

MATERIALS LICENSE

Amendment No. 02

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 39, 40 and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee		In accordance with letter dated June 22, 1992, 3. License number 29-28334-01 is amended in its entirety to read as follows:
1. Keystone X-Ray, Incorporated Dental Division		
2. Parkway 100 - Building No. 4 3535 Route 66 Neptune Township, New Jersey 07753		4. Expiration date July 31, 1994
		5. Docket or Reference No 030-30950 29-15799-01
6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Americium 241	A. Sealed neutron source (NEN Model NER-478)	A. Not to exceed 2 curies per source, 4 curies total
B. Americium 241	B. Sealed neutron source (Amersham Model AMR-216)	B. Not to exceed 3.46 microcuries per source, 10 microcuries total
9. Authorized use		
A. For use in a Technical Operations, Inc. Model 571 Calibrator for calibration of instruments.		
B. For use in calibration of instruments.		

CONDITIONS

10. Licensed material shall be used only at Parkway 100 - Building No. 4, 3535 Route 66, Neptune Township, New Jersey.
11. A. Licensed material shall be used by, or under the supervision of, Robert Hay or Robert J. Jokarz.
B. The Radiation Safety Officer for this license is Robert Hay.
12. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders or detector cells by the licensee.
13. A. Any sealed source(s) or detector cell(s) specified in Item(s) 7.A. shall be tested for leakage and/or contamination at intervals not to exceed 6 months. Any source or detector cell received from another person which is not accompanied by a certificate indicating that a test was performed within 6 months before the transfer shall not be put into use until tested.

250056
9302260187 920926
PDR ADOCK 03030950
C PDR

"OFFICIAL RECORD COPY" ML 10

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number

29-28334-01

Docket or Reference number

030-30950

Amendment No. 02

(13. continued)

CONDITIONS

- B. Any sealed source or detector cell in storage and not being used need not be tested. When the source or detector cell is removed from storage for use or transfer to another person, it shall be tested before use or transfer.
- C. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, the source or detector cell shall be removed from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. A report shall be filed within 5 days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region I, ATTN: Chief, Nuclear Materials Safety Branch, 475 Allendale Road, King of Prussia, Pennsylvania 19406. The report shall specify the source involved, the test results, and corrective action taken. Records of leak test results shall be kept in units of microcuries and shall be maintained for inspection by the Commission. Records may be disposed of following Commission inspection.
- D. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically licensed by the Commission or an Agreement State to perform such services.
14. The licensee shall conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 2 years from the date of each inventory.
15. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.
- A. Letter dated November 1, 1983
 - B. Application dated July 25, 1985
 - C. Application dated December 21, 1988
 - D. Letter dated February 21, 1989
 - E. Letter dated February 23, 1989
 - F. Letter dated April 24, 1989
 - G. Letter dated February 8, 1990
 - K. Letter dated June 22, 1992

For the U.S. Nuclear Regulatory Commission

Original Signed By:

Duncan White

By

Nuclear Materials Safety Branch
Region I

King of Prussia, Pennsylvania 19406

Date

SEP 26 1992

SEP 26 1992

License No. 29-28334-01
Docket No. 030-30950
Control No. 116819

Keystone X-Ray, Incorporated
Dental Division
ATTN: Alan R. Keim
President
3535 Route 66
Neptune Township, New Jersey 07753

Dear Mr. Keim:

Please find enclosed an amendment to your NRC Material License.

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the Region I Material Licensing Section, (215) 337-5093, so that we can provide appropriate corrections and answers.

Please be advised that you must conduct your program involving licensed radioactive materials in accordance with the conditions of your NRC license, representations made in your license application, and NRC regulations. In particular, please note the items in the enclosed, "Requirements for Materials Licensees."

Since serious consequences to employees and the public can result from failure to comply with NRC requirements, the NRC expects licensees to pay meticulous attention to detail and to achieve the high standard of compliance which the NRC expects of its licensees.

You will be periodically inspected by NRC. A fee may be charged for inspections in accordance with 10 CFR Part 170. Failure to conduct your program safely and in accordance with NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC will result in prompt and vigorous enforcement action against you. This could include issuance of a notice of violation, or in case of serious violations, an imposition of a civil penalty or an order suspending, modifying or revoking your license as specified in the General Policy and Procedures for NRC Enforcement Actions, 10 CFR Part 2, Appendix C.

Keystone X-Ray, Incorporated

-2-

We wish you success in operating a safe and effective licensed program.

Sincerely,

Original Signed By:
Duncan White

Duncan White
Nuclear Materials Safety Branch
Division of Radiation Safety
and Safeguards

Enclosures:

1. Amendment No. 02
2. Requirements for Materials Licensees
3. NRC Forms 3 and 313

DRSS:RI
White/gc

9/26/92



KEYSTONE X-RAY, INC.

DENTAL DIVISION
3535 Route 66
Neptune, New Jersey 07753

Telephone (201) 922-8555
Fax (201) 922-4311

June 22, 1992

030-30950

RECEIVED
DIVISION OF ACCOUNTING

United States Nuclear Regulatory Commission
Region 1
475 Allendale Road
King of Prussia, PA 19406

'92 JUL -9 PM 2:57

U.S. NUCLEAR REGULATORY COMMISSION

Attention: Paul D. Swetland, Chief
Industrial Applications Section
Division of Radiation Safety & Safeguards

REQUEST TO AMEND NRC LICENSE NO. 29-28534-01

I wish to remove Theodore T. Bowser as Radiation Safety Officer, replace him with Robert Hay as Radiation Safety Officer, also please add Robert J. Tokarz as Associate Radiation Safety Officer.

Robert Hay has recently completed a course of training for Radiation Safety Officers. See Attachment 1. In addition, Robert Hay received 10 hours of supervised experience in handling the 2Ci Americium-241 source. See Attachment 2.

Robert J. Tokarz is currently the RSO on an NRC license. See Attachment 3.

Thank you for your consideration of this matter.

Sincerely,

Alan R. Keim
President

ARK/lp

Log	July 6
Remitter	
Check No.	033360
Amount	8380
Fee Category	3P
Type of Fee	AMB
Date Check Rec'd	Dep by OC
Date Completed	8/25/92
By	B. Brown

OFFICIAL RECORD COPY ML 10

116819

JUL 02 1992

ROBERT EDWARD HAY
502 High Avenue
Hatboro, PA, 19040
(215) 672-5069

EDUCATION: GERMANTOWN HIGH SCHOOL, Philadelphia, PA
Course: Mechanical Arts. Graduated in June, 1952.

U.S. NAVY ELECTRONICS SCHOOL, Great Lakes, IL
Certificate received in June, 1956.

EMPLOYMENT: KEYSTONE X-RAY, Neptune, NJ
Sept. 1986 Title: Senior Technician
to Present Duties: Technical training of field servicemen and
factory personnel. Produce and edit technical and
service manuals and directions. Consultant in UL,
CSA, FDA, and other regulatory matters. Assist field
service men in problem solving via telephone.
Assist on projects where technical expertise and
experience is needed. Participate in installations and
repairs. Assist in determining company policy based on
field contact. Represent company at trade shows and
demos. Selling and telemarketing. Recently completed
training to qualify as radiation safety officer.

4/84 to 3/86 S.S. WHITE COMPANY, Holmdel, NJ
5/74 to 4/84 PENWALT/S.S. WHITE COMPANY
Title: Technical Representative
Duties: Aid in the installation, calibration, and
indoctrination of new systems. Field service support
for all equipment. Training of dealers service
technicians.

10/61 to 5/74 LEEDS & NORTHRUP COMPANY, North Wales, PA
Title: Standards Lab Technician
Duties: Calibrate, maintain and repair the company
electrical standards. Maintain and repair test
equipment. Working to accuracies of .001 percent.

8/58 to 8/61 HENKLES & MCCOY, Philadelphia, PA
Title: Electronics Technician
Duties: Test, repair and calibrate government
communications systems.

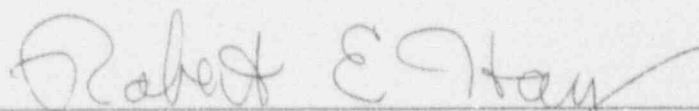
9/53 to 6/58 U.S. NAVY
Title: Electronics Technician/Second Class.

AWARDS: 1976 - National Representative of the Year.
1982 - Regional Representative of the Year.
1982 - Technical Representative of the Year.
1982 - President's Club for Excellence.
1983 - Regional Representative of the Year.

ASSOCIATIONS: American Academy of Dental Radiology.
American Academy of Oral and Maxillofacial Radiology.

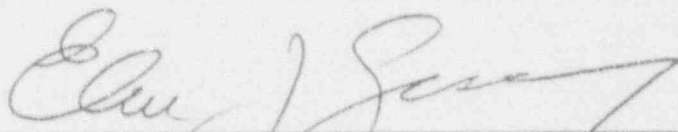
July 9, 1991

**RADIATION SAFETY ORIENTATION
CERTIFICATE OF ATTENDANCE**



Signature

has attended the Radiation Safety Orientation Lecture given
today by Rutgers Environmental Health and Safety
Department.



Signature

Elan Gandisman, PhD, CHP
University Health Physicist

Cook College

Continuing Professional Education

THIS CERTIFICATE IS AWARDED TO

ROBERT E. HAY

FOR THE COMPLETION OF

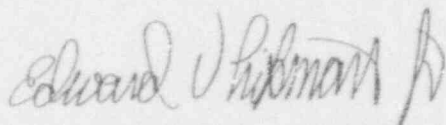
BASIC RADIOISOTOPE THEORY - FEBRUARY 24, 1992

HEALTH EFFECTS OF IONIZING RADIATION - FEBRUARY 25, 1992

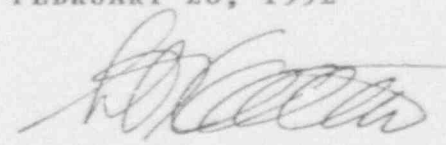
RADIOISOTOPE LABORATORY SAFETY - FEBRUARY 26, 1992

RADIATION INSTRUMENTATION - FEBRUARY 27, 1992

RADIATION PROTECTION PROGRAM MANAGEMENT - FEBRUARY 28, 1992



Edward V. Lipman, Jr.
Director
Continuing Professional Education



Stephen J. Kleinschuster
Dean
Cook College

To: Keystone X ray, Inc.
Dental Division
Parkway 100, Building 4
3535 Route 66
Neptune, NJ 07753

Re: Supervision experience for Robert Hay

Date: 29 May 1992

Robert Hay received 10 hours of supervised experience under my supervision. The experience included the following:

- Use of 2000mCi of americium 241 as a sealed source.
- Use of GM survey instruments to conduct a radiation survey.
- Handling the source so as to reduce exposure.
- Use of personal monitoring devices.
- securing the source.
- Taking a sample for sealed source leak test analysis.
- General radiation practices.

Name of Preceptor: Robert J. Tokarz, M.S., DABR
Certified Medical Physicist

Signature of Preceptor:



Date:

2 June 92

KEYSTONE X-RAY, INC.
NRC AMENDMENT

Date: 3 June 1992

RE: Robert J. Tokarz, M.S., DABR
Associate Radiation Safety Officer

Qualification: Currently Radiation Safety Officer on
NRC licenses 29-07566-01 and 29-07566-02

ROBERT J. TOKARZ
459 NEW MARKET ROAD
PISCATAWAY, NEW JERSEY 08854

PERSONAL DATA:

Age:	45 years old
Date of Birth:	8 April 1947
Place of birth:	Newark, New Jersey
Marital status:	Married with two children

EDUCATION:

University of Scranton Scranton, PA	Bachelor of Science-Biology June, 1968
William Beaumont General Hospital, U.S. Army, El Paso, TX	On the job training in nuclear medicine technology Certificate, May, 1970.
Rutgers University New Brunswick, NJ	Master of Science-Statistics May, 1976
Rutgers University New Brunswick, NJ	Master of Science Radiation Science October, 1986
M.D. Anderson Cancer Houston, Tx	Dosimetry of High Energy Electrons and X-Ray Therapy Machines. February, 1989.
Rutgers University New Brunswick, NJ	Ph.D. candidate, 1991-present.

MILITARY:

United States Army	February, 1969 - December, 1971. Honorable Discharge.
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REGISTRIES:

Certified Medical Nuclear Physicist
(American Board of Radiology, 26 May 1988)

American Registry of Radiologic Technologists
(Registered Nuclear Medicine Technologist-092469)

Certified Nuclear Medicine Technologist
(New Jersey State License-0408)

MEMBERSHIPS AND COMMITTEE ASSIGNMENTS:

American Association of Physicists in Medicine
Society of Nuclear Medicine
Society of Nuclear Medicine, Technologist Section
New Jersey Health Physics Society
New Jersey Medical Physics Society
Chairman of the Advisory Committee on Nuclear Medicine
to the New Jersey Radiation Protection Commission, 1979 and
1986 through 1990.
Member of the Advisory Committee on Nuclear Medicine to
to the New Jersey Radiation Protection Commission, 1984
to present.
Chairman of Education Committee, Greater New York Chapter,
Society of Nuclear Medicine Technologist Section, 1985
to 1986.
Instructor in the Radiation Therapy Technology Program at
St. Peter's Medical Center, New Brunswick, NJ, 1990 to
present.
Adjunct Instructor in the Department of Radiology at UMDNJ-
Robert Wood Johnson Medical School, New Brunswick, NJ,
July, 1989 to present.
Instructor of "Internal Dosimetry". A Series of Short
Courses in RADIATION SCIENCE, 17 March 1989 Cook College,
Office of Continuing Education, Rutgers University, New
Brunswick, NJ.
Instructor of "Error Propagation". Radiation Science Series
Cook College, Office of Continuing Education, Rutgers
University, New Brunswick, NJ.
Program Director and instructor of Nuclear Medicine Review
1985, August 23 and 24, 1985. Cook College Campus, New
Brunswick, NJ.
Instructor of "Nuclear Medicine Instrumentation" at the
Nuclear Medicine Review 1984, August 24 and 25, 1984.
Philadelphia, PA.
Instructor of "Radiation Dosimetry: Methods of Determination
External and Internal Radiation Dose; Current Standards."
Advanced Radiation Safety, June 26, 1984, Cook College
Short Courses, Kilmer Campus, Piscataway, NJ.
Instructor for "Registry Review and Refresher Course",
July 20-22, 1984. Capitaland Society of Nuclear Medicine
Instructor of "Basic Science Review for Nuclear Medicine".
A two workshop presented at the Annual Meeting of the

Greater New York Chapter Society of Nuclear Medicine,
Technologist Section; 1973 through 1983 and 1985.
Instructor of "Instrumentation and Computer Principles"
at Squibb National Nuclear Medicine Seminar, May, 1982
Cherry Hill, NJ.

MILITARY EXPERIENCE;

US Army from February, 1969 through December, 1971.
Trained as Medic and Nuclear Medicine Technologist.
Honorably discharged December, 1971.

WORK EXPERIENCE:

Medical Physicist	St. Peter's Medical Center July, 1986 to present.
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Responsibilities include radiation safety in diagnostic radiology, nuclear medicine and radiation therapy. Maintain the radiation safety program throughout the institution. Perform and evaluate quality control data for each section including mammography. Calculate radiation doses for radiation therapy. Perform calibrations and quality control on linear accelerator, cobalt-60 therapy unit and diagnostic imaging systems. Modify the radiation safety program to maintain compliance with Federal and State regulatory agencies. Develop, evaluate and present the instructional program for Radiology Residents on the application of Physics in diagnostic radiology. Perform treatment planning in radiation oncology. Function as radiation safety officer. Test sealed sources including teletherapy source for leakage. Perform full calibration on the teletherapy unit. Perform monthly spot checks on the teletherapy unit. Perform radiation surveys after installation of a new source in the teletherapy unit. Instructor for the School of Radiation Therapy Technology.

Technical Director Radiology	Middlesex General- University Hospital, 1980 - June, 1986.
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Responsibilities include the management of a large and active radiology department which includes special procedures, plain film radiography, three fluoroscopy suites, CT scanner, nuclear medicine, ultrasound and beta site for PACS. Function as Radiation Safety Officer. Maintain the radiation monitoring program throughout the Hospital. Conduct in-service training throughout the Hospital. Radiation physics instructor in the Radiology Residency program. Calibrate radiation survey equipment. Interact with users of radiation outside of the Radiology Department. Prepare budgets for operations and capital expenditures. Write certificate of need applications for purchase of x-ray equipment, nuclear medicine equipment and MRI scanner for NBAH.

Technical Supervisor
Nuclear Medicine

St. Peter's Medical Center and
Middlesex General University
Hospital, 1971-1979.

Responsibilities included technical supervision of the Nuclear Medicine Departments at both Hospitals. Enforce the radiation safety program at both institutions. Prepare and submit all license applications. Function as a member of the Radiation Safety Committee. Develop and maintain a quality assurance program for both Departments.

PUBLICATIONS:

Wynveen RA, Tokarz RJ, and Stahl TJ. "Evaluation of a Xenon-133 Trapping and Containment System for the Nuclear Medicine Laboratory," Abstract AAPM Annual Meeting, Medical Physics 1,109,1974.

Erdman WA, Stahl TJ and Tokarz RJ. "The Nuclear Medicine Department of the eighties". RNM Images 1983;13,6.

Erdman WA, Stahl TJ Tokarz RJ, Maguire GQ, Jr., Noz ME. "Development of a Digital Nuclear Medicine System". Proceedings of SPIE Conference on Picture Archiving and Communication Systems in Medicine. 1983;418:100-102.

Noz ME, Erdman WA, Maguire Gq, Jr., Stahl TJ, Tokarz RJ, et.al. "Modus Operandi for a Picture Archiving and Communication System" Radiology 1984;152:221-223.

Stahl TJ, Erdman WA and Tokarz RJ. "Experience in the Development and Utilization of a Digital Nuclear Medicine Department". ACR Proceedings Eighth Conference on Computer Applications in Radiology 1984;627-636.

Erdman WA, Stahl TJ, Tokarz RJ, et.al. "Evaluation of 99mTc Pyrophosphate Myocardial Scans in a Community Hospital Setting". J. Medical Society of New Jersey 1978;75,13;909-912.

Tokarz, RJ, Leghrouz, A, Appleby, A, Mezrich, R. "Spatial Radiation Dose Distribution by Imaging Ferrous/Gel System Using MRI Techniques". Presented at the RSNA, December 3, 1991, Chicago, IL.

JUL 24 1992

Keystone X-Ray, Inc.
ATTN: Alan R. Keim, President
Dental Division
3535 Route 66
Neptune, NJ 07753

Gentlemen:

This refers to your letter dated June 22, 1992, for an amendment to Materials License 29-28334-01.

Your request is subject to an amendment fee of \$380 as specified in fee Category 3P of \$170.31, 10 CFR 170, which went into effect August 9, 1991. A copy of the July 10, 1991, Federal Register notice regarding the revisions to the Commission's license and annual fee regulations (10 CFR 170 and 10 CFR 171) is enclosed.

Payment of the \$380 fee should be made to the U.S. Nuclear Regulatory Commission and mailed to the following address:

U.S. Nuclear Regulatory Commission
ATTN: Sandra Kimberley
License Fee and Debt Collection Branch, OC/DAF
Mail Stop MNBB 4503
Washington, D.C. 20555

Your application will be processed by the Region I Licensing staff located at 475 Allendale Road, King of Prussia, PA 19406. The fee, however, is required prior to issuance of the amendment. When submitting the fee, please refer to CONTROL NUMBER 116819.

If we do not receive a reply from you within 30 calendar days from the date of this letter, we shall assume that you do not wish to pursue your application and will void this action.

Sincerely,
Signed by
Sandra Kimberley

Sandra Kimberley
License Fee and Debt Collection Branch
Division of Accounting and Finance
Office of the Controller

Enclosure:
July 10, 1991, Federal Register notice

cc: Region I

DISTRIBUTION
Pending Fee File
OC/DAF R/F
LFDCB R/F (2)

OFFICE: OC/LFDCB
NAME: BBrown
DATE: 7/27/92

OC/LFDCB
SKimberley
7/24/92

OC/LFDCB
MMessier
7/24/92

19\B:AMD-KS1\B:KXRI.mer

BETWEEN:

PROGRAM CODE: C3221

STATUS CODE: 0

FEE CATEGORY: 3P

EXP. DATE: 19940731

FEE COMMENTS:

DECOM FIN ASSUR REQD: N

A. REGION

1. APPLICATION ATTACHED

APPLICANT/LICENSEE: KEYSTONE X-RAY, INC.

RECEIVED DATE: 920702

DOCKET NO: 3030950

CONTROL NO.: 116819

LICENSE NO.: 27-28334-01

ACTION TYPE: AMENDMENT

2. FEE ATTACHED

AMOUNT: \$50
CHECK NO.:

3. COMMENTS

SIGNED
DATE

Rebecca J. Brown
31/9/92

B. LICENSE FOR MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED 1 Y 1)

1. FEE CATEGORY AND AMOUNT: 3P 7380

2. CORRECT FEE PAID. APPLICATION MAY BE PROCESSED FOR:

AMENDMENT	<input checked="" type="checkbox"/>
RENEWAL	
LICENSE	

3. OTHER

SIGNED
DATE

B. Zinn
8/25/92