37-52 80-1

# NUCLEAR SYSTEMS

A DIVISION OF THE BUDD COMPANY • PHILADELPHIA 32, PA.

July 20, 1950

Mr. William O. Miller
Byproduct Licensing Branch
Isotope Extension
U. S. A. E. C.
Washington 25, D. C.

Dear Mr. Miller:

RE: **THE BUDD COMPANY**
**2450 Hunting Park Avenue**
**Philadelphia 32, Pennsylvania**

The personnel named below successfully completed the Health Physics and Safety Program conducted by Nuclear Systems on **July 14, 1950** through **July 16, 1950** at **Philadelphia, Pennsylvania:**

**Emmert M. Baxter**

**James H. Smyth**

This training program was in accordance with the outline which you have on file.

Very truly yours,

Training Director

CFT:pam



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ATOMIC ENERGY COMMISSION - APPLICATION FOR BYPRODUCT MATERIAL LICENSE.

No. 13 - Facilities and Equipment.

The source will be exposed only in a Nuclear Systems Model 30 Iriditron for in-plant radiography. All areas exceeding 5 mr/hr will be roped off and posted with radiation area warning signs. Personnel will be in constant attendance during all exposures.

Survey meters will be used to monitor the area and to determine that the source is returned safely to the Iriditron. The Iriditron and source will be stored in a concrete room in a restricted area with 24 hour guard service.

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ATOMIC ENERGY COMMISSION - APPLICATION FOR BYPRODUCT MATERIAL LICENSE.

14. Radiation Protection Program.

A. The use of the Model 30 Iriditron will be under the direct supervisionof Mr. Herbert D. Van Sciver. In his absence, delegation will be James H. Smyth.

B. Responsibility for the radiation protection program is delegated to Emmert M. Baxter, Industrial Hygiene Engineer.

C. All employees working with the radiography source shall be instructed in the hazards of excessive radiation and in the requirements and limits of CFR Title 10 Part 20 - "Standards for Protection Against Radiation".

D. 1. The model 30 Iriditron shall be operated in accordan e with the operating instructions provided by Nuclear Systems.

2. Before being removed from the storage room, the unit will be monitored with a radiation survey meter and checked to make sure it is locked.

3. All areas where the radiation might exceed 5 mr/hr will be roped off priorto exposure of the source. Standard radiation warning signs and lights will be posted at the limits of the roped off area.

4. When setting up the Iriditron, the source tube and control cable will be as straight as possible in order to provide maximum distance for the operator and ensure proper operation of the unit.

5. Exposure techniques shall be determined prior to unlocking the unit. After unlocking the unit the source is exposed by turning the control handle ina clockwise direction until it stops.

6. The roped off area will be monitored using a Nuclear Chicago Model 2586 Survey Meter immediately upon exposure. If the level is greater than 5 mr/hr, the roped off distance shall be increased until the level is reduced to 5 mr/hr.

7. During exposure, the roped off area must be attended at all times to prevent unauthorized personnel from entering.

8. At completion of exposure, return source to unit by using handle at end of control cable. Check source position indicator on handle to make sure source has returned, then lock unit and remove key.

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14. Radiation Program (Continued)

9. Survey Iriditron. If above 8 mr/hr at 2 feet, establish 10 mr/hr boundaries, post as "Radiation Hazard", and arrange to have unit removed and checked. If below 8 mr/hr at 2 ft. return to storage.

10. The unit must be locked at all times and the key removed except during exposure.

11. The Iriditron will be used only at the Hunting Park Plant.

E. Monitoring Equipment.

1. An operating survey meter shall be carried at all times that the Iriditron is being used.

2. All operating personnel shall wear film badges and dosimeters at all times while handling the Iriditron or X-Ray equipment.

3. The film badges and dosimeters will be turned in daily to Mr. H. D. Van Sciver. Film badges will be forwarded weekly to Mr. Emmert Baxter for processing.

4. Dosimeter readings shall be recorded daily by Mr. H. D. Van Sciver or in his absence by Mr. J. M. Smyth on Form A. A copy of the weekly accumulated dosimeter readings shall be forwarded to Mr. Baxter.

5. Forms AEC-20-1 and AEC-20-2 shall be maintained by Mr. E. Baxter for all personnel using the Iriditron.

F. Storage.

When not in use, the Iriditron will be stored in the Radiography Room in Building L. The room will be kept locked at all times. Keys for the Iriditron and Storage Room will be kept by Mr. Smyth.

G. Emergency Procedures.

In case of any incident with the Iriditron, the unit shall be guarded and personnel kept outside an area exceeding 5 mr/hr and the following personnel immediately notified:

| | During Working Hours | Off Hours |
|---|---|---|
| H. D. Van Sciver | Ext. 7102 | MO 4-0659 |
| J. H. Smyth | Ext. 7104 | IV-2-0180 |
| E. M. Baxter | Ext. 7063 | GR-6-6473 |
| C. Thompson | Ext. 453, 673 | AD 3-2080 |

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14. Radiation Program (Continued)

An incident shall be considered to exist when

1. The source cannot be retracted safely after exposure and locked.

2. Radiation levels at the unit are higher than 8 mr at 2 feet.

3. Any accident to the equipment, such as fire, dropping of unit.

4. Any apparent attempts at tampering of unit.

H. Changing Sources.

The Iridium 192 source shall be changed or removed from the Iriditron only with a Nuclear Systems' source changer in accordance with the operating instructions provided. No one will switch sources unless he has thoroughly read these instructions.

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ATOMIC ENERGY COMMISSION - APPLICATION FOR BYPRODUCT MATERIAL LICENSE.

15. Waste Disposal:

All decayed sources will be returned to Nuclear Systems for disposal.

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THE BUDD COMPANY RESEARCH LABORATORY

Occupational Radiation Exposure

Daily Dosage Report

| Name | Budd Badge No | Film Badge No. | Dates | | | | | | | Total for Week |
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REMARKS:

Signed : _____