

- (3) When the system is required to be operable, the exhaust air downstream of the filters shall be continuously monitored or sampled to show that the specified release rate limits in Specification 3.7.3.2 are not exceeded. If the release rate limits are exceeded, activities causing the release will be discontinued and corrective action taken to ensure further release is within limits.
- (4) The ventilation system shall be capable of maintaining the direction of airflow into the reactor building through any existing pathways open directly to the environs.

3.5.4 Bases

The extremely small source term at the GETR is adequately confined by the reactor building. Whenever restricted activities are in progress, a filtered and monitored ventilation system provides assurance release rates are maintained within limits.

3.6 Emergency Power

Not applicable.

3.7 Radiation Monitoring Systems and Effluents

3.7.1 Applicability

This specification applies to those devices either permanently installed or portable and used to detect radiation and/or contamination levels and to the effluents released through the reactor building ventilation system.

3.7.2 Objective

To describe the minimum radiological instrument capabilities that must be available for use at the reactor facility and to state the airborne radioactivity limits for effluent released through the reactor building ventilation system.

3.7.3 Specifications

3.7.3.1 Monitoring Systems

The radiological instrumentation capability that must be available for use at the reactor facility are given in Table 3-1. These instruments shall perform the following functions.

- (1) Stack Particulate Sampling (Monitoring) System. During performance of restricted activities, the stack effluent shall be continuously monitored or sampled.

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- (2) Airborne Activity Monitors. Mobile and/or stationary continuous air monitors and samplers shall be used as necessary in the reactor building and are located as necessary to support the activities in progress.

Whenever such monitors are inoperable, portable instruments, surveys or analyses may be substituted for any of the normally installed monitors in Section 3.7.3.1 for periods up to 48 hours.

TABLE 3-1

GETR Radiological Instrumentation

a. Portable Instrumentation

<u>Activity Detected</u>	<u>Maximum Range</u>
Beta-Gamma	250 R/h; 1,000 Rad/h
Gamma	1,000 R/h
Beta-Gamma	1,000 R/h; 20,000 Rad/h
Beta-Gamma	70,000 cpm

b. Fixed Instrumentation

	<u>Activity Detected</u>	<u>Maximum Range</u>
Stack Particulate	Beta-Gamma	10^5 cps
CAM's (continuous air monitor)	Beta-Gamma	50,000 cpm

3.7.3.2 Effluents

The limits for radioactive material discharged through the reactor building ventilation system to the atmosphere shall be as specified in Table 3-2.

TABLE 3-2

Isotope Group	Stack Release Rate Limits	
	Annual Average ($\mu\text{Ci/sec}$)	Short-Term ($\mu\text{Ci/sec}$)
Particulate > 8d $T_{\frac{1}{2}}$		
Beta-Gamma	$1.04 \times 10^{11} \text{ MPC}_a / 1400$	$1.04 \times 10^{12} \text{ MPC}_a / 700$
Alpha	$1.04 \times 10^{11} \text{ MPC}_a / 1400$	$1.04 \times 10^{12} \text{ MPC}_a / 700$

where MPC_a = the concentration in $\mu\text{Ci/ml}$ shown in Table II, Appendix B, 10 CFR Part 20.

Liquid effluents exceeding the unconditional release concentration limits of Column 2 of Table II, Appendix B, 10 CFR Part 20 shall ultimately be disposed of as solid waste. When underground tanks are used for storage of liquid effluents, a surveillance program to detect leakage shall be maintained.

3.7.4 Bases

The instrumentation described in 3.7.3.1 will provide assurance that the concentration of airborne radioactive material in the working areas and the stack effluent are measured and that when there is a potential for the creation of high gamma fields as a result of the conduct of restricted activities, the radiation level will be monitored and an alarm actuated if necessary.

The stack release rate limits are based on computer calculated dilution-dispersion factors using two years of site recorded meteorological data.

The above listed annual average contains a reduction factor of 2 to account for discharges from other VNC stacks and a reduction factor of 700 to account for reconcentration in the environs.

3.8 Experiments

Not applicable.

3.9 Facility Specific LCO

Not applicable.

4.5 Ventilation Systems

4.5.1 Applicability

Applies to the reactor building ventilation system.

4.5.2 Objective

To specify surveillance requirements that will provide assurance the reactor ventilation system is operable when required.

4.5.3 Specification

- (1) Particulate filters shall be visually inspected and tested by the standard filter dioctyl phthalate (DOP) or dioctyl sebacate (DOS) efficiency test for 99.97% removal of 0.3 μm particles by the vendor. Each filter shall be visually inspected prior to and after installation and at least annually thereafter.
- (2) A channel calibration of the ventilation effluent sampler or monitor shall be performed prior to placing into service, after major maintenance, and at least annually while in service. A channel check shall be performed monthly while the sampler or monitor is in service. These tests need not be performed if operation of the ventilation system was not required during the year.
- (3) At least annually direction of airflow through pathways open directly to the environs shall be verified to be into the reactor building while the ventilation system is operating. This test also shall be performed prior to the initiation of any restricted activity; it need not be performed if operability of the ventilation system was not required during the year.

4.6 Emergency Power

Not applicable.

4.7 Radiation Monitoring Systems and Effluents

4.7.1 Applicability

This specification applies to the equipment and systems installed to detect radiation and/or contamination, e.g., laboratory counting instruments and portable radiation measuring instrumentation used for the reactor facility.

4.7.2 Objective

To describe check and calibration frequencies of laboratory counting instruments and portable radiation measuring instrumentation.

4.7.3 Specifications

- (1) Portable monitoring instruments shall be calibrated upon initial acquisition, after major maintenance, and at least annually.
- (2) Background and efficiency using standard sources shall be measured at least quarterly on all laboratory instruments used for counting health physics samples.

4.7.4 Bases

These specifications provide assurance that monitoring and analytical instrumentation will be functional when needed.

4.8 Experiments

Not applicable.

4.9 Facility Specific Surveillance

Not applicable.

5.0 Design Features

5.1 Site and Facility Description

The GETR facility shall be located on the site of the Vallecitos Nuclear Center which is owned and controlled by the General Electric Company. The minimum distance from the facility to the posted site boundary shall be approximately 2,800 feet. The restricted area as defined in 10CFR20 of the Commission's regulations shall be the Vallecitos Nuclear Center.

5.2 Reactor Coolant System

Not applicable.

5.3 Reactor Core and Fuel

Not applicable.

5.4 Fissionable Material Storage

Not applicable.

IX. Safety Equipment

A. High Radiation Areas

High radiation areas are posted and controlled as required by 10CFR20.

B. Airborne Radioactivity Sampling

The containment building basement and third floor each have a fixed particulate sampler.

C. Air Supply Systems

The two service air compressors and the breathing air compressor have been turned off.

D. Emergency Systems

GETR accidental criticality alarm system is deactivated.

X. Radiation and Contamination Status

Comprehensive surveys have been made of the GETR. Field dose rate readings and contamination levels are commensurate with the status of the facility. The chief components of the removable contamination are Co-60 and Cs-137. No alpha contamination was detected. The surveys also indicated that there was no migration of removable contamination.

XI. Administrative Controls

A. Organization

Manager, IPO, is responsible for the reactor facility license. He has designated Manager, Engineering & Support Services, as the facility manager, a position required by Technical Specification No. 9.1.1. VNC Nuclear Safety function provides the independent review function required by Technical Specification No. 9.2.1 and radiation protection services and environmental monitoring for the VNC site, including the shut down GETR facility.