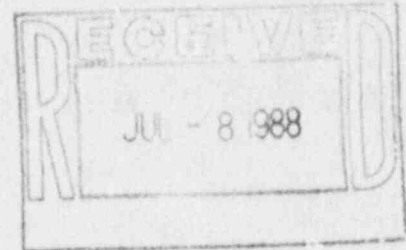


"REPLY TO A NOTICE OF VIOLATION"

June 23, 1988



Director, Office of Enforcement,
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sirs:

Please find enclosed information pursuant to a reply to a notice of violation letter dated June 3, 1988.

The information contained within this letter corresponds alphabetically to the noted violations as indicated during the NRC inspection of this facility dated March 24, 1988.

Violation A

A physician at this facility did indeed order and administer a therapeutic dose of Iodine-131 in the amount of 15 millicuries. The physician in question was unsure as to his authorized uses and possession limits at this facility. This physician has since been advised as to all authorized possession limits and uses. A license amendment request has been submitted to the NRC requesting additional authorization for this physician concerning the use of I-131 for hyperthyroidism and cardiac dysfunction. In the future strict attention will be given to authorized amounts and uses of radioactive materials at this facility.

Violation B

Technical personnel working within the nuclear department in the past had inadvertently not been given all instructions as required by 10 CFR 19.12. This was an oversight on the part of the Radiation Safety Officer as well as radiation safety committee and administration of this facility. All new employees now frequenting the nuclear department will be given appropriate instructions as required by the regulations. The appropriate instructions will be given by either the Radiation Safety Officer and/or the visiting Radiation Safety auditors. Documentation attesting to these instructions will be maintained on file for future review.

IC-88/685

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REG3 LIC30
34-16272-01 PDC

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11

Violation C

The radiation safety committee had not met in a substantial period of time beginning October 1, 1986 through March 24, 1988. This was due to an oversight on the part of the radiation safety committee and management. Starting immediately radiation safety committee meetings will be held on a quarterly basis. These meetings will be scheduled in order to coincide with the quarterly radiation safety audits performed by an independent party. The independent party will attend these meetings. Minutes from the radiation safety committee meetings will be made available to all personnel involved. Minutes from the REC meetings will be maintained on file for future review.

Violation D

Several physicians listed on our radioactive materials license were inadvertently maintained on the license after their performance of duties were discontinued. These physicians were allowed to remain on this license due to the fact that we were unsure as to whether or not these physicians would be frequenting this facility as authorized users for a substantial period of time subsequent to May of 1987. In the future any physician no longer performing duties pertaining to radioactive materials at this facility will be deleted from the radioactive materials license as soon as possible. This will be accomplished by requesting deletion in writing to the Regional Office of the Nuclear Regulatory Commission. Also as mandated by the modification of our radioactive materials license as specified by the Nuclear Regulatory Commission, the Regional NRC office would be notified by telephone as soon as we ascertain that any employee is to terminate employment at this facility when involved in nuclear medicine activities.

Violation E

A quarterly sealed source inventory was missed during the period covering September 24, 1987 and March 24, 1988. This was due mainly to a change in personnel within the nuclear department who were unaware of this requirement. In the future the sealed source inventories will be conducted on a quarterly basis. This will be performed by our Radiation Safety Auditors. Records of quarterly inventories will be maintained on file and reviewed by the Radiation Safety Officer.

Violation F

A visiting physician did perform procedures within the nuclear department, a copy of the physician's radioactive materials license was not obtained prior to his temporary employment. In the urgency of locating and securing an authorized user for procedures at this facility, a copy of the physician's license was not obtained. In the future a license indicating an authorized physician will be acquired and approved by the radiation safety committee prior to that physicians' performing nuclear medicine procedures at this facility. All documentation will be maintained on file for future review.

Violation G

Personnel involved in the nuclear medicine department were unaware of conditions set forth by 10 CFR 35.2. This regulation has subsequently been reviewed at this facility. In the future all record keeping as mandated by 10 CFR 35.33 Paragraph C will be reviewed by the Radiation Safety Officer and documented. These records will be maintained as direct by 10 CFR 35.33 Paragraph D.

Violation H

It is apparent that record keeping requirements pursuant to 10 CFR 35.53 (C) were incomplete. This requirement has subsequently been reviewed by personnel at this facility. In the future all required documentation concerning radiopharmaceutical doses to patients as described in 10 CFR 35.53 (C) (2) and 10 CFR 35.53 (C) (3) as well as 35.53 (C) (5) will be maintained on file for review.

The modifications to our radioactive materials license as set forth by the nuclear regulatory commission have also been implemented. An independent medical physics consulting firm has been secured. Attached, please find the evaluations that will be reviewed on a quarterly basis by the consulting firm. I also would like to indicate that our Radiation Safety Officer has recently attended a Radiation Safety Officer's Training Course. This course was provided by Nuclear Medicine Associates, a medical physics consulting group. Topics covered during the Radiation Safety Officers Course included applicable portions of 10 CFR Parts 19, 20, 30, 31 and 35, license applications, NRC inspections, NRC enforcement policies and levels of violations, radiation safety committee meeting requirements, items required in order to satisfy ALARA commitments, film badge reports, personnel dosimetry, records and record keeping necessitated by both the NRC and State Regulatory Agencies. We now feel our Radiation Safety Officer has an adequate background in order to help comply with regulatory requirements.

I hope this information meets with your approval. Please feel free to contact me if any questions arise. Upon receipt of your reply if all information meets with your approval. An initial Radiation Safety Audit will be scheduled as soon as possible. Thank you.

Sincerely,

Bruce K. Birchell

Bruce K. Birchell, Administrator,
Riverton Memorial Hospital/Health Trust, Inc.

cc: Regional Administrator
U.S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

cc: Assistance General Counsel for Enforcement
U.S. Nuclear Regulatory Commission,
Washington, D.C. 20555

FFR 81088

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number

34-16272-01

Docket or Reference number

030-10703

Amendment No. 18

Mallinckrodt, Inc.
NMA
9700 Garfield Blvd.
Cleveland, OH 44125

In accordance with application dated January 22, 1988, License Number 34-16272-01 is amended as follows:

Item 1 (Name) is changed from: Mallinckrodt, Inc.
NMA Medical Physics Services

to: Mallinckrodt, Inc.
NMA

Condition 12. is amended to read:

12. Licensed material shall be used by, or under the supervision of,

| | | |
|--------------------|---------------------|--------------------|
| Paul J. Early | William H. Miller | David W. Close |
| Raymond L. Kaczur | Steve A. Spinosi | W. Chris Wagner |
| Charles A. Giomuso | Frank T. Bloe | Samuel A. Pontillo |
| Ronald Scala | Margaret M. Reilly | Joseph G. Och |
| Mark Beanblossom | Daniel Patrick | Amy Sakaluk |
| Colleen Rose Brady | Thomas W. Dickinson | Andrew Williams |

Date: 2/8/88

For the U.S. Nuclear Regulatory Commission

By

J. L. R. Mad
Materials Licensing Section, Region III



1756 18TH ST.
SAN FRANCISCO, CALIFORNIA 94107
(415) 626-8411

SERVICE CONTRACT
(Limited to Nuclear Medicine)

for

RIVERTON MEMORIAL HOSPITAL/
HEALTHTRUST, INC.
2100 W. SUNSET DR.
P.O. BOX 1280
RIVERTON, WYOMING 82501

Beginning upon initiation of services, NMA Medical Physics Services, San Francisco, CA, agrees to supply the following services for the quoted prices. Cancellation of this contract can be effected within thirty (30) days written notice by either party.

A. SERVICES

1. Assist in applying for NRC and/or State license/registration (excludes teletherapy).
2. Aid in keeping license current.
3. Advise in selection of equipment and supplies to achieve maximum economy and service.
4. Aid in installing isotope laboratory according to NRC and/or State regulations.
5. Offer in-service education and annual review programs to technical staff.
6. Establish a radiological health program and record system in accordance with the NRC and/or State regulation.
7. Wipe/leak test sealed sources semi-annually.
8. Calibration of survey meters on an annual basis (Limit: 4).
9. Mail monthly clinical newsletters and/or regulatory alerts.
10. Provide and maintain pertinent portions of the Code of Federal Regulations.
11. Will visit your facility quarterly to:

(2)

- a. Offer consultation on problems pertaining to your Radiation Safety Program.
 - b. Perform quality assurance programs on scintillation camera, rectilinear scanner, uptake and well units.
 - c. Perform geometry, accuracy, constancy, and evaluate activity linearity checks on dose calibrator as required.
 - d. Review record system (radioactive shipment receipt, use and disposal) for NRC and State compliance, counting and handling procedures for proper techniques, and health physics program to assure continued safe handling of byproduct materials. Film badge records will be reviewed and action recommended in case of overexposures.
 - e. Inventory all sealed sources quarterly.
 - f. Survey facilities for possible contamination and excessive radiation.
 - g. Lecture on nuclear medicine techniques and radiation physics. Attend Radiation Safety Committee meetings staff meetings if arranged to coincide with routine consulting visit.
12. Available at all times for consultation by telephone or letter.
 13. Available at other times for consultation by special visit. Fees for special visits to be negotiated with due consideration given to the type of service and the travel expense to be incurred.
 14. Provide a typed report of the consultation.

B. CHARGES

RIVERTON MEMORIAL HOSPITAL agrees to pay \$380.00 (which includes travel expenses) per month to NMA Medical Physics Services, for the services listed above.

APPROVED BY:

Bruce H. Bucknell
Administrator

Date: 5-5-88

SUBMITTED BY:

W. Christopher Wagner
W. CHRISTOPHER WAGNER

Date: APRIL 21, 1988

NMA STAFF CONSULTANT

Paul J. Early, DABSNM

Director, Health Physics Services, Nuclear Medicine Associates

EDUCATION

- 1957 B.S.— St. Ambrose College, Davenport, Iowa.
1957-1959 Graduate School, Creighton University, Omaha, Nebraska.

QUALIFICATIONS

- 1959-1962 U.S. Army, Nuclear Physicist Assistant.
1962-1967 Mallinckrodt/Nuclear, Division of Mallinckrodt Chemical Works, St. Louis, Missouri.
Consulting Medical Physicist.
1967-1973 Nuclear Medicine Institute, Cleveland, Ohio, Physicist.
1973-1975 Nuclear Medicine Institute, Cleveland, Ohio, Associate Director.
1970-1984 Nuclear Medicine Associates, Cleveland, Ohio, President.
1970-Present Named on the following licenses: Nuclear Regulatory Commission; Illinois, Kansas, New York, Pennsylvania, Illinois - Qualified Radiation Expert, and Indiana - Qualified Radiation Expert.
1977-Present Member Nat'l Exam. Review Board of the American Osteopathic College of Radiology.
1977-Present Consultant in Nuclear Medicine, Ohio University.
1978-Present Membership Committee Central Chapter, SNM.
1982-Present Volunteer Clinical Faculty, Ohio University.
1984 Agency Expert of International Atomic Energy Agency (IAEA), Vienna, Austria, serving in Costa Rica and Ecuador.
1985 American College of Medical Physics (ACMP). Member of Task Group on Nuclear Medicine Calibration and Survey Standards.

PUBLICATIONS

1. Textbook of Nuclear Medicine Technology, Early, P.J., Razzak, M.A., and Sodee, D.B.; Mosby Company, 1969, 1st Ed., 1975, 2nd Ed., 1980, 3rd Ed.
2. Technology and Interpretation of Nuclear Medicine Procedures, Sodee, D.B., and Early, P.J.; Mosby Company, 1972, 1st Ed., 1975, 2nd Ed.
3. Mosby's Manual of Nuclear Medicine Procedures, Sodee, D.B., and Early, P.J., Mosby Company, 1981.
4. Principles and Practice of Nuclear Medicine Procedures, Early, P.J., and Sodee, D.B., Mosby Company, 1984.
5. Contributor To: Atlas of Roentgenographic Positions, Vinita Merrill, C.V. Mosby Co. (In Publication)

RECENT LECTURERS AND PAPERS

1. Contributor to "Essentials of Nuclear Medicine," 27th Annual Meeting, Society of Nuclear Medicine, June, 1980, Detroit, Michigan.
2. Co-moderator of "Quality Assurance and Maintenance," Central Chapter, Society of Nuclear Medicine, April, 1981.
3. Nuclear Medicine Review Board Program, 28th Annual SNM Meeting, Las Vegas, 1981; 29th Annual SNM Meeting, Miami, 1982; 30th Annual SNM Meeting, St. Louis, 1983; 31st Annual SNM Meeting, Los Angeles, 1984; 32nd Annual SNM Meeting, Houston, 1985.
4. "A Procedure for Performing Activity Linearity Checks ALARA," 28th Annual SNM Meeting, 1981.
5. "A Case of the Measles," Scientific Exhibit, 29th Annual SNM Meeting, Miami, 1982.
6. "Dose Calibrator Activity Linearity Evaluations with ALARA Exposures," SNM Meeting, Miami, 1982.
7. Basic Radiation Safety Lecture Series, Center for Continuing Education, Cleveland Clinic, Cleveland, Ohio, 1982.
8. "Nuclear Medicine Calibration and Survey Standards," 2nd Annual Meeting American College of Medical Physics, (ACMP), Victoria, B.C., June, 1985.

SOCIETIES

1. Society of Nuclear Medicine (SNM): 1972 Member of the Awards Committee; 1978 Prospective nominee to the National Board of Trustees from the Central Chapter; 1978 - Present Membership Committee, Central Chapter SNM; 1979 Scientific Program Reviewer.
2. American Association of Physicists in Medicine (AAPM). 1970 Charter Member of the Ohio Valley Chapter, 1977.
3. Health Physics Society.
4. Cleveland Area Medical Physicists (CAMP). 1978-79, President, 1979-80, Executive Board.
5. American College of Medical Physics (ACMP).

William H. Miller, DABSNM

Manager, Consulting Services, Nuclear Medicine Associates

EDUCATION

- 1955 Pre-med.-John Carroll University, Cleveland, Ohio.
- 1965 B.S. Education-Kent State University, Kent, Ohio.
- 1968 Seminar-Mallinckrodt/Nuclear,
St. Louis, Mo. Radiopharmaceutical preparation and quality control.

QUALIFICATIONS

- 1958-1960 U.S. Army, Physical Science Assistant.
- 1967-1975 Nuclear Medicine Institute, Cleveland, Ohio. Instructor, Chemistry and Radiochemistry.
- 1969 Cuyahoga Community College, Cleveland, Ohio. Instructor, Radiochemistry.
- 1969 Cleveland Regional Council of Science Teachers, Cleveland, Ohio. Lecturer.
- 1970-1975 Hillcrest Hospital, Cleveland, Ohio. Radiochemist and member of the Medical Isotope Committee.
- 1970-1984 Nuclear Medicine Associates, Cleveland, Ohio. Secretary-Treasurer.
- 1976-Present Named as qualified user on the following radioactive material licenses:
Nuclear Regulatory Commission license #34-16272-01
Illinois license #11-00345-01,
Kansas license #33-B382-01
New York license #1848
Pennsylvania license #PA-355
- 1979 Certification, American Board of Science in Nuclear Medicine, (ABSNM).
- 1979 Certification, DABSNM — Radiopharmaceutical and Radiochemistry Science.
- 1983 Certification, DABSNM — Radiation Protection
- 1984 Named on the Indiana State Board of Health list of qualified Radiation or Health Physicists

LECTURES, PUBLICATIONS

1. Inexpensive human organ phantoms, J. Nuclear Medicine, Vol. 9, #6, p. 271, June, 1968.
2. Contributor to: Technology and Interpretation of Nuclear Medicine Procedures, Sodde, D.B. and Early, P.J.; Mosby Company, 1972, 1st Ed., 1975, 2nd Ed.
3. Contributor to: Textbook of Nuclear Medicine Technology, Early, P.J., Razzak, M.A., and Sodde, D.B.; Mosby Company, 1975, 2nd Ed.
4. Contributor to: Technology and Interpretation of Nuclear Medicine Procedures, Sodde, D.B. and Early, P.J.; Mosby Company, 3rd Ed., 1980.
5. Nuclear Physician Training Program: Picker Center for Continuing Education, Instructor — 1978 to 1981.
6. Nuclear Cardiologist Training Course, Instructor, Los Angeles, California, December 2-7, 1979.
7. Symposium, Penn-Ohio Chapter of the American Association of Physicists in Medicine, Guest Lecturer, Wilkinsburg, PA, November 21, 1981.
8. Nuclear Physician Training Program, Instructor in Radiopharmaceutical Chemistry and Radiopharmacy, Nuclear Medicine Associates, Cleveland, Ohio, 1981 to Present.
9. Contributor to Fourth Edition of "Principles and Practices of Nuclear Medicine," Early, Sodde, 1984, C.V. Mosby Company.

SOCIETIES

- Society of Nuclear Medicine (SNM)
- American Nuclear Society
- Cleveland Area Medical Physicists (CAMP)

NMA STAFF CONSULTANT

Mark Beanblossom, B.S., CNMT

Consultant, Nuclear Medicine Associates

EDUCATION

- 1975-1976 Niagara Community College, Sanborn, New York.
Associates Applied Science.
- 1977-1980 Rochester Institute of Technology, Rochester, New York.
B.S., Nuclear Medicine Technology

QUALIFICATIONS

- 1980-1986 Chief Technologist/Radiation Safety Officer, Pawating Hospital,
Niles, Michigan
- 1986-Present Nuclear Medicine Associates, Cleveland, Ohio, Consultant.
- 1981 Nuclear Medicine Technologist Certification Board (#006573).
- Present Named as a qualified user on the following Radioactive Material Licenses:
Nuclear Regulatory Commission license #34-16272-01
Illinois license #IL-00345-01
New York license #1848
Pennsylvania license #PA-355
Kansas license #33-B382-01

PUBLICATIONS

"Cold Hematoma Visualization by Utilization of Tc-99m Labeled Red Blood Cells", Journal of Nuclear Medicine Technology, September, 1986.
Contributor to: UPDATE Newsletter, monthly publication of NMA.

LECTURES

Instructor: Continuing Education Programs to Physicians, Radiation Safety Officers, & Technologists as conducted by National Institute of Nuclear Medicine Education.

SOCIETIES

American Society of Radiological Technologists
Nuclear Medicine Technologist Certification Board
American Associates of Physicists in Medicine
Health Physics Society
Society of Nuclear Medicine
Missouri Chapter — Society of Nuclear Medicine

Frank T. Bloe, DABSNM
Consultant, Nuclear Medicine Associates

EDUCATION

| | |
|-----------|---|
| 1961-1963 | Ferris State College |
| 1963-1965 | Michigan State University |
| 1972-1973 | B.S., Michigan State University |
| 1966 | Medical Field Service School, Beaumont Army Medical Center, San Antonio, Texas |
| 1968 | Pontiac General Hospital X-Ray School, Pontiac, Michigan |
| 1969 | Nuclear Medicine Technology Course, Cuyahoga Community College, Cleveland, Ohio |
| 1969-1970 | Nuclear Medicine Technology Training, Nuclear Medicine Institute, Cleveland, Ohio |
| 1970-1977 | Supervisory Management Courses in Management Principles & Leadership Skills, American Management Association. |

QUALIFICATIONS

| | |
|--------------|--|
| 1966-1968 | U.S. Army X-Ray Technician |
| 1968 | R.T. (ARRT) X-Ray, American Registry of Radiologic Technologists. |
| 1970 | R.T. (ARRT) N.M.T. American Registry of Radiologic Technologists. |
| 1970-1977 | Department Manager, Nuclear Medicine Department, Lapeer County General Hospital, Lapeer, Michigan |
| 1980 | Certified Nuclear Medicine Technologists (CNMT) by Nuclear Medicine Technology Certification Board (NMTCB). |
| 1980 | Board certified in Nuclear Medicine Science with Special Competency in Radiation Protection and Nuclear Medicine Physics & Instrumentation by American Board of Science in Nuclear Medicine (ABSNM). |
| 1977-Present | Nuclear Medicine Associates |

SOCIETIES

Society of Nuclear Medicine
Society of Nuclear Medicine Technologists Section
Northern Ohio Society of Nuclear Medicine Technologists
Cleveland Area Medical Physicists

Peggy Reilly

Radiological Physicist, Nuclear Medicine Associates

EDUCATION

1978 University of Central Florida, Orlando, Florida
Bachelor of Science Degree in Radiological Sciences

EXPERIENCE & QUALIFICATIONS

1978-1984 Ohio Department of Health, Columbus, Ohio
Radiological Health Specialist

1985-Present Nuclear Medicine Associates (NMA), Cleveland, Ohio
Radiological Physicist

1985 Named as Qualified Radiological Expert in the States of Indiana
and Illinois

1985 Named as Qualified User on the following Radioactive Material Licenses:
Nuclear Regulatory Commission license #34-16272-01
Illinois license #11-00345-01
Kansas license #33-B382-01
New York license #1848
Pennsylvania license #PA-355

1987 Named as Qualified Radiological Expert in Ohio

SOCIETIES

Health Physics Society (HPS)
American Association of Physicists in Medicine (AAPM)
Society of Nuclear Medicine - Physics (SNM)
Cleveland Area Medical Physicists (CAMP)
American Healthcare Radiology Administrators (AHRA)

David W. Close, B.S.

Senior Consultant

EDUCATION

- 1968-1973 Carnegie-Mellon University, Pittsburgh, Pennsylvania: B.S. Degree in Physics
1983-1984 Cleveland State University, Cleveland, Ohio

QUALIFICATIONS

- 1973-1975 Allegheny General Hospital, Pittsburgh, Pennsylvania; Health Physicist
1975-1979 Hillcrest Hospital, Cleveland, Ohio; Radiation Safety Officer
1975-1979 Nuclear Medicine Institute, Cleveland, Ohio; Instructor
1980 Harshaw Chemical Co., Solon, Ohio; Crystal and Electronics Department,
 Product Manager, Electronic Systems
1980-Present NMA, Cleveland, Ohio; Consultant
1980-Present Named as qualified user on the following radioactive material licenses:
 Nuclear Regulatory Commission license #34-16272-01
 Illinois license #II-00345-01
 Kansas license #33-B382-01
 New York license #1848
 Pennsylvania license #PA-355
1986-Present Qualified Radiation/Health Physicist, X-ray Machine Physicist in
 State of Indiana
1986-Present Qualified Inspector of Medical Therapeutic, Medical Diagnostic and
 Industrial/Analytical/Research X-ray Equipment in State of Illinois

LECTURES AND PAPERS

Instructor; Nuclear Physician Training Program, Cleveland, Ohio, 1980-Present
Instructor; Radiation Safety Officer Review Program, Cleveland, Ohio,
1980-Present
Instructor; Basic Science Review Program, Cleveland, Ohio, 1980-Present
Contributor to UPDATE Newsletter, monthly publication of
Nuclear Medicine Associates
"A Measurement of Neutron and Gamma-Ray Dose Rate from a Plutonium-238
Powered Cardiac Pacemaker," L.F. Hans, D. Close, P.N. Shrivastava and
R.E. Summers. Presented at the AAPM Annual Meeting, July, 1974.
"Dose Calibrator Activity Linearity Evaluations with ALARA Exposures,"
Davis, Giomuso, Miller, Ferrell, Early, Gargaro, Bloe, Close and Began;
Journal of Nuclear Medicine Technology; December 1981, Volume 9, No. 4.

SOCIETIES

Cleveland Area Medical Physicists (CAMP)
American Association of Physicists in Medicine (AAPM); Full Member
American Osteopathic College of Radiology (AOCR); Affiliate Member

NMA STAFF CONSULTANT

W. Christopher Wagner, B.A., CNMT
Consultant, Nuclear Medicine Associates

EDUCATION

- 1977-1979 Muskingum Area Technical College, Zanesville, Ohio Associate Degree — Applied Sciences; Major: Radiologic Technology
1979-1980 Ohio State University Hospitals, School of Nuclear Medicine Technology, Columbus, Ohio. Certificate in Nuclear Medicine.
1982-1983 Otterbein College, Westerville, Ohio. B.A. Degree. Major: Nuclear Medicine

EXPERIENCE & QUALIFICATIONS

- 1979 Bethesda Hospital, Zanesville, Ohio, Radiologic Technologist
1980-1983 Doctors Hospital, Columbus, Ohio, Nuclear Medicine Technologist
1983-Present Nuclear Medicine Associates, Cleveland, Ohio, Consultant
1983-Present Named on the following radioactive materials licenses: Nuclear Regulatory Commission; Illinois, Kansas, Pennsylvania, New York

PROFESSIONAL AFFILIATIONS

- American Registry of Radiologic Technologists
— 1979 Radiologic Technology
— 1980 Nuclear Medicine Technology
Nuclear Medicine Technology Certification Board (NMTCB)
— 1980 Nuclear Medicine Technology
Central Ohio Society of Nuclear Medicine
— Board Member — Executive Committee 1983
Society of Nuclear Medicine (SNM)
Society of Nuclear Medicine, Technologists Section
Cleveland Area Medical Physicists (CAMP)

LECTURES AND PAPERS

- Instructor; Nuclear Physician Training Program, Cleveland, Ohio, 1983-Present
Instructor; Radiation Safety Officer Review Program, Cleveland, Ohio, 1983-Present
Instructor; Basic Science Review Program, Cleveland, Ohio, 1983-Present
Contributor to: UPDATE Newsletter, monthly publication of Nuclear Medicine Associates, Inc.
"Safe Transportation of Radium-226" — Cleveland Area Medical Physicists — 1983
"Professional Ethics & Patient Communications" — Department of Radiology, Nuclear Medicine, Ultrasound & Computed Tomography — 1983

NMA STAFF CONSULTANT

Colleen R. Brady, M.S.A.

Consultant, NMA

A Professional Medical Physics Service of Mallinckrodt, Inc.

EDUCATION

- 1980-1984 Ferris State College, Big Rapids, Michigan;
B.S. Nuclear Medicine Technology.
- 1984 R.T. (ARRT) N.M.T. American Registry of Radiologic Technologists.
- 1984 C.N.M.T. (NMTCB) Nuclear Medicine Technology Certification Board.
- 1984-1985 Central Michigan University, Mt. Pleasant, Michigan;
M.S.A., Management and Supervision, Health Services Administration.

EXPERIENCE

- 1983-1986 Sinai Hospital of Detroit, Detroit, Michigan;
Nuclear Medicine Technologist.
- 1986-1987 Detroit-area clinic; Nuclear Medicine Technologist.
- 1987-Present NMA/Mallinckrodt, Detroit, Michigan; Consultant.
- 1988-Present Named as qualified user on the following radioactive material licenses:
Nuclear Regulatory Commission license #34-16272-01
Illinois license #11-00345-01
New York license #1848
Pennsylvania license #PA-355

PROFESSIONAL ORGANIZATIONS

- Society of Nuclear Medicine
Society of Nuclear Medicine, Technologists Section
Southeastern Michigan Associates and Technical Affiliates

Samuel A. Pontillo, B.A.

Consultant, Nuclear Medicine Associates

EDUCATION

1973-1975 Parkland College, Champaign, Illinois
 Associates Degree Applied Science; Major: Radiologic Technology

1975-1976 Nuclear Medicine Institute, Cleveland, Ohio

1979-1981 B.A., Eastern Illinois University, Charleston, Ill.

QUALIFICATIONS

1976 Carle Clinic, Urbana, Illinois, Staff Technologist

1977-1984 Burnham Hospital, Champaign, Illinois, Chief Nuclear Medicine Technologist

Present Nuclear Medicine Associates, Cleveland, Ohio

Present Named as qualified user of the following Radioactive Material Licenses:
 Nuclear Regulatory Commission license #34-16272-01
 Illinois license #IL-00345-01
 New York license #1848
 Pennsylvania license #PA-355
 Kansas license #33-B382-01

SOCIETIES

American Registry of Radiologic Technologists (ARRT)
 Nuclear Medicine Technology Certification Board (NMTCB)
 Certified in Nuclear Medicine Technology by The State of Illinois
 Society of Nuclear Medicine
 Cleveland Area Medical Physics (CAMP)

LECTURES

Annual Review of Radiation Safety For Occupational and Non-occupational Personnel 1981-1984
 Instructor: Nuclear Physician Training Program, Cleveland, Ohio. 1985-Present
 Instructor: Radiation Safety Officer Review Program, Cleveland, Ohio. 1985-Present
 Instructor: Basic Science Review Program, Cleveland, Ohio. 1985-Present
 Contributor to: UPDATE Newsletter, monthly publication of Nuclear Medicine Associates.

NMA STAFF CONSULTANT

Amelia K. Bourne, M.S.

Radiological Physicist, NMA Medical Physics Services

EDUCATION

- 1981-1985 Allegheny College, Meadville, PA, June 1985;
Bachelor of Science in Biology and Psychology
- 1985-1986 University of Pittsburgh, PA
Master of Science: Radiation Health Course Work includes: Radiation
Physics, Radiobiology, Nonionizing Radiation, Radiochemistry

QUALIFICATIONS

- 1986 **Medical Physics Internship**, Joint Radiation Oncology Center, University
Health Center of Pittsburgh, Pittsburgh, PA.

Experience with:

- AECL Theratron 80 Cobalt Unit
- Philips SL 75/20 Linear Accelerator
- Varian Clinac 6 Accelerator
- AECL TP11 Theraplan Treatment Computer
- Brachytherapy (I-125, Ir-192, Cs-137, etc.)
- Harshaw TLD systems
- Whole and hemibody radiotherapy treatment planning
- Photon and electron beam calibrations
- Daily treatment planning (with and without CT tumor localization)

Master's Thesis:

A two-part study to determine the accuracy of the TP11 Theraplan Computer for predicting radiation dose distribution in a breast phantom as compared to NSABP manual method and a Wellhofer-Kernphysik isodose plotter.

- 1987-Present Radiological Physicist Consultant, NMA
Medical Physics Services

SOCIETIES:

Member, Health Physics Society (HPS)
Cleveland Association of Medical Physicist (CAMP)
American Association of Physicist in Medicine (AAPM)

NMA STAFF CONSULTANT

Anthony D. Montagnese, M.S.

Radiological Physicist, NMA

A Professional Medical Physics Service of Mallinckrodt, Inc.

EDUCATION

- 1981-1985 B.A. in Radiation Medicine, Wittenberg University, Springfield, Ohio
1985-1987 M.S. in Radiation Health, University of Pittsburgh,
Graduate School of Public Health, Pittsburgh, Pennsylvania

EXPERIENCE

- 1979-1981 Greene Memorial Hospital, Xenia, Ohio
Registered Technologist in Department of Radiology
Summer 1986 Health and Medical Physics Traineeship, Brookhaven National Laboratory,
Upton, New York, and State University of New York at Stonybrook
1986-1987 Teaching Fellow, University of Pittsburgh, Graduate School of Public Health,
Department of Radiation Health, Pittsburgh, Pennsylvania
Summer 1987 Medical Physics internship,
Presbyterian-University Hospital, Pittsburgh, Pennsylvania
1987-Present NMA/Mallinckrodt, Pittsburgh, PA
1987-Present Named as qualified user on the following radioactive material licenses:
Nuclear Regulatory Commission license #34-16272-01
Illinois license #11-00345-01
New York license #1848
Pennsylvania license #PA-355

LECTURES

- 1987-Present Instructor: Radiation Safety Officer Review Program, St. Louis, Missouri

PROFESSIONAL SOCIETIES

- American Association of Physicists in Medicine
American Association of Physicists in Medicine, Penn/Ohio Chapter
Health Physics Society
Health Physics Society, Western Pennsylvania Chapter
American Registry of Radiologic Technologists

NMA STAFF CONSULTANT

Andrew Williams

Consultant, NMA

A Professional Medical Physics Service of Mallinckrodt, Inc.

EDUCATION

August, 1985 B.S., Radiologic Science, Nuclear Medicine, University of Missouri, Columbia
May, 1984 B.S., Agriculture, Emphasis in Animal Science, University of Missouri, Columbia

QUALIFICATIONS

August, 1985 Nuclear Medicine Technology Certification
August, 1985 Outstanding Achievement Award in Nuclear Medicine (Mallinckrodt)
1985-1987 Senior Research Technologist, Department of Radiology, University of Missouri, Columbia
03/87-11/87 Research Biologist, Pharmacology and Toxicology Research, Mallinckrodt, Inc., St. Louis, Missouri.
12/87-Present NMA/Mallinckrodt, Consultant, St. Louis
1987-Present Named as qualified user on the following radioactive material licenses:
Nuclear Regulatory Commission license #34-16272-01
Illinois license #11-00345-01
New York license #1848
Pennsylvania license #PA 355

SOCIETIES

Society of Nuclear Medicine
Missouri Valley Chapter, SNM
Mid-Missouri Subchapter, SNM, Executive Committee

PUBLICATIONS AND PRESENTATIONS

1. Stringham, L.M., Williams, A., Ketring, A.R., Lattimer, J.C., Corwin, L.A., Volkert, W.A., and Holmes, R.A., Sm-153-Ethylenediaminetetra-methylenephosphonate (Sm-153-EDTMP): A Promising Radiopharmaceutical for the Treatment of Metastatic Bone Disease. Missouri Valley Chapter, Society of Nuclear Medicine Annual Meeting, 1986, Kansas City, Missouri.
2. Williams, A., Volkert, W.A., Holmes, R.A., Evaluation of Sm-153-EDTMP by Autoradiography for the Treatment of Bone Cancer. 71st Annual Meeting, Federation of American Societies for Experimental Biology, 1987, Washington, D.C.
3. Stringham, L.M., Williams, A., Ketring, A.R., Volkert, W.A., Holmes, R.A., Sm-153-EDTMP: A New Modality for the Treatment of Metastatic Bone Cancer. 71st Annual Meeting, Federation of American Societies for Experimental Biology, 1987, Washington, D.C.
4. Williams, A., Volkert, W.A., Holmes, R.A., Autoradiographic Evaluation of Sm-153-EDTMP as a Radiotherapeutic Agent for Primary Bone Cancer. Proceedings of the 34th Annual Meeting, Society of Nuclear Medicine. J Nucl Med 1987, 28:709.
5. Singh, A., Farhangi, M., Volkert, W.A., Williams, A., Stringham, L.M., Holmes, R.A., Sm-153-EDTMP: A Potential Therapy for Osseous Metastasis. Proceedings of the 34th Annual Meeting, Society of Nuclear Medicine. J Nucl Med 1987, 28:708-709.
6. Stringham, L.M., Williams, A., Ketring, A.R., Corwin, L.A., Volkert, W.A., Holmes, R.A., Sm-153-EDTMP: A Promising Radiopharmaceutical for the Treatment of Metastatic Bone Cancer. Proceedings of the 34th Annual Meeting, Society of Nuclear Medicine. J Nucl Med 1987, 15: Abs 7.
7. Singh, A., Volkert, W.A., Holmes, R.A., Williams, A., Stringham, L.M., Farhangi, M., Clinical Pharmacokinetics of Sm-153-EDTMP. Proceedings of the 34th Annual Meeting, Society of Nuclear Medicine. J Nucl Med 1987, 28: 762.

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EDUCATION

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QUALIFICATIONS

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1983-1987 Reynolds Memorial Hospital, Glen Dale, West Virginia, Chief Technologist, Department of Nuclear Medicine.

1987-Present Consultant, NMA Medical Physics Services

1987-Present Named as qualified user on the following radioactive material licenses:

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Pennsylvania license #PA-355

New York license #1848

Illinois license #II-00345-01

SOCIETIES

American Registry of Radiologic Technologists (ARRT)

Society of Nuclear Medicine (SNM)