

United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555  
Utah Docket 50-407

Attention: Geoffrey Wertz

**SUBJECT:** Supplement to letter dated November 17<sup>th</sup> 2011: Request for the Amendment to the University of Utah TRIGA Reactor Technical Specification 3.5, Ventilation System, Specification 1, and to TS 4.4, Confinement, Basis

Dear Mr. Wertz:

This supplement letter provides marked-up pages that were omitted in letter dated November 17<sup>th</sup> 2011, and in addition it provides the proposed TS pages as attached.

Sincerely,



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**I declare under penalty of perjury that the foregoing is true and correct.**

Executed on 11/29/11 -----  
Date Signature

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MEL

cc:

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### 3.5 Ventilation System

#### Applicability

This specification applies to the operation of the reactor area ventilation system.

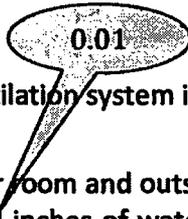
#### Objective

The objective is to assure that the ventilation system shall be in operation to mitigate the consequences of possible releases of radioactive materials resulting from reactor operation.

#### Specifications

The reactor shall not be operated unless the ventilation system is fully operable which is when:

1. The pressure difference between the reactor room and outside of the Merrill Engineering Building is larger than 0.1 inches-of-water.
2. In the event of a substantial release of airborne radioactivity within the reactor area, the ventilation system will be secured or operated in the limited intake mode to prevent the release of a significant quantity of airborne radioactivity from the reactor area.



#### Basis

In the operational mode of the ventilation system, the air in the controlled access area (reactor room area) is constantly being exchanged. The air leaving the facility has a volumetric flow rate of more than 100 CFM per each of the two fume hoods. The result of this is a negative pressure of greater than 0.01 inches of water in the reactor room.

The worst-case maximum total effective dose equivalent is well below the applicable annual limit for individual members of the public and building residents during the maximum hypothetical accident (MHA) (SAR 13.2.1).

## 4.4 Confinement

### Applicability

This specification applies to the reactor confinement.

### Objective

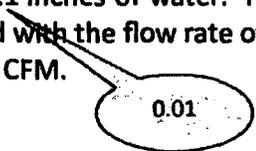
The objective is to assure that air is swept out of confinement and exhausted through a monitored release point (two fume hood systems located at Fuel Inspection area).

### Specification

The ventilation system shall be verified operable in accordance with TS 4.5 monthly.

### Basis

Because the ventilation system is the only equipment required to achieve confinement, operability checks of the ventilation system meet the functional testing requirements for confinement. The pressure difference between the reactor room and outside of the Merrill Engineering Building should be larger than 0.1 inches-of-water. To keep this pressure difference, two fume hoods should be operated with the flow rate of 90 CFM or higher. Current flow rate for two fume hoods are >100 CFM.



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## 3.5 Ventilation System

### Applicability

This specification applies to the operation of the reactor area ventilation system.

### Objective

The objective is to assure that the ventilation system shall be in operation to mitigate the consequences of possible releases of radioactive materials resulting from reactor operation.

### Specifications

The reactor shall not be operated unless the ventilation system is fully operable which is when:

1. The pressure difference between the reactor room and outside of the Merrill Engineering Building is larger than 0.01 inches-of-water.
2. In the event of a substantial release of airborne radioactivity within the reactor area, the ventilation system will be secured or operated in the limited intake mode to prevent the release of a significant quantity of airborne radioactivity from the reactor area.

### Basis

In the operational mode of the ventilation system, the air in the controlled access area (reactor room area) is constantly being exchanged. The air leaving the facility has a volumetric flow rate of more than 100 CFM per each of the two fume hoods. The result of this is a negative pressure of greater than 0.01 inches of water in the reactor room.

The worst-case maximum total effective dose equivalent is well below the applicable annual limit for individual members of the public and building residents during the maximum hypothetical accident (MHA) (SAR 13.2.1).

## 4.4 Confinement

### Applicability

This specification applies to the reactor confinement.

### Objective

The objective is to assure that air is swept out of confinement and exhausted through a monitored release point (two fume hood systems located at Fuel Inspection area).

### Specification

The ventilation system shall be verified operable in accordance with **TS 4.5** monthly.

### Basis

Because the ventilation system is the only equipment required to achieve confinement, operability checks of the ventilation system meet the functional testing requirements for confinement. The pressure difference between the reactor room and outside of the Merrill Engineering Building should be larger than 0.01 inches-of-water. To keep this pressure difference, two fume hoods should be operated with the flow rate of 90 CFM or higher. Current flow rate for two fume hoods are >100 CFM.