



## UNITED STATES RADIUM CORPORATION

4150 OLD BERWICK ROAD / BLOOMSBURG, PA. 17815 / (717) 784-3510

1631

July 15, 1969

Division of Licensing  
UNITED STATES ATOMIC ENERGY COMMISSION  
Washington, D. C. 20545

Attn: Mr. Robert Dube

Dear Sir:

In response to your recent telephone call, I am enclosing  
1) three (3) copies of our new zone definitions, and 2)  
three (3) copies of the emergency operating procedure  
for the Gas Fill System which you requested.

The zone definitions included in this letter preempt all  
preceding zone definitions, including those that were, or  
should have been, included in Mr. Olson's letter of April 24.  
If Mr. Olson's enclosures have come to your attention, please  
replace them with the definitions enclosed with this letter.

With regard to renewal of our License 37-00030-02, we request  
extension of the expiration to July 1, 1970, in order that we  
may continue our decontamination program. We anticipated  
earlier completion of our cleanup, but we have already uncovered  
several areas, hitherto unknown, which will require extensive  
decontamination before release. We are apt to encounter more  
such areas, hence the request for the one-year extension of  
the license.

If further information or clarification is required, I will be  
more than happy to discuss with you any questions or problems  
which arise.

Sincerely yours,

UNITED STATES RADIUM CORPORATION

J. David McGraw  
Radiological Safety Officer

JDMcG  
jrn

Encs.

DUPLICATED  
FOR DIV. OF COMPLIANCE

## 0.0.0 Zone Definitions

Yellow Zone - an area which does not qualify for exemptions from posting under 10 CFR 20.204; and in which contamination levels do not exceed the following limits:

- a) Direct radiation to a major portion of the body not greater than 0.6 mr/hr.
- b) Airborne contamination not greater than the levels stated in 10 CFR 20, Appendix B, Table II.
- c) Fixed alpha contamination not greater than 1000 dpm/100 cm<sup>2</sup>.
- d) Removable alpha contamination not greater than 200 dpm/100 cm<sup>2</sup>.
- e) Removable beta-gamma contamination other than Tritium not greater than 500 dpm/100 cm<sup>2</sup>.
- f) Removable Tritium contamination not greater than 5000 dpm/100 cm<sup>2</sup>.

Magenta Zone - an area in which any of the contamination levels exceed those of a Yellow Zone, but in which the occupants will not be exposed to contamination levels exceeding any of the following limits:

- a) Direct radiation to a major portion of the body not greater than 5 mr/hr.

- b) Airborne contamination not greater than 10 CFR 20 Appendix, Table I.
- c) Fixed alpha contamination not greater than 10,000 dpm/100 cm<sup>2</sup>.
- d) Removable alpha contamination not greater than 2000 dpm/100 cm<sup>2</sup>.
- e) Removable Tritium contamination not greater than 50,000 dpm/100 cm<sup>2</sup>.
- f) Removable beta-gamma contamination not greater than 5000 dpm/100 cm<sup>2</sup>.

Red Zone - any area in which any of the contamination levels exceed those of the limits of a Magenta Zone. Entry to a Red Zone must be authorized by the Health Physicist.

A Red Zone will normally be returned to a lower radiation level status except where a Red Zone may be appropriate for non-occupied storage.

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### 3.0.0 Emergency Operating Procedure For The H-3 Fill System.

In the event of a rupture of a tube while on the manifold, the operator will immediately push the panic button which will initiate a pull back of all tritium onto the storage pots. The operator will then immediately evacuate the area, notify his supervisor and Health Physics, for evacuation of the building. Re-entry into the area will be under Health Physics control.

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