates will be supplied to the traveler at ORNL to perform fluorination studies as a model for fluorine-18 studies for positron emission tomography (PET). The novel I-Cl chlorination (vide ante) studied by the traveler will be further evaluated using histidine and other molecules of biological interest for its implications in radioiodination reactions.

The dimaleimide agent, OPDM, will be used for cross-linking proteins to study the differences in the membrane structure of normal and malarial parasite-infected erythrocytes of primates in collaboration with Dr. C. M. Gupta. After preliminary evaluations, the dimaleimide agent will be radiolabeled to study free protein thiols. Malarial parasite-infected erythrocytes could potentially undergo reduction of the disulfide bonds of intracellular proteins. The smaller proteins with free thiol groups are then released with subsequent changes in the membrane phospholipid organization of the host erythrocytes. These studies have recently been reported by this group, "Possible Basis for Membrane Changes in Nonparasitized Erythrocytes of Malaria Infected Animals" (BBA, 862, 1986, 220-222). Dr. C. M. Gupta did his postdoctoral and sabbatical work with Professor H. G. Khorana at the Massachusetts Institute of Technology. Dr. Gupta has international recognition in his field, with several awards and honors and excellent publications to his credit. It is anticipated that a collaborative program with this group will be mutually beneficial.

VISITS TO OTHER LABORATORIES

While in India, the traveler visited other institutions where he presented seminars and had stimulating discussions on subjects of mutual interests resulting in exchange of ideas.

A. All India Institute Of Medical Sciences (AIMS), New Delhi

While in transit from Oak Ridge to Lucknow, the traveler stayed in New Delhi for two days for briefings by the UNDP and CSIR officials. During this period he was invited to visit AIMS to meet Dr. S. K. Sharma, Head,

Biochemistry Department, and to present a seminar entitled, "Maleimide Probes for Labeling Antibodies." The AIMS group has expressed interest in synthetic chemistry and developmental aspects of radioiodination techniques at ORNL. Dr. D. N. Rao of the Biochemistry and Immunology Department showed interest in using the maleimide agent developed at ORNL for labeling peptides under a collaborative arrangement.

B. Department of Chemistry, University of Rajasthan (UR), Jaipur

The traveler was invited by Dr. R. C. Mehrotra, Professor-Emeritus, to visit UR, and to present a seminar on "Boronic Acid Precursors for Radioiodination and Radiopharmaceutical Development." Following the seminar, the traveler had the opportunity to meet the faculty members and tour the Chemistry Department facilities.

In the early sixties, Dr. M. S. Mehta, then the vice-chancellor of the university, was keen to invite eminent scientists as professors and heads of the newly established science departments, and with his foresight and vision, he was able to persuade Professor R. C. Mehrotra, who was at that time Professor and Head of the Chemistry Department and Dean, Faculty of Science, Gorakhpur University, to join the department in July 1962.

Although research work in the field of potentiometric techniques was initiated in the department from the beginning, an increased interest in synthetic inorganic and organometallic chemistry occurred with the shifting of a few students, along with Professor R. C. Mehrotra, in 1962. Other lines of work which were initiated in the department at this time were in the field of synthetic organic chemistry. The department quickly grew into an active center of chemical research and attracted substantial funds in the support of a large number of research projects for the CSIR, Atomic Energy, as well as the Defense organization. Research work in the field of modern organic chemistry began to receive accelerated attention after Professor K. C. Joshi joined the department, with his long experience in the field of organo-fluorine and heterocyclic chemistry. Currently, this group is among the best in the country in the areas of chelating and organometallic chemistry.

C. Bhabha Atomic Research Center (BARC), Bombay

The traveler was invited by Dr. R. S. Mani, Head, Radiopharmaceutical Division, to visit BARC and present a seminar on "Radiopharmaceutical Development at ORNL." This seminar was very well publicized and attended and included an interesting question-answer session. The traveler spent three days at BARC and had the opportunity to meet several BARC scientists and visit the Isotope Division, Radiation Technology Division, Radiopharmaceuticals Division, and the Labeled Compounds Section. The traveler was introduced to Dr. R. G. Deshpande, the Director of these four

divisions, which employs approximately 350 scientists and technicians. Dr. Deshpande spent a year in a training program at ORNL during the early sixties. The following is a brief recollection of the travelers visit to BARC, and his discussions with the BARC scientists. Although much larger, BARC is in many ways very similar to ORNL. India started work in the peaceful aspects of nuclear energy at a time when it was very much a frontier science. The late Dr. Homi J. Bhabha recognized, in those early days, the important role that atomic energy could play in India's development and initiated the nuclear program.

The Atomic Energy Establishment, Trombay, was established in January 1954, and formally inaugurated by Prime Minister Shri Jawaharlal Nehru, on January 20, 1957. In January 1967, the Establishment was named the Bhabha Atomic Research Center, to perpetuate the memory of the father of atomic energy in India. BARC is today one of the largest and best equipped research centers in the world. Over the period of ten years it has built strong research groups and a wide range of modern facilities in a number of disciplines and programs such as reactor development, reactor engineering, heavy water, radioisotopes, radiation medicine, radioactive waste management, health physics and radiological protection.

The Isotope Group of BARC is engaged in the production and supply of various radioisotopes and radiopharmaceuticals for use in medicine, industry, agriculture, and research. The research reactors, Cirus (40 MW) and Dhruva (100 MW) provide the irradiation facilities for production of radioisotopes. The new BARC Radiopharmaceuticals Laboratory, known as "Isopharm," is located at Vashi and has facilities for the production of a variety of radiopharmaceuticals. The Radiopharmaceuticals Division of BARC produces and supplies a wide range of radiopharmaceuticals to over 120 hospitals and medical institutions enabling 500,000 patient investigations to be carried out annually in India. Radiopharmaceuticals from BARC are also exported to several countries, including western countries such as Australia, Denmark, and France.

CONCLUSIONS

The traveler, during the tenure of his assignment in India, had the opportunity to perform laboratory experiments at CDRI, visit research institutions, present seminars on several topics on radiopharmaceutical development at ORNL, interact with the scientists, and make collaborative arrangements. The traveler gained valuable experience in important projects which were extensions of his work at ORNL. The assignment provided the traveler with the opportunity to ensure continued success in his role in the nuclear medicine program. The collaborative arrangements that were established will benefit the research of the Nuclear Medicine Program at ORNL. The visit was also helpful for exchange of ideas and evaluation of exchange programs among ORNL, CDRI and BARC. Several graduate students and postdoctoral scientists showed interest in coming to

ORNL to pursue postdoctoral work with the Nuclear Medicine Group. The traveler has been invited by CDRI and CSIR to visit India in late 1988 to establish new collaboration among ORNL, CDRI and BARC in order to strengthen the radiopharmaceutical research dealing with tissue specific organic molecules in India. Currently there is no collaboration between CDRI and BARC. CSIR and CDRI scientists believe that the traveler, with unique experience in synthetic organic chemistry and radiopharmaceutical chemistry, could play a catalytic role in bringing these research institutions together to benefit mutual research interests. The funds for traveler's visit to India in 1988 are available under a similar United Nations program subject to approval from the Director General of CSIR, India.

APPENDIX

Itinerary

10/30/1987- Travel from Oak Ridge, Tennessee, to New Delhi, India
10/31/1987

11/1/1987 Weekend

11/2/1987 United Nations Development Program (UNDP) and Council of Scientific and Industrial Research (CSIR) Offices. Visit All India Institute of Medical Sciences.

11/3/1987- UNDP Distinguished Scientist Research Assignment, Central
12/26/1987 Drug Research Institute, Lucknow, India

11/18/1987- Chemistry Department, Rajasthan University, Jaipur, India
11/20/1987

12/14/1987- Bhabha Atomic Research Center, Bombay, India
12/17/1987

12/27/87 Travel from Lucknow to New Delhi

12/28/1987- Visit UNDP and CSIR Offices and Ranbaxy Laboratories,
12/29/1987 Ltd., New Delhi

12/30/1987 Travel from New Delhi, India, to Oak Ridge, Tennessee

Persons Contacted

1. United Nations Development Office, New Delhi, India
P. N. Pathak, Ph.D.
2. Council of Scientific and Industrial Research, New Delhi, India
Indradev, Ph.D.
D. N. Misra, Ph.D.
3. Central Drug Research Institute, Lucknow, India
N. Anand, Ph.D.
S. Anand, M.D., Ph.D.
A. P. Bahaduri, Ph.D.
D. S. Bhakuni, Ph.D.
B. N. Dhawan, M.D., Ph.D.
C. M. Gupta, Ph.D.
R. C. Gupta, Ph.D.

K. B. Mathur, Ph.D.
R. P. Rastogi, Ph.D.
S. N. Rastogi, Ph.D.
S. Ray, Ph.D.
S. V. Sharma, Ph.D.
C. Sing, Ph.D.
R. P. Singh, Ph.D.
J. S. Tandon, Ph.D.

4. All India Institute of Medical Sciences, New Delhi, India

D. N. Rao, Ph.D.
S. K. Sharma, Ph.D.

5. University of Rajasthan, Jaipur, India

R. C. Mehrotra, Ph.D.
J. P. Tandon, Ph.D.
A. K. Rai, Ph.D.

6. Bhabha Atomic Research Center, Bombay, India

C. N. Desai, M.S.
R. G. Deshpande, Ph.D.
R. S. Mani, Ph.D.
K. B. Shah, Ph.D.

7. Ranbaxy Laboratories, Ltd., New Delhi, India

J. M. Khanna, Ph.D.

DISTRIBUTION

1. Assistant Secretary for International Affairs, DOE, Washington, D.C.
2. R. W. Wood, Acting Associate Director, Office of Health and Environmental Research, Office of Energy Research, DOE, Washington, D.C.
3. Director, Division of Safeguards and Security, DOE, Washington, D.C.
4. Director, Division of International Security Affairs, DOE, Washington, D.C.
5. J. A. Lenhard, DOE/ORO
- 6-7. D. J. Cook, DOE/ORO
8. Herman Postma
9. F. F. Knapp, Jr.
10. J. F. Allred
11. K. R. Ambrose
12. S. Blystone
13. A. P. Callahan
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21. D. E. Rice
22. C. R. Richmond
23. J. Robertson, DOE/OHER
24. P. C. Srivastava
25. J. H. Swanks
26. P. J. Walsh
27. H. A. Wright
- 28-29. Laboratory Records Department
30. Laboratory Records Department - RC
31. Laboratory Protection Division
32. ORNL Patent Section
33. ORNL Public Relations Office
- 34-35. Technical Information Center

70:

FROM: Herman Postma, Director
Oak Ridge National Laboratory
4500N, Room I-210, X-10

Joseph A. Lenhard, Assistant Manager
for Energy Research and Development
ORO, DOE, Federal Building

Reply Message

DATE
November 16, 1987

SUBJECT
ASSIGNMENT OF PREM C. SRIVASTAVA (ORNL) TO
CENTRAL DRUG RESEARCH INSTITUTE (CDRI) OF INDIA

FOLD Y
Reference Letter: Form DOE-F-1512.I, 8/17/87

M Document Transmitted: Agreement with CDRI implementing two-month (11/1/87-12/31/87) assign-
E ment of Dr. Srivastava (ORNL Health & Safety Research Division) to CDRI to participate as a
S distinguished scientist in radiopharmaceutical research and development under sponsorship of
S the United Nations Development Program.

S Four executed originals of the above document are transmitted for your approval. If satis-
A factory, please return five copies (at least three originals) to me for distribution.

HP:ERB:bdp

Attachments - as stated

cc: G. W. Horde - RC
H. M. Oakes

Herman Postma 11/19/87

DATE OF REPLY
DEC 8 1987

SIGNED
Herman Postma

Approved.

Attachment:
Agreement (5)

cc w/o atchmt:
W. P. Snyder, CC-10, ORO
R. M. Poteat, CC-20, ORO

SIGNED
ORIGINAL SIGNED BY
L K PRICE

RECIPIENT
for Joseph A. Lenhard, Assistant Manager
for Energy Research and Development

ER-122: MWallace: aa: 6-0714: 12/08/87
REPLY MESSAGE - Log #W-6139

*Return to
M. Wallace*

H-2919

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RTG SYMBOL ER-122
INITIALS/SIG M. Wallace
DATE 12/8/87
RTG SYMBOL ER-122
INITIALS/SIG DUNAWAY
DATE 12/8/87
RTG SYMBOL ER-10
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AGREEMENT BETWEEN
MARTIN MARIETTA ENERGY SYSTEMS, INC.
AND THE
CENTRAL DRUG RESEARCH INSTITUTE
Pertaining to the Assignment of
Dr. PREM C. SRIVASTAVA

THIS AGREEMENT, made and entered into effective the 1st day of November, 1987, by and between MARTIN MARIETTA ENERGY SYSTEMS, INC., a corporation duly organized and existing under the laws of the State of Delaware and having a business office at Oak Ridge, Tennessee 37831 (USA) (hereinafter referred to as "Energy Systems"), acting under its Contract No. DE-AC05-84OR21400 with the UNITED STATES OF AMERICA (hereinafter referred to as the "USA"), as represented by the UNITED STATES DEPARTMENT OF ENERGY (hereinafter referred to as "DOE"), and the CENTRAL DRUG RESEARCH INSTITUTE, located at Chattar Manzil, Lucknow-226 011 (India) (hereinafter referred to as the "CDRI"), a Constituent Establishment of the COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH of INDIA (hereinafter referred to as the "CSIR"):

CONSIDERING THAT CSIR, in cooperation with the UNITED NATIONS DEVELOPMENT PROGRAMME (hereinafter referred to as the "UNDP"), has established a program designated as the "Transfer of Knowledge Through Expatriate Nationals" (TOKTEN) Project through which distinguished scientists of Indian origin settled abroad are invited to contribute towards India's developmental endeavors through projects or programs which would lead to transfer of knowledge, special skills, or technique, with certain funding for said effort to be provided by UNDP; and

CONSIDERING THAT, pursuant to the TOKTEN Project, CDRI has invited Dr. PREM C. SRIVASTAVA (hereinafter referred to as the "Assignee") to participate in and conduct research at CDRI involving the preparation of agents for use in the study and development of radiopharmaceuticals for diagnostic and therapeutic applications; and

CONSIDERING THAT the Assignee is an employee of Energy Systems at the OAK RIDGE NATIONAL LABORATORY (hereinafter referred to as "ORNL"), which is operated for DOE by Energy Systems pursuant to its aforesaid contract with the USA; and

CONSIDERING THAT the DOE has agreed that such assignment may be made, pursuant to the terms and conditions set forth below; and

CONSIDERING THAT CDRI and Energy Systems desire to establish an understanding concerning their respective rights and responsibilities with regard to such assignment;

NOW THEREFORE, CDRI and Energy Systems agree as follows:

1. Energy Systems will temporarily assign the Assignee to CDRI for the purposes set forth above, with the period of such assignment to begin on or about November 1, 1987, and end on or about December 31, 1987. However, the period of the assignment may be extended by written agreement of the Parties, or may be terminated as provided in Article 10, below. During the period of this assignment CDRI shall make available to the Assignee those facilities and services reasonably necessary for the performance of his research activities.
2. The Assignee will continue to be and remain the employee of Energy Systems at all times during the period of the assignment and shall not be considered an employee of CDRI for any purpose. Therefore, although certain travel and per diem expenses incident to the Assignment are to be reimbursed by the UNDP, neither CDRI nor CSIR shall be responsible for any costs or expenses of or applicable to the assignment except as specifically provided in this Agreement. However, the Assignee will cooperate with and be subject to the technical and administrative guidance and supervision of CDRI, and shall therefore conform to and comply with all applicable rules, regulations and other requirements of CDRI (not in conflict with this Agreement) including, but not limited to, those pertaining to security, health and safety, operating procedures, hours of work, and conduct. His leave, time off, holidays and vacations will insofar as possible be in accordance with the policies of Energy Systems, but will be integrated with the administrative requirements of CDRI.
3. The Assignee will, on or before reporting to CDRI for work under this Agreement, execute and deliver to CDRI the attached Appendix "A" to this Agreement, signifying his knowledge thereof and his obligation and agreement to comply with and be bound by these terms and conditions. Therefore, CDRI and CSIR shall not require the Assignee to execute any individual contract, agreement, or undertaking other than the aforesaid Appendix "A" to this Agreement, nor shall the CDRI or CSIR require the Assignee to be bound by or comply with any provisions, terms or conditions relative to his assignment other than those set forth in this Agreement.
4. Neither Party will be responsible for any injury, loss, damage, claim or expense caused to or suffered by either Party or its agents, officers, employees, or representatives, nor to or by any third parties, unless the injured Party can prove that such injury, loss, damage, claim or expense was caused or contributed to by the negligence or willful misconduct of the other Party or its agents, officers, employees, or representatives. Neither Energy Systems, DOE, the Government of the USA, nor their officers or employees, shall be responsible for any claims, losses, expenses, or damages caused to or suffered by any person or party arising out of or resulting in any way from the use or misuse of information, techniques or technology communicated or imparted to CDRI, CSIR or their officers, employees or representatives by the Assignee in the course of or under this Agreement.
5. It is understood and agreed that no Restricted Data or classified, proprietary, trade secret, or business confidential information of either Party or

its government is to be exchanged, transferred, or disclosed to, by or between the Parties or their employees or representatives under this Agreement. However, the Assignee shall upon request of CDRI provide CDRI with a copy of all notes, writings, designs, drawings, memoranda, written reports, and other technical data (hereinafter referred to as "information") generated or developed by the Assignee in connection with his assignment hereunder, which may be utilized by CDRI, CSIR, and the Government of India without restriction and without payment of compensation to any party, subject to the provisions of Articles 6 and 7, below, and subject to patent clearance for release by Energy Systems. In turn, any and all information generated, developed, or acquired by the Assignee in the course of or under this Agreement may be utilized without restriction and without payment of compensation to any party by Energy Systems, DOE, and the Government of the USA.

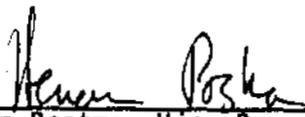
6. The Government of the USA retains a nonexclusive, royalty free license in and to any copyright obtained by any person or party covering any information generated or developed by the Assignee, solely or in conjunction with others, in the course of or under this Agreement, to publish or reproduce the published form of such information, or to allow others to do so, for government purposes only and not for resale.
7. As an employee of Energy Systems, the Assignee has executed a patent agreement which provides that any invention or discovery made or conceived by the Assignee in the course of or under his employment shall be governed by the applicable provisions of Energy Systems' aforesaid Contract No. DE-AC05-84OR21400 with the Government of the USA. Those provisions require that any such invention or discovery be reported to DOE, and further provide that thereafter DOE shall have the sole power and discretion to determine whether or not and where a patent application shall be filed, and to determine the disposition of the title to and rights under any patent application or patent that may result. Therefore, any invention or discovery made or conceived by the Assignee in the course of or under this Agreement shall be subject to and governed by the aforesaid contract between Energy Systems and the Government of the USA. However, the CDRI shall receive a nonexclusive, irrevocable, royalty-free license under any such invention or discovery, or any patent application or patent thereon.
8. No member of or delegate to the Congress of the USA or Resident Commissioner shall be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this Agreement if made with a corporation for its general benefit.
9. CDRI may, after giving Energy Systems an explanation of the reason therefor, request the recall of the Assignee at any time, in which event Energy Systems shall immediately recall the Assignee. Either Party may also terminate this Agreement for any other reason upon written notice to the other Party, but any such termination for any reason shall not affect the rights of either Party which have accrued prior to such termination.

10. It is understood and agreed that this Agreement is entered into by Energy Systems for and on behalf of the USA; that Energy Systems will administer this Agreement in all respects for the DOE, unless otherwise specifically provided for herein; that administration of this Agreement may be transferred from Energy Systems to the DOE or its designee; and that in case of such transfer and notice thereof to CDRI, Energy Systems shall have no further responsibilities hereunder.
11. No agreement to modify, vary or extend this Agreement shall be valid unless made in writing and signed or acknowledged by the duly authorized officers of Energy Systems and CDRI.
12. This Agreement and any modification thereof or amendment thereto shall be subject to the written approval of DOE, and shall not be binding until so approved.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first above mentioned.

MARTIN MARIETTA ENERGY SYSTEMS, INC

CENTRAL DRUG RESEARCH INSTITUTE

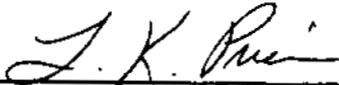
By: 
 Herman Postma, Vice President and
 Director, Oak Ridge National Laboratory

By: 
 Name (typed): Dr. M.M. Dhar

Date: 11/20/87

Title: Director, Central Drug
Research Institute, Lucknow
 Date: October 10, 1987

APPROVED ON BEHALF OF THE
 UNITED STATES DEPARTMENT OF ENERGY

By: 
 Name (typed): ^{for} Joseph A. Lenhard
Assistant Manager for Energy
 Title: Research and Development
 Date: 12/8/87

APPENDIX "A" TO AGREEMENT
BETWEEN
MARTIN MARIETTA ENERGY SYSTEMS, INC.
AND THE
CENTRAL DRUG RESEARCH INSTITUTE

AGREEMENT COVERING OBLIGATIONS AND RESPONSIBILITIES
OF ASSIGNEE

Dr. PREM C. SRIVASTAVA, the undersigned employee of MARTIN MARIETTA ENERGY SYSTEMS, INC. (Energy Systems) at the OAK RIDGE NATIONAL LABORATORY, pursuant to an Agreement between Energy Systems and the CENTRAL DRUG RESEARCH INSTITUTE (CDRI), is to be assigned to facilities of CDRI at Lucknow, India, for a period beginning on or about November 1, 1987 and ending on or about December 31, 1987, in order to participate in and conduct research involving the preparation of agents for use in the study and development of radiopharmaceuticals for diagnostic and therapeutic applications, incident to the TOKTEN Project sponsored by the UNITED NATIONS DEVELOPMENT PROGRAMME in cooperation with the COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH of INDIA.

The undersigned understands and agrees, as a condition of his entrance into the aforesaid CDRI and/or of having facilities and technical data made available to him for the purpose of work in connection with his assignment, that:

1. He is aware of the terms and conditions of the aforesaid Agreement between Energy Systems and CDRI governing his assignment; and
2. He will conform to, comply with, and be bound by the said terms and conditions of the aforesaid Agreement.

The undersigned further states that he has entered into no agreements with any person or party conflicting with his agreement herein.

WITNESS the hand and seal of the undersigned, this ____ day of _____, 19__.

PREM C. SRIVASTAVA

WITNESS:

Name (typed): _____

Title (or address): _____

<p>1. INSERT ABOVE, CLASSIFICATION LEVEL, UNCLASSIFIED, OR OFFICIAL USE ONLY</p>		<p>2. MESSAGE CONTAINS WEAPON DATA? ("X" appropriate box. Message Center will not transmit message unless one box is marked.)</p> <p><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>													
<p align="center">U.S. DEPARTMENT OF ENERGY TELECOMMUNICATION MESSAGE</p> <p align="center"><i>(See reverse side for instructions.)</i></p>		<p>3. USE WHEN REQUIRED</p> <p>THIS DOCUMENT CONSISTS OF _____ PAGES NO. _____ OF _____ COPIES, SERIES _____</p>													
<p>4. PRECEDENCE DESIGNATION ("X" appropriate box):</p> <table border="1"> <tr> <td>FOR NORMAL USE</td> <td>EMERGENCY USE ONLY</td> </tr> <tr> <td>ACTION: <input checked="" type="checkbox"/> Routine <input type="checkbox"/> Priority</td> <td><input type="checkbox"/> Immediate <input type="checkbox"/> FLASH</td> </tr> <tr> <td>INFO: <input type="checkbox"/> (6 Hrs.) <input type="checkbox"/> (3 Hrs.)</td> <td><input type="checkbox"/> (30 Mins.) <input type="checkbox"/> (ASAP)</td> </tr> </table>		FOR NORMAL USE	EMERGENCY USE ONLY	ACTION: <input checked="" type="checkbox"/> Routine <input type="checkbox"/> Priority	<input type="checkbox"/> Immediate <input type="checkbox"/> FLASH	INFO: <input type="checkbox"/> (6 Hrs.) <input type="checkbox"/> (3 Hrs.)	<input type="checkbox"/> (30 Mins.) <input type="checkbox"/> (ASAP)	<p>5. TYPE OF MESSAGE ("X" appropriate box)</p> <p><input checked="" type="checkbox"/> Single Address <input type="checkbox"/> Multiple Address <input type="checkbox"/> Tide Address <input type="checkbox"/> Book Message</p>							
FOR NORMAL USE	EMERGENCY USE ONLY														
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INFO: <input type="checkbox"/> (6 Hrs.) <input type="checkbox"/> (3 Hrs.)	<input type="checkbox"/> (30 Mins.) <input type="checkbox"/> (ASAP)														
<p>6. FROM: MARTIN MARIETTA ENERGY SYSTEMS, INC. EDGAR R. BOWERS, ASSOCIATE COUNSEL OAK RIDGE Y-12 PLANT OAK RIDGE, TENNESSEE 37831</p>		<p>7. OFFICIAL BUSINESS (TIME)</p> <p align="right">A.M. P.M.</p> <p>8. DATE NOVEMBER 10, 1987</p>													
<p>9. TO DR. M. M. DHAR, DIRECTOR CENTRAL DRUG RESEARCH INSTITUTE LUCKNOW, INDIA (TELEX NO. 0535-286)</p> <p>UNCLASSIFIED/NONWD</p> <p>SUBJECT: <u>ASSIGNMENT OF DR. PREM C. SRIVASTAVA TO THE CENTRAL DRUG RESEARCH INSTITUTE (CDRI)</u></p> <p>YOUR TELEX OF OCTOBER 13 ADVISED THAT AGREEMENT BETWEEN CDRI AND MARTIN MARIETTA ENERGY SYSTEMS (ENERGY SYSTEMS) IMPLEMENTING SUBJECT ASSIGNMENT HAD BEEN SIGNED BY CDRI AND RETURNED TO US VIA AIR MAIL ON OCTOBER 12. HOWEVER, IT HAS NOT YET ARRIVED.</p> <p align="center">BE BRIEF - ELIMINATE UNNECESSARY WORDS</p>		<p>COMMUNICATION CENTER ROUTING</p> <table border="1"> <tr> <td>89</td> <td>89</td> </tr> <tr> <td>E</td> <td>P</td> </tr> <tr> <td>.</td> <td>I</td> </tr> <tr> <td>.</td> <td>C</td> </tr> <tr> <td>.</td> <td>A</td> </tr> <tr> <td>.</td> <td>.</td> </tr> </table>		89	89	E	P	.	I	.	C	.	A	.	.
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<p>10. ORIGINATOR (On separate lines, enter Name, Routing Symbol, & Tel. No.)</p> <p>E. R. BOWERS:bdp Y-12 PLANT, 9704-2, MS-020 4-2227</p>		<p>11. DERIVATIVELY CLASSIFIED NSI</p> <p align="center">NATIONAL SECURITY INFORMATION <small>Unauthorized disclosure subject to Administrative and Criminal Sanctions.</small></p> <p>Derivative Classifier: (Name) _____ (Title) _____ (Date or Event/DAOR) _____ Declassify on: _____ Derivatively Classified by: _____ (Date or Source Document)</p>		<p>12. ORIGINALLY CLASSIFIED NSI</p> <p align="center">NATIONAL SECURITY INFORMATION <small>Unauthorized disclosure subject to Administrative and Criminal Sanctions.</small></p> <p>Originally Classified by: (Name) _____ (Title) _____ Declassify on: _____ (Date or Event/DAOR)</p>											
<p>13. <input type="checkbox"/> RESTRICTED DATA</p> <p><small>This document contains Restricted Data as defined in the Atomic Energy Act of 1954. Unauthorized disclosure subject to Administrative and Criminal Sanctions.</small></p> <p>DERIVATIVE CLASSIFIER _____ (Name and Title)</p>		<p>14. <input type="checkbox"/> FORMERLY RESTRICTED DATA</p> <p><small>Unauthorized disclosure subject to Administrative and Criminal Sanctions. Handle as Restricted Data in Foreign Classification Section 144a Atomic Energy Act, 1954</small></p> <p>DERIVATIVE CLASSIFIER _____ (Name and Title)</p>													
<p>15. INSERT BELOW, CLASSIFICATION LEVEL, UNCLASSIFIED, OR OFFICIAL USE ONLY</p> <p align="center">UNCLASSIFIED</p>															

PAGE 2

PLEASE ADVISE US AS TO NAME AND ADDRESS OF PERSON AT ENERGY SYSTEMS
TO WHOM AGREEMENT WAS SENT. MANY THANKS FOR YOUR HELP. REGARDS.

bcc: A. R. Hawthorne
F. F. Knapp, Jr.
M. C. Wallace, ORO
P. J. Walsh
File

1121069

REQUEST FOR APPROVAL OFFICIAL FOREIGN TRAVEL

(Previous Editions are Obsolete)

PART B—To be completed by traveler's administrative officer

Budget and Reporting Classification to be charged: HA 02 07 01 0
(see Chapter II, Accounting Practices and Procedures Handbook)

PART C—To be completed by traveler

1a. NAME OF TRAVELER P. C. Srivastava	c. DATE AND PLACE OF BIRTH [REDACTED] India
b. CITIZENSHIP U.S.A.	d. PASSPORT NUMBER (if available) [REDACTED]
2a. HOME ADDRESS [REDACTED]	b. BUSINESS ADDRESS Oak Ridge National Laboratory, P.O. Box X, Oak Ridge, TN 37831
3a. EMPLOYER Martin Marietta Energy Systems, Inc.	c. TELEPHONE NUMBER (615) 576-6708
b. ORGANIZATIONAL UNIT Oak Ridge National Laboratory	c. CONTRACT NUMBER DE-AC05-84OR21400
4. PURPOSE OF TRAVEL—Include all pertinent background information leading to travel and attach copies of invitations and correspondence regarding travel to present papers, give speeches, or to attend conference or symposia. Justification for travel must be provided including benefit to be derived by the government if trip is taken. Also identify by name and organization other DOE and contractor personnel who, to the traveler's knowledge, are going to the same destination at the same time as the traveler. In addition, specify nature and classification of information to be disclosed including titles of papers to be presented; nature of information to be obtained at each of the places to be visited and conferences to be attended and its relation to traveler's work. Travelers are responsible for obtaining clearances for papers or speeches when necessary. If more space is required, attach a separate sheet. NOTE: IF THIS INFORMATION IS CLASSIFIED BE SURE TO CLASSIFY THIS FORM APPROPRIATELY.	d. POSITION TITLE (including profession) Medicinal Chemist, Staff Member Health and Safety Research Division

The traveler has received the United Nations (UN) Development Program Award from the Council of Scientific and Industrial Research (CSIR), New Delhi, India, to participate as a distinguished scientist in an UN research program at the Central Drug Research Institute (CDRI), Lucknow, India. This will be a unique opportunity for the traveler to pursue his research work of current interest at the Oak Ridge National Laboratory (ORNL) and develop collaboration at a major UN sponsored research institution. He will be involved in the preparation of agents that will be used for the study and development of radiopharmaceuticals for diagnostic and therapeutic applications.

The assignee will remain on ORNL's payroll, retaining all benefits, and will be on assignment in accordance with Martin Marietta Energy Systems, Inc.'s travel policy. All information and discussions will be unclassified and directly related to the traveler's responsibilities at ORNL.

An appropriate agreement will be developed to cover all aspects of the assignment. The traveler has been instructed not to sign agreements that have not been reviewed by the Office of General Counsel.

A trip report describing the traveler's research activities in India will be submitted to ORNL and the United Nations Development Office, New Delhi. The traveler has no plans for other employment.

1121092

5. PROPOSED ITINERARY (Account for all time from beginning and ending dates of travel. Vacation dates taken in conjunction with this travel shall be indicated. NOTE: IF INFORMATION IS CLASSIFIED, CLASSIFY THIS FORM APPROPRIATELY.)

DATES	LOCATION (Installation, City, Country)	INDIVIDUALS TO BE CONTACTED	SUBJECTS OF DISCUSSION	(Check One)	
				Classified	Unclassified
SEE ATTACHED ITINERARY					

6. HAS TRAVELER SUBMITTED DOE F1512.2 TO COGNIZANT DOE SECURITY OFFICE? (Required for travel to a sensitive country by an individual who currently holds or has ever held, within the last 5 years, a DOE Access Authorization.)

YES NO: Have not held a DOE Access Authorization within last 5 years.

7. SIGNATURE OF TRAVELER—By signing, the traveler acknowledges the obligation to file a trip report within 30 days of return to duty station.

(DUE: January 15, 1988)
Prem C. Arivastary (Signature) 8/10/87 (Date)

PART D—To be completed by official responsible for travel funds

8a. ESTIMATED COST OF TRAVEL TO DOE

Transportation	\$ -0-
Per Diem and Miscellaneous	\$ 2,727
Total	\$ 2,727

b. IF PART OF COST OF TRAVEL IS TO BE PAID OR HAS BEEN REQUESTED FROM SOURCES OTHER THAN DOE, INDICATE SOURCE AND AMOUNT. United Nations Development Program will provide roundtrip airfare plus a reimbursement of \$2968 to cover lodging, per diem and miscellaneous expenses. The traveler will give an itemized accounting of all expenses paid by others to the Foreign Travel Office.

TRAVEL FUNDS ARE NOW AVAILABLE FOR THIS TRIP

Scott Levin, Finance Officer (Signature and Title) 8/11/87 (Date)

PART E—To be completed by Traveler's supervisor

9. REVIEW AND COMMENTS

ENDORSED: W. D. Adams
Herman Postma, Director, Oak Ridge National Laboratory (Signature and Title of Supervisor) 14 Aug 87 (Date)

PART F—To be completed at DOE Field Organization

10. NON SENSITIVE TRAVEL: Review/approval by Head of DOE Field Organization. (Approval may be given if such authority has been delegated by the Cognizant Secretarial Officer.)

Approval recommended.
M. C. Wallace (Signature) W. D. Adams, Director (Title) 8/25/87 (Date) PB4

11. SENSITIVE TRAVEL: Review by Head of DOE Field Organization. Has Field Security reviewed DOE F 1512.2 and completed DOE F 1512.3?

YES NO To be briefed by Shields Smith prior to departure

PART G—To be completed at Headquarters

12. REVIEW/COMMENTS BY DIRECTOR OF DIVISION OR OFFICE

James S. Robertson, M.D., Ph.D. (Signature) Human Health and Assessments Division (Title) 9/16/87 (Date)

13. COGNIZANT SECRETARIAL OFFICER

IF DOE EMPLOYEE TRAVEL IE Determination Received 9/16/87
 IF SENSITIVE TRAVEL IE Determination Received ISA Determination Received OSS Determination Received
Robert Wood (Signature) ACTING ASSOCIATE DIRECTOR (Title) 10/16/87 (Date)
for Health & ENVIRONMENTAL Research, ER-20

11-2-1095

8. PROPOSED ITINERARY (Account for all time from beginning and ending dates of travel. Vacation dates taken in conjunction with this travel shall be indicated. NOTE: IF INFORMATION IS CLASSIFIED, CLASSIFY THIS FORM APPROPRIATELY.)

DATES	LOCATION (Installation, City, Country)	INDIVIDUALS TO BE CONTACTED	SUBJECTS OF DISCUSSION	(Check One)	
				Class.	Uncl.
10/30/87- 11/2/87	Travel from Oak Ridge to New Delhi, India	DN Misra Dr. Indradev PN Pathak PN Bhattacharya	United Nations Development Program briefings. Visit Council of Scientific and Industrial Research Facilities for coordination of research assignment at CDRI, Lucknow.		X
11/3/87	Travel from New Delhi to Lucknow, India	MM Dhar CM Gupta DS Bhakuni	Research assignment at Central Drug Research Institute		X
11/18/87	Visit Jaipur Univ., Rajasthan, India	RC Meherotra	Present talk entitled "Organoboranes as Radioiodination Precursors for Radiopharmaceutical Development."		X
12/14/87	Visit Bhabha Atomic Research Center, Parel, Bombay, India	Dr. Rangarajan	Present invited talk entitled "Development of Radiopharmaceuticals at ORNL for Diagnostic and Therapeutic Applications."		X
12/28/87	Travel from Lucknow to New Delhi - United Nations office	DN Misra PN Pathak	Final briefings, discuss UN Development Program and trip report.		X
12/30/87	Travel from New Delhi to Oak Ridge, Tennessee				

MEMORANDUM

TO: N. P. Ross, ORNL Travel
FROM: E. R. Bowers, OGC *ERB*
DATE: October 13, 1987
RE: Assignment of Dr. Prem C. Srivastava to the
Central Drug Research Institute (CDRI), India

Reference my previous communications with CDRI regarding the above, the last being my telex of October 12 to Dr. Dhar.

By reply telex (copy attached), CDRI advises that the agreement between Energy Systems and CDRI implementing this assignment was signed by Dr. Dhar and mailed on October 12. Therefore, based on this assurance, the Office of General Counsel does not object to the departure of Dr. Srivastava as scheduled, even in advance of our receipt of the documents from CDRI, provided all other administrative requirements are satisfied.

ERB:bdp

Enclosure - as stated

cc/enc: A. R. Hawthorne
F. F. Knapp, Jr.
P. C. Srivastava
M. C. Wallace, ORO
P. J. Walsh
File

10/23/87

Notified by Eddreana Powell that travel was approved on 10/16/87 per Bob Main. Form is in the mail to us from Bob/aa

10/13/87
10/13/87

08:49
09:06

Y-12 COMCEN OR
U S DOE OAK RIDG

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NO. 004

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B301

USDOE OKRE

535 204 CDRI IN
ATTN MR EDGAR R BOWERS
REFUTLX AGREEMNT DULY SIGNED BY DR HM DHAR ON 10TH OCT MI+
MAILED TO U BY RETD AIRMAIL ON OCTOBER 12TH (.) ROOS

*****PS TO DIR CENTRAL DRUG RES INSTT LKO:/ O+ INDIA*****
DATE 10.10.87/1100HRS IST
USDOE OKRE

Copy to: A. R. Hawthorne
F. F. Knapp, Jr.
N. P. Ross
P. C. Srivastava
M. C. Wallace, ORO
P. J. Walsh

For your information.

E. R. Bowers
10/13/87

1127046

1. INSERT ABOVE CLASSIFICATION LEVEL, UNCLASSIFIED, OR OFFICIAL USE ONLY

**U.S. DEPARTMENT OF ENERGY
TELECOMMUNICATION MESSAGE**
(See reverse side for instructions.)

2. MESSAGE CONTAINS WEAPON DATA?
("X" appropriate box. Message Center will not transmit message unless one box is marked.)
 YES NO

3. USE WHEN REQUIRED
THIS DOCUMENT
CONSISTS OF _____ PAGES
NO. _____ OF _____ COPIES, SERIES _____

FOR COMMUNICATION CENTER USE
MESSAGE IDENTIFICATION

4. PRECEDENCE DESIGNATION ("X" appropriate box):
FOR NORMAL USE EMERGENCY USE ONLY
ACTION: Routine Priority Immediate FLASH
INFO: (8 Hrs.) (3 Hrs.) (30 Mins.) (ASAP)

5. TYPE OF MESSAGE
("X" appropriate box)
 Single Address
 Multiple Address
 Title Address
 Book Message

NR: _____ DTG: _____ 2

6. FROM: MARTIN MARIETTA ENERGY SYSTEMS, INC.
EDGAR R. BOWERS, ASSOCIATE COUNSEL
OAK RIDGE Y-12 PLANT
OAK RIDGE, TENNESSEE 37831

7. OFFICIAL BUSINESS (TIME) _____ A.M. / P.M.
(Signature of authorizing official)

8. DATE: OCTOBER 9, 1987

9. TO: DR. M. M. DHAR, DIRECTOR
CENTRAL DRUG RESEARCH INSTITUTE
LUCKNOW, INDIA

COMMUNICATION CENTER ROUTING

(TELEX NO. 0535-286)
UNCLASSIFIED/NONWD

*Departure
Oct. 30*

SUBJECT: ASSIGNMENT OF DR. PREM C. SRIVASTAVA TO THE
CENTRAL DRUG RESEARCH INSTITUTE (CDRI)

DR. SRIVASTAVA, AN EMPLOYEE OF MARTIN MARIETTA ENERGY SYSTEMS, INC.
(ENERGY SYSTEMS) AT THE OAK RIDGE NATIONAL LABORATORY (ORNL),
PREVIOUSLY SENT YOU VIA EXPRESS MY LETTER OF 31 AUGUST 1987
ENCLOSING FOUR COPIES OF A PROPOSED AGREEMENT BETWEEN ENERGY

BE BRIEF - ELIMINATE UNNECESSARY WORDS

10. ORIGINATOR *(On separate lines, enter Name, Routing Symbol, & Tel. No.)*
E. R. BOWERS:bdp
Y-12 PLANT, 9704-2, MS-020
4-2227

11. DERIVATIVELY CLASSIFIED NSI
NATIONAL SECURITY INFORMATION
Unauthorized disclosure subject to Administrative and Criminal Sanctions.
Derivative Classifier: *(Name)* _____
(Title) _____
(Date or Event/OADR) _____
Declassify on: _____
Derivatively Classified by: _____
(Guide or Source Document)

12. ORIGINALLY CLASSIFIED NSI
NATIONAL SECURITY INFORMATION
Unauthorized disclosure subject to Administrative and Criminal Sanctions.
Originally Classified by: *(Name)* _____
(Title) _____
Declassify on: _____
(Date or Event/OADR)

13. RESTRICTED DATA
This document contains Restricted Data as defined in the Atomic Energy Act of 1954. Unauthorized disclosure subject to Administrative and Criminal Sanctions.
DERIVATIVE CLASSIFIER _____
(Name and Title)

14. FORMERLY RESTRICTED DATA
Unauthorized disclosure subject to Administrative and Criminal Sanctions. Handle as Restricted Data in Foreign Distribution Section 144 Atomic Energy Act 1954.
DERIVATIVE CLASSIFIER _____
(Name and Title)

15. INSERT BELOW CLASSIFICATION LEVEL, UNCLASSIFIED, OR OFFICIAL USE ONLY

UNCLASSIFIED

1127097

PAGE 2

SYSTEMS AND CDRI WHICH WOULD IMPLEMENT SUBJECT ASSIGNMENT. WE REQUESTED THAT CDRI SIGN AND RETURN THREE COPIES FOR SUBSEQUENT EXECUTION BY ENERGY SYSTEMS AND APPROVAL BY U.S. DEPARTMENT OF ENERGY (DOE), FOR WHICH ENERGY SYSTEMS OPERATES ORNL.

DOE REQUIRES THAT ENERGY SYSTEMS CONCLUDE IMPLEMENTING AGREEMENT WITH HOST ORGANIZATION BEFORE SUCH FOREIGN ASSIGNMENTS BEGIN. SINCE LITTLE TIME REMAINS BEFORE SCHEDULED DEPARTURE OF DR. SRIVASTAVA, WE WILL APPRECIATE YOUR PROMPT RETURN OF EXECUTED DOCUMENTS. PLEASE ADVISE ME BY TELEX (AT NUMBER USDOE 810-572-1076 Y-12) WHEN CDRI HAS SIGNED AND MAILED DOCUMENTS, SINCE DOE WILL PROBABLY PERMIT ASSIGNMENT TO COMMENCE ON BASIS OF SUCH ASSURANCE.

THANKS FOR YOUR COOPERATION. BEST REGARDS.

bcc: A. R. Hawthorne
F. F. Knapp, Jr.
N. P. Ross
P. C. Srivastava
M. C. Wallace, ORO
P. J. Walsh
File

1127090

M E M O R A N D U M

TO: P. C. Srivastava, ORNL H&SRD
FROM: E. R. Bowers, OGC (4-2227) *ERB*
DATE: August 31, 1987
RE: Assignment to the Central Drug Research Institute (CDRI),
Lucknow, India (11/1 - 12/31/87)

*Departure
October 30, 1987*

In our previous telephone conversations regarding the above, you expressed a desire to forward the necessary implementing agreement to CDRI along with your explanatory letter, thinking this might make the agreement more readily acceptable to officials there. I have now prepared the proposed agreement and, in accordance with your request, enclose four copies along with my transmittal letter for your further transmittal to CDRI. Due to the vagaries of postal service in both countries, it might be advisable to forward the package to CDRI via express. (An extra copy of the package is enclosed for your file.)

Please also be sure to execute and deliver to CDRI a copy of Appendix "A" to the enclosed agreement (extra copy enclosed for your convenience) on or before reporting there. The "witness" to your signature can be anyone in your ORNL group who actually witnesses your execution of the document, or any appropriate person in India if you do not sign the document until you arrive there. This is to be in lieu of any other entrance agreement or personal undertaking on your part, so if CDRI, CSIR, or UNDP asks that you sign any other document purporting to affect your legal rights or responsibilities, or those of Energy Systems, DOE or the Government, concerning liability for injuries, rights in inventions, patents, data, etc., be sure to refer the document to this office for review and approval before it is signed.

When communicating with CDRI, please urge them to give this matter their early attention and to promptly return the executed agreement, since DOE requires that such agreements be concluded before the assignment begins.

Advise if there are any questions or if I can be of further assistance. Best wishes for a pleasant and productive assignment.

ERB:bdp

Enclosures - as stated

cc/enc: A. R. Hawthorne
F. F. Knapp, Jr.
N. P. Ross
~~E. C. Wallace, DOE-ORB~~
P. J. Walsh
File

Via guard

1127099

MARTIN MARIETTA ENERGY SYSTEMS, INC.

POST OFFICE BOX Y
OAK RIDGE, TENNESSEE 37831
(615) 574-2227

EDGAR R. BOWERS
ASSOCIATE COUNSEL

August 31, 1987

Dr. M. M. Dhar, Director
Central Drug Research Institute
Chattar Manzil, Post Box 173
Lucknow-226 011
INDIA

bcc/enc: A. R. Hawthorne
F. F. Knapp, Jr.
N. P. Ross
P. C. Srivastava
M. C. Wallace, DOE-ORO
P. J. Walsh
File

Dear Dr. Dhar:

RE: Assignment of Dr. Prem C. Srivastava to the
Central Drug Research Institute (CDRI)

We are pleased to learn that the CDRI has invited Dr. Srivastava to participate in collaborative research at your institution incident to the "Transfer of Knowledge Through Expatriate Nationals" Project of the United Nations Development Programme (UNDP).

As you are perhaps aware, Dr. Srivastava is an employee of Martin Marietta Energy Systems, Inc. (Energy Systems) at the Oak Ridge National Laboratory (ORNL), which is operated by Energy Systems for the United States Department of Energy (DOE) under Energy Systems' operating/management contract with the United States Government. Although we understand that certain expenses of this assignment are to be reimbursed by UNDP, DOE requires that assignments of this nature be implemented by an agreement between Energy Systems and the receiving organization whereby the two parties establish an understanding as to their respective rights and responsibilities incident to the assignment.

We accordingly enclose four copies of a proposed agreement between Energy Systems and CDRI for this purpose. Since it is similar to many previous agreements used to implement other Energy Systems assignments to various nations, we trust that CDRI will find it acceptable. If so, please have the appropriate official of CDRI sign and return three copies to this office. After obtaining formal approval of the documents by DOE, we will furnish you one fully executed and approved original for your records.

Please notify me as soon as possible (my telex number is USDOE 810-572-1076 Y-12) if there are questions or comments regarding the proposed agreement. Otherwise, we will appreciate CDRI's prompt execution and return of the documents, in order that the proposed assignment may commence as scheduled.

We appreciate the CDRI receiving Dr. Srivastava for this significant research assignment, and we are confident it will prove beneficial to all parties involved.

Sincerely,



Edgar R. Bowers

ERB:bdp

Enclosures - as stated

1121900

AGREEMENT BETWEEN
MARTIN MARIETTA ENERGY SYSTEMS, INC.
AND THE
CENTRAL DRUG RESEARCH INSTITUTE

Pertaining to the Assignment of
Dr. PREM C. SRIVASTAVA

THIS AGREEMENT, made and entered into effective the 1st day of November, 1987, by and between MARTIN MARIETTA ENERGY SYSTEMS, INC., a corporation duly organized and existing under the laws of the State of Delaware and having a business office at Oak Ridge, Tennessee 37831 (USA) (hereinafter referred to as "Energy Systems"), acting under its Contract No. DE-AC05-84OR21400 with the UNITED STATES OF AMERICA (hereinafter referred to as the "USA"), as represented by the UNITED STATES DEPARTMENT OF ENERGY (hereinafter referred to as "DOE"), and the CENTRAL DRUG RESEARCH INSTITUTE, located at Chattar Manzil, Lucknow-226 011 (India) (hereinafter referred to as the "CDRI"), a Constituent Establishment of the COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH of INDIA (hereinafter referred to as the "CSIR"):

CONSIDERING THAT CSIR, in cooperation with the UNITED NATIONS DEVELOPMENT PROGRAMME (hereinafter referred to as the "UNDP"), has established a program designated as the "Transfer of Knowledge Through Expatriate Nationals" (TOKTEN) Project through which distinguished scientists of Indian origin settled abroad are invited to contribute towards India's developmental endeavors through projects or programs which would lead to transfer of knowledge, special skills, or technique, with certain funding for said effort to be provided by UNDP; and

CONSIDERING THAT, pursuant to the TOKTEN Project, CDRI has invited Dr. PREM C. SRIVASTAVA (hereinafter referred to as the "Assignee") to participate in and conduct research at CDRI involving the preparation of agents for use in the study and development of radiopharmaceuticals for diagnostic and therapeutic applications; and

CONSIDERING THAT the Assignee is an employee of Energy Systems at the OAK RIDGE NATIONAL LABORATORY (hereinafter referred to as "ORNL"), which is operated for DOE by Energy Systems pursuant to its aforesaid contract with the USA; and

CONSIDERING THAT the DOE has agreed that such assignment may be made, pursuant to the terms and conditions set forth below; and

CONSIDERING THAT CDRI and Energy Systems desire to establish an understanding concerning their respective rights and responsibilities with regard to such assignment;

NOW THEREFORE, CDRI and Energy Systems agree as follows:

1. Energy Systems will temporarily assign the Assignee to CDRI for the purposes set forth above, with the period of such assignment to begin on or about November 1, 1987, and end on or about December 31, 1987. However, the period of the assignment may be extended by written agreement of the Parties, or may be terminated as provided in Article 10, below. During the period of this assignment CDRI shall make available to the Assignee those facilities and services reasonably necessary for the performance of his research activities.
2. The Assignee will continue to be and remain the employee of Energy Systems at all times during the period of the assignment and shall not be considered an employee of CDRI for any purpose. Therefore, although certain travel and per diem expenses incident to the Assignment are to be reimbursed by the UNDP, neither CDRI nor CSIR shall be responsible for any costs or expenses of or applicable to the assignment except as specifically provided in this Agreement. However, the Assignee will cooperate with and be subject to the technical and administrative guidance and supervision of CDRI, and shall therefore conform to and comply with all applicable rules, regulations and other requirements of CDRI (not in conflict with this Agreement) including, but not limited to, those pertaining to security, health and safety, operating procedures, hours of work, and conduct. His leave, time off, holidays and vacations will insofar as possible be in accordance with the policies of Energy Systems, but will be integrated with the administrative requirements of CDRI.
3. The Assignee will, on or before reporting to CDRI for work under this Agreement, execute and deliver to CDRI the attached Appendix "A" to this Agreement, signifying his knowledge thereof and his obligation and agreement to comply with and be bound by these terms and conditions. Therefore, CDRI and CSIR shall not require the Assignee to execute any individual contract, agreement, or undertaking other than the aforesaid Appendix "A" to this Agreement, nor shall the CDRI or CSIR require the Assignee to be bound by or comply with any provisions, terms or conditions relative to his assignment other than those set forth in this Agreement.
4. Neither Party will be responsible for any injury, loss, damage, claim or expense caused to or suffered by either Party or its agents, officers, employees, or representatives, nor to or by any third parties, unless the injured Party can prove that such injury, loss, damage, claim or expense was caused or contributed to by the negligence or willful misconduct of the other Party or its agents, officers, employees, or representatives. Neither Energy Systems, DOE, the Government of the USA, nor their officers or employees, shall be responsible for any claims, losses, expenses, or damages caused to or suffered by any person or party arising out of or resulting in any way from the use or misuse of information, techniques or technology communicated or imparted to CDRI, CSIR or their officers, employees or representatives by the Assignee in the course of or under this Agreement.
5. It is understood and agreed that no Restricted Data or classified, proprietary, trade secret, or business confidential information of either Party or

its government is to be exchanged, transferred, or disclosed to, by or between the Parties or their employees or representatives under this Agreement. However, the Assignee shall upon request of CDRI provide CDRI with a copy of all notes, writings, designs, drawings, memoranda, written reports, and other technical data (hereinafter referred to as "information") generated or developed by the Assignee in connection with his assignment hereunder, which may be utilized by CDRI, CSIR, and the Government of India without restriction and without payment of compensation to any party, subject to the provisions of Articles 6 and 7, below, and subject to patent clearance for release by Energy Systems. In turn, any and all information generated, developed, or acquired by the Assignee in the course of or under this Agreement may be utilized without restriction and without payment of compensation to any party by Energy Systems, DOE, and the Government of the USA.

6. The Government of the USA retains a nonexclusive, royalty free license in and to any copyright obtained by any person or party covering any information generated or developed by the Assignee, solely or in conjunction with others, in the course of or under this Agreement, to publish or reproduce the published form of such information, or to allow others to do so, for government purposes only and not for resale.
7. As an employee of Energy Systems, the Assignee has executed a patent agreement which provides that any invention or discovery made or conceived by the Assignee in the course of or under his employment shall be governed by the applicable provisions of Energy Systems' aforesaid Contract No. DE-AC05-84OR21400 with the Government of the USA. Those provisions require that any such invention or discovery be reported to DOE, and further provide that thereafter DOE shall have the sole power and discretion to determine whether or not and where a patent application shall be filed, and to determine the disposition of the title to and rights under any patent application or patent that may result. Therefore, any invention or discovery made or conceived by the Assignee in the course of or under this Agreement shall be subject to and governed by the aforesaid contract between Energy Systems and the Government of the USA. However, the CDRI shall receive a nonexclusive, irrevocable, royalty-free license under any such invention or discovery, or any patent application or patent thereon.
8. No member of or delegate to the Congress of the USA or Resident Commissioner shall be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this Agreement if made with a corporation for its general benefit.
9. CDRI may, after giving Energy Systems an explanation of the reason therefor, request the recall of the Assignee at any time, in which event Energy Systems shall immediately recall the Assignee. Either Party may also terminate this Agreement for any other reason upon written notice to the other Party, but any such termination for any reason shall not affect the rights of either Party which have accrued prior to such termination.

10. It is understood and agreed that this Agreement is entered into by Energy Systems for and on behalf of the USA; that Energy Systems will administer this Agreement in all respects for the DOE, unless otherwise specifically provided for herein; that administration of this Agreement may be transferred from Energy Systems to the DOE or its designee; and that in case of such transfer and notice thereof to CDRI, Energy Systems shall have no further responsibilities hereunder.
11. No agreement to modify, vary or extend this Agreement shall be valid unless made in writing and signed or acknowledged by the duly authorized officers of Energy Systems and CDRI.
12. This Agreement and any modification thereof or amendment thereto shall be subject to the written approval of DOE, and shall not be binding until so approved.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first above mentioned.

MARTIN MARIETTA ENERGY SYSTEMS, INC

CENTRAL DRUG RESEARCH INSTITUTE

By: _____
 Herman Postma, Vice President and
 Director, Oak Ridge National Laboratory

By: _____
 Name (typed): _____

Title: _____

Date: _____

Date: _____

APPROVED ON BEHALF OF THE
 UNITED STATES DEPARTMENT OF ENERGY

By: _____

Name (typed): ~~ORIGINAL SIGNED BY~~
 L K PRICE

Title: _____

Date: _____

APPENDIX "A" TO AGREEMENT
BETWEEN
MARTIN MARIETTA ENERGY SYSTEMS, INC.
AND THE
CENTRAL DRUG RESEARCH INSTITUTE

AGREEMENT COVERING OBLIGATIONS AND RESPONSIBILITIES
OF ASSIGNEE

Dr. PREM C. SRIVASTAVA, the undersigned employee of MARTIN MARIETTA ENERGY SYSTEMS, INC. (Energy Systems) at the OAK RIDGE NATIONAL LABORATORY, pursuant to an Agreement between Energy Systems and the CENTRAL DRUG RESEARCH INSTITUTE (CDRI), is to be assigned to facilities of CDRI at Lucknow, India, for a period beginning on or about November 1, 1987 and ending on or about December 31, 1987, in order to participate in and conduct research involving the preparation of agents for use in the study and development of radiopharmaceuticals for diagnostic and therapeutic applications, incident to the TOKTEN Project sponsored by the UNITED NATIONS DEVELOPMENT PROGRAMME in cooperation with the COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH of INDIA.

The undersigned understands and agrees, as a condition of his entrance into the aforesaid CDRI and/or of having facilities and technical data made available to him for the purpose of work in connection with his assignment, that:

1. He is aware of the terms and conditions of the aforesaid Agreement between Energy Systems and CDRI governing his assignment; and
2. He will conform to, comply with, and be bound by the said terms and conditions of the aforesaid Agreement.

The undersigned further states that he has entered into no agreements with any person or party conflicting with his agreement herein.

WITNESS the hand and seal of the undersigned, this ____ day of _____, 19__.

PREM C. SRIVASTAVA

WITNESS:

Name (typed): _____

Title (or address): _____

AUG 25 1987

ER-122:Wallace

PROPOSED SENSITIVE COUNTRY RESEARCH ASSIGNMENT BY P. C. SRIVASTAVA, ORNL

Charles DeLisi, Associate Director, Office of Health and Environmental Research, ER-70, Headquarters, Germantown, Maryland

Attached for DOE Headquarters approval are three copies of DOE F 1512.1 covering the proposed two-month assignment by P. C. Srivastava at the Central Drug Research Institute (CDRI), Lucknow, India, beginning October 30, 1987. At the invitation, of the Council of Scientific and Industrial Research (CSIR), the traveler will participate and conduct research in a United Nations Development Program (UNDP). He will be involved in the preparation of agents that will be used for the study and development of radiopharmaceuticals for diagnostic and therapeutic applications.

The traveler will remain on the ORNL payroll during the period of the assignment and retain all benefits. As noted in Part D, Block 8b., DOE F 1512.1, the UNDP will fund transportation expenses and provide reimbursement of \$2,968 toward subsistence expenses. Therefore, the estimated cost to DOE Budget Activity HA 02 07 01 is \$2,727 plus the continuation of the traveler's salary during the period of the assignment.

An appropriate agreement will be developed to cover all aspects of the assignment.

Please have Margie Wallace (FTS 626-0714) notified as soon as a determination is made regarding the travel and return the signed original of DOE F 1512.1 to this office.

ORIGINAL SIGNED BY
M. C. WALLACE

for W. D. Adams, Director
Research and Waste Management Division

Attachment

- cc w/atchmt:
- D. B. Waller, IE-1, HQ, FORS
- A. R. Siebert, Jr., DP-33, HQ, FORS
- J. A. Lenhard, ER-10, ORO
- M. M. Dare, AD-43, ORO
- D. J. Cook, DP-82, ORO

ER-122:MWallace:1h:6-0714:8-24-87
OFFICIAL FILE COPY

- DOE F 1325.10 (7-79) cc w/o atchmt:
- R. M. Poteat, CC-20, ORO
- W. A. Truex, AD-441, ORO

H-2050

CONCURRENCES	
REQ SYMBOL ER-122 WALLACE	INITIALS/SIG. <i>M. Wallace</i>
DATE 8/24/87	
REQ SYMBOL DUNAWAY	INITIALS/SIG. <i>MD</i>
DATE 8/24/87	
REQ SYMBOL DP-32 KRAUSE	INITIALS/SIG. <i>(90)</i>
DATE 8-25-87	
REQ SYMBOL AD-40 MARQUESS	INITIALS/SIG. <i>(Signature)</i>
DATE 8/25	
REQ SYMBOL ER-122 WALLACE	INITIALS/SIG. <i>M. Wallace</i>
DATE 8/25/87	
REQ SYMBOL	INITIALS/SIG.
DATE	
REQ SYMBOL	INITIALS/SIG.
DATE	
REQ SYMBOL	INITIALS/SIG.
DATE	

Returns to Anna

1516 ✓

11271906

REQUEST FOR APPROVAL OFFICIAL FOREIGN TRAVEL

All Other Editions Are Obsolete

PART A-SUMMARY TRAVEL INFORMATION

ORGANIZATION: ORNL

COST TO DOE: \$2,727

FUND SOURCE: DOE Budget Activity HA 02 07 01 0

NAME OF TRAVELER: Srivastava, Prem C.

DOE/CONTRACTOR/UNIVERSITY:

DESTINATION: Lucknow, India

DATES: 11 / 02 / 87 TO 12 / 30 / 87
MM DD YY MM DD YY

PURPOSE: OFF-SITE ASSIGNMENT IN LUCKNOW, INDIA, AT THE INVITATION OF COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH, NEW DELHI, TO PARTICIPATE AND CONDUCT RESEARCH IN A UNITED NATIONS DEVELOPMENT PROGRAM.

AGREEMENT: None

DESTINATION: Jaipur University, Jaipur, India

DATES: 11 / 18 / 87 TO 11 / 19 / 87
MM DD YY MM DD YY

PURPOSE: PRESENT SEMINAR ON PROGRAMMATIC INTEREST

AGREEMENT: None

DESTINATION: Bhabha Atomic Research Center, Bombay, India

DATES: 12 / 14 / 87 TO 12 / 15 / 87
MM DD YY MM DD YY

PURPOSE: PRESENT INVITED TALK ON RADIOPHARMACEUTICAL DEVELOPMENT AT ORNL

AGREEMENT: None

DESTINATION: _____

DATES: / / TO / /
MM DD YY MM DD YY

PURPOSE: _____

AGREEMENT: _____

REQUEST FOR APPROVAL OFFICIAL FOREIGN TRAVEL

(Previous Editions are Obsolete)

PART B--To be completed by traveler's administrative officer

Budget and Reporting Classification to be charged: HA 02 07 01 0
(see Chapter II, Accounting Practices and Procedures Handbook)

PART C--To be completed by traveler

1a. NAME OF TRAVELER P. C. Srivastava	c. DATE AND PLACE OF BIRTH [REDACTED], India
b. CITIZENSHIP U.S.A.	d. PASSPORT NUMBER (if available) [REDACTED]
2a. HOME ADDRESS [REDACTED]	b. BUSINESS ADDRESS Oak Ridge National Laboratory, P.O. Box X, Oak Ridge, TN 37831
3a. EMPLOYER Martin Marietta Energy Systems, Inc.	c. TELEPHONE NUMBER (615) 576-6708
b. ORGANIZATIONAL UNIT Oak Ridge National Laboratory	c. CONTRACT NUMBER DE-AC05-84OR21400
	d. POSITION TITLE (including profession) Medicinal Chemist, Staff Member Health and Safety Research Division

4. PURPOSE OF TRAVEL—Include all pertinent background information leading to travel and attach copies of invitations and correspondence regarding travel to present papers, give speeches, or to attend conference or symposia. Justification for travel must be provided including 1 to be derived by the government if trip is taken. Also identify by name and organization other DOE and contractor personnel who, to the best knowledge, are going to the same destination at the same time as the traveler. In addition, specify nature and classification of information disclosed including titles of papers to be presented; nature of information to be obtained at each of the places to be visited and conference attended and its relation to traveler's work. Travelers are responsible for obtaining clearances for papers or speeches when necessary. If more is required, attach a separate sheet. NOTE: IF THIS INFORMATION IS CLASSIFIED BE SURE TO CLASSIFY THIS FORM APPROPRIATELY.

The traveler has received the United Nations (UN) Development Program Award from the Council of Scientific and Industrial Research (CSIR), New Delhi, India, to participate as a distinguished scientist in an UN research program at the Central Drug Research Institute (CDRI), Lucknow, India. This will be a unique opportunity for the traveler to pursue his research work of current interest at the Oak Ridge National Laboratory (ORNL) and develop collaboration at a major UN sponsored research institution. He will be involved in the preparation of agents that will be used for the study and development of radiopharmaceuticals for diagnostic and therapeutic applications.

The assignee will remain on ORNL's payroll, retaining all benefits, and will be on assignment in accordance with Martin Marietta Energy Systems, Inc.'s travel policy. All information and discussions will be unclassified and directly related to the traveler's responsibilities at ORNL.

An appropriate agreement will be developed to cover all aspects of the assignment. The traveler has been instructed not to sign agreements that have not been reviewed by the Office of General Counsel.

A trip report describing the traveler's research activities in India will be submitted to ORNL and the United Nations Development Office, New Delhi. The traveler has no plans for other employment.

1171906

5. PROPOSED ITINERARY (Account for all time from beginning and ending dates of travel. Vacation dates taken in conjunction with this travel shall be indicated. NOTE: IF INFORMATION IS CLASSIFIED, CLASSIFY THIS FORM APPROPRIATELY.)

DATES	LOCATION (Installation, City, Country)	INDIVIDUALS TO BE CONTACTED	SUBJECTS OF DISCUSSION	(Check One)	
				Classified	Unclassified
SEE ATTACHED ITINERARY					

6. HAS TRAVELER SUBMITTED DOE F1512.2 TO COGNIZANT DOE SECURITY OFFICE? (Required for travel to a sensitive country by an individual who currently holds or has ever held, within the last 5 years, a DOE Access Authorization.)

YES NO: Have not held a DOE Access Authorization within last 5 years.

7. SIGNATURE OF TRAVELER—By signing, the traveler acknowledges the obligation to file a trip report within 30 days of return to duty station.

(DUE: January 15, 1988)

Prem C. Arivastan
(Signature)

8/10/87
(Date)

PART D—To be completed by official responsible for travel funds

8a. ESTIMATED COST OF TRAVEL TO DOE

Transportation \$ -0-
Per Diem and Miscellaneous \$ 2,727
Total \$ 2,727

b. IF PART OF COST OF TRAVEL IS TO BE PAID OR HAS BEEN REQUESTED FROM SOURCES OTHER THAN DOE, INDICATE SOURCE AND AMOUNT. United Nations Development Program will provide roundtrip airfare plus a reimbursement of \$2968 to cover lodging, per diem and miscellaneous expenses. The traveler will give an itemized accounting of all expenses paid by others to the Foreign Travel Office.

TRAVEL FUNDS ARE NOW AVAILABLE FOR THIS TRIP

Scott Steier, Finance Officer
(Signature and Title)

8/11/87
(Date)

PART E—To be completed by Traveler's supervisor

9. REVIEW AND COMMENTS
ENDORSED:

Herman Postma, Director, Oak Ridge National Laboratory
(Signature and Title of Supervisor)

14 Aug 87
(Date)

PART F—To be completed at DOE Field Organization

10. NON SENSITIVE TRAVEL: Review/approval by Head of DOE Field Organization. (Approval may be given if such authority has been delegated by the Cognizant Secretarial Officer.)

Approval recommended.

M. C. Wallace
(Signature)

for W. D. Adams, Director
Research and Waste Management Div.
(Title)

8/25/87
(Date)

11. SENSITIVE TRAVEL: Review by Head of DOE Field Organization. Has Field Security reviewed DOE F 1512.2 and completed DOE F 1512.37

YES NO

To be briefed by Shields Smith prior to departure

PART G—To be completed at Headquarters

12. REVIEW/COMMENTS BY DIRECTOR OF DIVISION OR OFFICE

(Signature)

(Title)

(Date)

13. COGNIZANT SECRETARIAL OFFICER

IF DOE EMPLOYEE TRAVEL IE Determination Received

IF SENSITIVE TRAVEL IE Determination Received ISA Determination Received OSS Determination Received

5. PROPOSED ITINERARY (Account for all time from beginning and ending dates of travel. Vacation dates taken in conjunction with this travel shall be indicated. NOTE: IF INFORMATION IS CLASSIFIED, CLASSIFY THIS FORM APPROPRIATELY.)					
DATES	LOCATION (Installation, City, Country)	INDIVIDUALS TO BE CONTACTED	SUBJECTS OF DISCUSSION	(Check One)	
				Class	Uncl.
10/30/87- 11/2/87	Travel from Oak Ridge to New Delhi, India	DN Misra Dr. Indradev PN Pathak PN Bhattacharya	United Nations Development Program briefings. Visit Council of Scientific and Industrial Research Facilities for coordination of research assignment at CDRI, Lucknow.		X
11/3/87	Travel from New Delhi to Lucknow, India	MM Dhar CM Gupta DS Bhakuni	Research assignment at Central Drug Research Institute		X
11/18/87	Visit Jaipur Univ., Rajasthan, India	RC Meherotra	Present talk entitled "Organoboranes as Radioiodination Precursors for Radiopharmaceutical Development."		X
12/14/87	Visit Bhabha Atomic Research Center, Parel, Bombay, India	Dr. Rangarajan	Present invited talk entitled "Development of Radiopharmaceuticals at ORNL for Diagnostic and Therapeutic Applications."		X
12/28/87	Travel from Lucknow to New Delhi - United Nations office	DN Misra PN Pathak	Final briefings, discuss UN Development Program and trip report.		X
12/30/87	Travel from New Delhi to Oak Ridge, Tennessee				

**UNITED NATIONS
DEVELOPMENT PROGRAMME**



**संयुक्त राष्ट्र
विकास कार्यक्रम**

TELEX : 31 61652 UNDP-IN
CABLES : UNDEVPRO-NEW DELHI
TELEPHONE : 6 9 0 4 1 0

55, LODI ESTATE
NEW DELHI-110003
INDIA

POST BOX NO. 3058

IND/84/014

16 June 1987

Reference:

Dear Dr. Srivastava,

Sub: Transfer of Know-how Through Expatriate Nationals
(TOKTEN) - India

With reference to your interest to participate in the UNDP "Transfer of Know-how Through Expatriate Nationals" (TOKTEN) project, we are pleased to invite you to visit and interact in your area of specialisation with the following institution(s) in India for a period of 4-8 weeks by December 1987:

Central Drug Research Institute, Lucknow

This office is responsible for providing you with an airticket from your home city to India and back, arrange your internal travel, and pay you per diem allowance in Indian rupees at the prevailing

Dr. Prem Chandra Srivastava
Staff Member
Nuclear Medicine Group
Health and Safety Research Division
Oak Ridge National Laboratory
Oak Ridge, TN 37830, USA

/.....

cc : Dr. P.N. Bhattacharya, CSIR, New Delhi.
Mr. Bernt Bernander, Director, OPE, UNDP, New York.
Mr. Rustam Lalkaka, Coordinator, TOKTEN, UNDP, New York.
Mr. J.N. Kanwar, UNDP, New Delhi.

1127911

..... rates for the period of your stay in India. Please find enclosed, for your information, the current per diem rates for various places in India.

Under this scheme, no salary is payable to you by the United Nations Development Programme and you will be considered as an independent specialist and not a UN staff member. You would, therefore, not be entitled to any other benefits, subsidy, insurance coverage or other types of compensation from UNDP.

Please let us have your agreement to the above conditions and confirm the dates of your visit preferably by cable (cable address: UNDEVPRO, NEW DELHI, INDIA). In the event of your affirmative reply, we are normally expected to provide you with a round-trip airticket, but to avoid the cumbersome procedure of arranging the ticket through our Travel Agents in India, may we request you to buy, preferably an excursion fare airticket, if not inconvenient to you, otherwise an economy class round-trip airticket, the cost of which will be reimbursed to you in US dollars.

On receipt of your flight details, we shall arrange to have you met on arrival.

Please let us know as early as possible your detailed itinerary so that we may make timely travel arrangements within India.

To facilitate optimal utilization of the limited time available for your consultancy, it is advisable that you communicate directly with the host organization(s) well before your actual visit to India, in order that both you and the institution(s) can make adequate preparations for the forthcoming inter-action. Kindly keep both CSIR and UNDP advised of developments.

Before you proceed to the host organization(s) you are requested to call on us for necessary briefing by this office, followed by briefing by the CSIR and to receive an advance against per diem payments due to you for your expected stay in India under this programme. We shall also arrange your travel within India, if called for under your programme. Similarly, we would also expect you to visit us at the end of your assignment for debriefing and final settlement of your entitlements. Please note that all your claims under this programme (pertaining to travel, per diem, etc.) are to be settled only by this office.

A comprehensive report prepared by the TOKTEN Consultants is considered a valuable input since it facilitates necessary follow-up action on the Consultant's suggestions/recommendations. We would, therefore, appreciate receiving from you, before leaving India on completion of your assignment, a report (say, 20 pages in single spaced type) giving: (a) an account of your activities and work schedule here; (b) your recommendations on solving the problems and meeting the requirements set out in the work plan as well as any arrangements

/.....

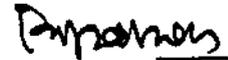
for implementation and follow-up (from your end and that of the host organisation(s); and (c) any comments you may have to offer on the TOKTEN programme and on improving its effectiveness. If your work involves visits to more than one host organisation, your report covering all the institutions may accordingly exceed 20 pages, depending on the number of institutions visited. If lack of facilities or time in India necessitate delaying preparation of the report until after your return home, we would then appreciate it if it could be sent to this office as soon as possible but not later than two months after completion of your assignment here so that timely follow-up steps can be taken by the host organisations. We would like to receive four copies of the report.

We are confident that your visit will help in the transfer of some of your expertise to the benefit of India's development efforts and look forward to the opportunity of welcoming you back to India on this mission.

If there are any further questions which you may have regarding your ensuing mission, please do not hesitate to get in touch with us.

With best wishes.

Yours sincerely,



P.N. Pathak
Programme Officer
for Resident Representative

We are informed by UNDP Headquarters that effective 1 January 1987, revised DSA rates for India are as follows :

Places	First 60 days		After 60 days
	US \$ Rate	Local Currency (Rs)	Local Currency (Rs)
Bombay, Calcutta & Madras	83	1080	810
Ahmedabad & New Delhi	72	930	700
Agra, Hyderabad, Jaipur, Pune, Srinagar & Udaipur	65	840	630
Aurangabad, Bangalore, Dehra Dun, Lucknow & Varanasi	53	690	520
Chandigarh, Jammu, Mysore, Simla, Trivandrum & Vishakhapatnam	46	600	450
Elsewhere	38	495	371



डा० डी. एन. मिश्रा
सलाहकार (एम)
Dr. D.N. MISRA
Advisor (M)

वैज्ञानिक एवं औद्योगिक अनुसंधान परिषद्
अनुसंधान भवन
रफी मार्ग, नई दिल्ली-110001
COUNCIL OF SCIENTIFIC &
INDUSTRIAL RESEARCH
Anusandhan Bhavan,
Rafi Marg, New Delhi-110001

Dear Dr Srivastava,

You may kindly recall that we had written to you recently about the TOKTEN (Transfer of Knowledge Through Expatriate Nationals) Project which the CSIR is operating in cooperation with the UNDP and you had very kindly sent us your curriculum vitae.

I have great pleasure in informing you that the Council of Scientific and Industrial Research would like to request you to visit India for a period 4-8 weeks under this scheme.

The main aim of the project is to invite distinguished Scientists and Technologists of Indian origin settled abroad for at least a period of 4 weeks to contribute in well defined projects/programmes towards India's developmental endeavours which would lead to transfer of knowledge/know-how or special skill or technique.

The following expert(s)/organisation(s) have already requested for your assistance.

Central Drug Research Institute,
Lucknow-226001
(contact person: Dr MM Dhar, Director)

The present phase of the project will end on December 31, 1987. We know that you are extremely busy and that it may be difficult for you to find time to take up the assignment with a short notice. However, we would be grateful if you could kindly accept our invitation and make it convenient to reach India anytime but before December 31, 1987 for at least a period of 4 weeks for assisting us in our developmental efforts related to your specialised subject field.

Contd....-2/...

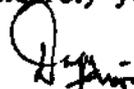
As the time is short, the CSIR would be extremely grateful to have a positive response from you through a cable or telex.

I may mention that the extension of the project beyond 1987 is under consideration and is likely to be extended. In case the project is extended, your visit could be accommodated in 1988, provided it is not possible to visit India in 1987.

I may add that your international and internal travel fare and per diem allowances at UN rates, during your stay in India will be met by the UNDP office at New Delhi. In this connection you will hear from the UNDP, New Delhi soon.

Thanking you and with warm regards,

Very sincerely yours,


(D N MISRA)

Dr Prem Chandra Srivastava,
Staff Member,
Nuclear Medicine Group,
Health and Safety Research Division,
Oak Ridge National Laboratory,
OAK RIDGE, TN -37830
USA

D O No DSTP/TOKTEN/T-939



DR INDRADEV
JOINT ADVISER

बैज्ञानिक एवं तकनीकी कार्मिक अनुभाग
DIVISION FOR SCIENTIFIC & TECHNICAL PERSONNEL
बैज्ञानिक एवं औद्योगिक अनुसंधान परिषद्
(COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH)
सी. एस. आई. आर. कॉम्प्लेक्स, लाहौरी एवेन्यू
पूसा, नई दिल्ली ११००१२
C.S.I.R. COMPLEX, LIBRARY AVENUE, PUSA
NEW DELHI - 110012 10.7. 1987

Dear Dr Srivastava,

I thank you for your telex dated June 29, 1987 accepting our invitation to visit India for 8 weeks starting from November 1, 1987 under the TOKTEN project.

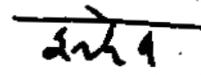
We hope you have received by now the letter No IND/84/014 dated June 16, 1987 from the UNDP, New Delhi in this connection.

We are glad to know that you are in touch with Dr MM Dhar, Director, CDRI, Lucknow to finalise programme of work and visit. This would help concretise the technical input expected from you during your visit to our country.

Please keep us and the UNDP, New Delhi informed about your programme of visits as soon as it is finalised.

Thanking you once again and with kind regards,

Yours sincerely,


(INDRADEV)

Dr PC Srivastava,
Staff Member,
Nuclear Medicine Group,
Health and Safety Research Division,
Oak Ridge National Laboratory,
OAK RIDGE TN-37830
USA



BY AIR MAIL

D.O.No.DIR-F(7)/87

Dr. M. M. DHAR, FNA
Director

केन्द्रीय औषधि अनुसंधान संस्थान

छत्तर मंजिल, पोस्ट बॉक्स नं० 173

लखनऊ-226 001 (भारत)

CENTRAL DRUG RESEARCH INSTITUTE

(A Constituent Establishment of CSIR)

Chattar Manzil. Post Box No. 173

LUCKNOW-226 001 (INDIA)

June 30, 1987

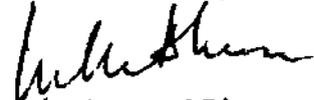
CC FFK
7/8/87

Dear PC,

I am happy that the CSIR has agreed to award you with a TOKTEN award. There should now be no problem in your spending time at this laboratory commencing November 1987. Please write indicating your programme more definitely.

With best wishes,

Yours sincerely,


(M.M. DHAR)

7 Dr. P.C. Srivastava,
Nuclear Medicine Group,
Health & Safety Research Division,
Oak Ridge National Laboratory,
Post Office Box X,
Oak Ridge,
Tennessee 37831
U.S.A.

Telex : 0835-286

Gram : CENDRUG

Phones : Office : 43406, 34219, 32411-18 (FABX)
Res. : 72652

1127918

D O No DSTP/TOKTEN/T-939



PN BHATTACHARYA
DEPUTY ADVISER

वैज्ञानिक एवं तकनीकी कार्मिक अनुभाग
DIVISION FOR SCIENTIFIC & TECHNICAL PERSONNEL

वैज्ञानिक एवं औद्योगिक अनुसंधान परिषद
(COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH)

सी. एस. आई. आर. कॉम्प्लेक्स, एन. पी. एल. केम्पस

नई दिल्ली-११००१२

C.S.I.R. COMPLEX, N.P.L. CAMPUS, PUSA,

NEW DELHI-110012...30/7/1987

Dear Dr Srivastava,

This refers to your letter dated July 2, 1987 to Dr DN Misra, Adviser, CSIR regarding your visit to India under the TOKTEN project for 8 weeks starting from November 1, 1987.

We hope that you have received by now our letter of even number dated July 9, 1987 in this connection.

Regarding your query about the time to be devoted at New Delhi, I may mention that the briefing both at the CSIR and UNDP, New Delhi could be completed in one day. Similary debriefing could also be completed in one day before your departure to the USA on completion of the assignment. I may also mention that Saturdays and Sundays are holidays for offices here.

The Department of Biochemistry, All India Instt of Medical Sciences(AIIMS), New Delhi-110029(contact person: Dr Shall K Sharma Head of the Department) have desired that you may give a Seminar at the Institute during your stay under the project. This may be possible at the beginning of your assignment before your departure to Lucknow from Delhi or at the end before your departure to the USA. You may kindly get in touch with Dr Sharma to finalise your programme at the AIIMS, New Delhi.

Please keep us and the UNDP, New Delhi informed about your programme of visit as soon as it is finalised.

With kind regards,

Yours sincerely,


(P N BHATTACHARYA)

Dr PC Srivastava,
Nuclear Medicine Group,
Health and Safety Research Division,
Oak Ridge National Laboratory,
Post Office Box X,
OAK RIDGE
Tennessee-37831(USA)

1127919

Internal Correspondence

MARTIN MARIETTA ENERGY SYSTEMS, INC.

August 10, 1987

A. R. Hawthorne

P. C. Srivastava's Foreign Travel to Lucknow, India

The attached request for assignment for P. C. Srivastava at the Central Drug Research Institute (CDRI) in Lucknow, India, as a distinguished scientist, represents an excellent opportunity for him to pursue synthesis of agents in which we have programmatic interests. This award was received from the United Nations Development Research Program and is targeted for expatriated Indian citizens and was received in recognition of the scientific achievements of P.C. Such offsite assignments are an important opportunity for our staff to intensely pursue research projects in a stimulating environment. The CDRI is a well-established institution, and the facilities and several staff members will be available.

I support and encourage such offsite assignments. This will be a good opportunity for P.C., will benefit our research program at ORNL, and most of the costs will be supported by the United Nations.



Russ Knapp

FFK:1a

Attachment

OAK RIDGE NATIONAL LABORATORY

OPERATED BY MARTIN MARIETTA ENERGY SYSTEMS, INC.

POST OFFICE BOX X
OAK RIDGE, TENNESSEE 37831

August 17, 1987

Mr. Joseph A. Lenhard, Assistant Manager
Energy Research and Development
Department of Energy, Oak Ridge Operations
Post Office Box E
Oak Ridge, Tennessee 37831

Dear Mr. Lenhard:

Foreign Travel by Prem C. Srivastava

Enclosed is our submission of DOE F 1512.1, "Request for Approval Official Foreign Travel," for Prem C. Srivastava. The proposed foreign travel will involve a visit to India.

Dr. Srivastava wishes to depart for India on October 30, 1987.

Sincerely,

Herman Postma
Director

HP:1a

Enclosure

cc: E. R. Bowers
D. J. Cook, DOE/ORO
A. R. Hawthorne
F. F. Knapp, Jr.
W. C. Kuykendall
P. T. Marquess, DOE/ORO
C. R. Richmond
M. P. Ross
P. C. Srivastava
P. J. Walsh
Travel - RC
Lab Records

1127921

1516

U.S. DEPARTMENT OF ENERGY

NOTIFICATION OF PROPOSED TRAVEL TO SENSITIVE COUNTRIES

1. NAME (last, first, middle) (include maiden name if married woman):
Srivastava, Prem C.

2. BIRTH:
a. Date: [REDACTED]
b. Place: [REDACTED], India

3. HOME ADDRESS: [REDACTED]

4. HOME TELEPHONE: [REDACTED]

5a. PURPOSE OF TRIP (Include details concerning any papers, lectures, etc., if the information pertains to the U.S. Department of Energy program.) Off-site assignment to participate and conduct research in a United Nations Development Program

5b. Official Travel Unofficial Travel

6. To Be Visited: (Also include information on any leave to be taken in conjunction with official travel.)

	Country	City	Person or Installation/Leave	Date(s)
a.	India	Rajsthan	Jaipur University	11/18/87
b.	India	Bombay	Bhabha Atomic Research Center	12/14/87
c.	India	New Delhi	United Nations Office	12/28/87
d.	India	*Lucknow	Central Drug Research Inst.	10/30/87-12/30/87
e.	*Location of assignment.			

7. Names, addresses, and citizenship of relatives, including in-laws, residing in sensitive countries: (Define relationship and relatives within 3 generations.)
[REDACTED]

8. Present Employment:

a. Name of employer: Martin Marietta Energy Systems, Inc.

b. Present capacity: Staff Member Health & Safety Re.

c. Business address: Oak Ridge National Laboratory, P.O. Box X, Oak Ridge, TN 37831-6022

d. Business telephone: (615) 576-6708

e. Highest classification of information received: unclassified

9a. Date and place of departure of travel:
10/30/87 - Oak Ridge, Tennessee

9b. Date of return:
12/30/87 - New Delhi, India

8/15/87
(Date)

Prem C. Srivastava
(Signature of Traveler)

NOTE: It is the responsibility of the traveler to inform the head of his or her division or office in writing of any change in the itinerary or purpose of the trip as set forth in this document.

1127922

MEMORANDUM

TO: N. P. Ross, ORNL Travel
FROM: E. R. Bowers, OGC *ERB*
DATE: August 12, 1987
RE: Foreign Travel of P. C. SRIVASTAVA (ORNL Health & Safety Research Division); India, 10/30 - 12/30/87

Dr. Srivastava has furnished me an advance copy of the form DOE-F-1512.1 covering the captioned travel.

Under DOE guidelines, an implementing agreement with the Central Drug Research Institute at Lucknow will be required in connection with his research assignment to that organization. I will endeavor to secure such an agreement as soon as possible, and will furnish you a copy when it is in place.

Dr. Srivastava also plans several side trips while in India, including visits to Jaipur University and the Bhabha Atomic Research Center, but their nature and duration is such that an implementing agreement with the host organization will not be required. However, the traveler is reminded that he should not sign any entrance agreement or other document which purports to affect his legal rights or responsibilities, or those of Energy Systems, DOE, or the U.S. Government, in regard to liability for injuries or damages, rights in inventions, discoveries, patents, data, etc., unless the document has first been approved by the Energy Systems Office of General Counsel.

ERB:bdp

cc: P. C. Srivastava*
~~H. G. Wallace~~, DOE-ORO RMB *Via grand*
P. J. Walsh
File (2)

* As you requested, when the proposed agreement is drafted, I'll send it to you for transmittal to India.

ERB