



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

APR 2 1985

Medi-Physic, Inc.
ATTN: Mr. Thomas J. Springer
900 Durham Avenue
South Plainfield, New Jersey 07080

REFUND OF APPLICATION FEE

1. BACKGROUND:

Check Received	<u>March 28, 1985</u>
Application Dated	<u>February 28, 1985</u>
Check Number	<u>51040221</u>
Check Amount	<u>\$120</u>

2. REFUND:

Amount	<u>\$60</u>
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This refund is now being processed by the Office of Resource Management and will be sent as soon as possible.

3. REASON FOR REFUND:

Overpayment of amendment fee for application dated February 28, 1985 for License 29-15360-01 as specified in fee Category 3P (\$60) of Section 170.31, 10 CFR 170.

15/
Glenda Jackson
License Fee Management Branch
Office of Administration

8505290726 850507
REG1 LIC30
29-15360-01 PDR



Medi-Physics, Inc.
900 Durham Avenue
South Plainfield
New Jersey 07080
(201) 757-0500

Gary Ziola

Formal Radiation Training

12/2/82 Ltr.

Hired as entry-level Health Physics Technician, July 13, 1981 - no previous radiation exposure. Health physics orientation upon procurement of employment at Medi-Physics Inc. given by Linda McLean, Radiation Safety Officer. The Radiation Safety Lecture consisted of:

- A.) Basic Radiation Physics
 - 1. Atomic Structure
 - 2. Nature of Radioactivity
 - 3. Radioactivity and decay
 - 4. Half-life
- B.) Radiation Quantities and Units
 - 1. Units of exposure
 roentgen, rad, rem
 - 2. Exposure Limits
- C.) Radiation Protection
 - 1. Time, distance and shielding
 - 2. Contamination control
 - 3. Personnel monitoring

Inclusive tour of facility given by Stuart Rosenberg, Senior Health Physics technician concurrent with production cross-training in radiopharmaceutical manufacturing. Applications of radiation safety stressed by Mr. Rosenberg included:

- A.) Regulations
 - 1. federal vs. state control
 - 2. required surveys - health physics procedures
 - 3. labelling and posting
- B.) MPI/ South Plainfield Policies and Procedures
 - 1. Action points
 - 2. monitoring for contamination
 - 3. controlled vs. unrestricted areas
 - 4. solid and liquid waste management
 - 5. instrumentation usage
 - 6. emergency planning and notification

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Associated Coursework
Rutgers University/January - May 1982

Radioactivity and the Environment: Frank Haughey PhD; 45 hours

lecture:

- a. Atomic Structure
- b. Nuclear Properties
 1. Neutron 'stability'
 2. Radiations
- c. Radioactivity
 1. Simple decay
 2. Complex decay
 3. Induced radioactivity
- d. Fission and Fusion
- e. Interaction of Radiation and Matter
- f. Radiation Detection
- g. Biological Effects of Ionizing Radiation
- h. Radiation Exposure Standards and Limits
- i. Source of Radioactive Contamination
 1. Radioecology
 2. Radwaste treatment and disposal

Applied Health Physics: Ed Christman PhD; 45 hours

lecture:

laboratory:

- | | |
|---|-------------------------------|
| a. Radioactive Transformations | G.M. Counting |
| b. Radioactive Decay | Radioisotope Calibration |
| c. Interaction of Radiation with Matter | Counting Statistics |
| d. Neutrons, X-Ray Machines | Attenuation, Absorption |
| e. Biological Effects of Radiation | Scintillation Counters |
| f. Regulations, Standards | Liquid Scintillation Counting |
| g. Dosimetry | Survey Instrument Calibration |
| h. Non-Ionizing Radiation | X-Ray Machine Survey |
| i. Industrial Hygiene | Dose Calculations |

Experience and organizational requirements specific to job description include:

1. Continuous documentation supporting the reliability and effectiveness of MPIs' radiation safety program
2. Dose equivalent data for all employees and visitors
3. Radioactive materials inventory and disposal
4. Surface contamination data
5. Airborne radioactivity data; effluent/restricted
6. Bioassay data for workers
7. Training program description and attendance
8. Environmental and personnel monitoring
9. Safety reviews of facility design and operations
10. Radiation safety surveys
11. Calibration of multi-channel analyzer and low level instruments



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Radioisotopes used at Medi-Physics and their maximum activities are:

99Mo	-	400 Ci
99mTc	-	200 Ci
67Ga	-	20 Ci
81Rb	-	2 Ci
81mKr	-	2 Ci
123I	-	2 Ci
133Xe	-	12 Ci