



A Subsidiary of RGS Energy Group, Inc.

ROCHESTER GAS AND ELECTRIC CORPORATION • 89 EAST AVENUE, ROCHESTER, N.Y. 14649-0001 • 716 546-2700

www.rge.com

ROBERT C. MECREDDY
Vice President
Nuclear Operations

October 29, 2001

U.S. Nuclear Regulatory Commission
Document Control Desk
Attn: Robert L. Clark
Project Directorate I-1
Washington, D.C. 20555

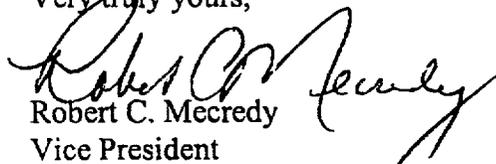
Subject: Supplementary Information Associated with the Control Room Emergency Air Treatment System (CREATS) Actuation Instrumentation Change (LCO 3.3.6) Rochester Gas and Electric Corporation R.E. Ginna Nuclear Power Plant Docket No. 50-244

Reference: Letter from Robert C. Mecreddy (RG&E) to Guy S. Vissing (NRC), "Application for Amendment to Facility Operating License Control Room Emergency Air Treatment System (CREATS) Actuation Instrumentation Change (LCO 3.3.6)", dated May 3, 2000.

Dear Mr. Clark:

In the above Reference, RG&E submitted a proposed change to the Improved Technical Specifications associated with the Control Room Emergency Air Treatment System (CREATS) Actuation Instrumentation requirements. Subsequent to the submittal, as the result of discussions with the NRC staff, RG&E would like to provide the attached additional information associated with the design of the new CREATS Actuation Instrumentation.

Very truly yours,


Robert C. Mecreddy
Vice President
Nuclear Operations Group

Subscribed and sworn to before me
on this 29th day of October, 2001.


Notary Public

SHARON L. MILLER
Notary Public, State of New York
Registration No. 01M18017756
Monroe County
Commission Expires December 21, 2002

A001

1000362

70000600002942579265

Attachment: R.E. Ginna Nuclear Power Plant CREATS Actuation Instrumentation Design Requirements

xc: Mr. Robert L. Clark (Mail Stop O-8-E9)
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Regional Administrator, Region 1
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

U.S. NRC Ginna Senior Resident Inspector

Mr. F. William Valentino, President
New York State Energy, Research, and Development Authority
Corporate Plaza West
286 Washington Avenue Extension
Albany, NY 12203-6399

**R.E. Ginna Nuclear Power Plant
CREATS Actuation Instrumentation Design Requirements**

The R.E. Ginna Nuclear Power Plant new CREATS Actuation Instrumentation radiation monitors are being designed and installed as Safety Related instrumentation. As such, they will include the following Class 1E requirements.

1. **Cable Separation / Isolation / Power Train Separation**

All new circuits (outside of cabinets) for this modification are run in conduit. Each conduit is dedicated to a single train; no conduit carries conductors of both A and B train. All new circuits are Class 1E. Connection of power to the existing, non-Class 1E toxic gas monitoring system is done through qualified fuses to provide electrical isolation. Where the analog output of the ratemeter is connected to the non-Class 1E plant process computer system (PPCS) circuits, safety-related, qualified isolators are used to provide isolation. These design features are consistent with the requirements of IEEE 384-1981 and the Ginna UFSAR Section 8.3.1.4.

The new ratemeters will be installed in the Control Room in the Radiation Monitor System Rack 2 (RMS2), a preferred location for Operator surveillance of this system as all of the other Control Room ratemeters are in these racks. The hand controls and logic devices (relays) for the system are installed in an Auxiliary Benchboard in the rear of the Control Room, consistent with the existing system design. Separation of trains of internal wiring and devices in these cabinets (RMS2 and Auxiliary Benchboard) will be maintained to the extent practicable, but only a minimum physical separation can be maintained where redundant wiring is terminated on a common device, as dictated by operational considerations to maintain redundancy. All wiring is qualified to IEEE 383-1974 flame test, to minimize the possibility of a fault resulting in a fire that would propagate between trains. This is in compliance with the current Ginna licensing basis (UFSAR Section 9.5.1.1.2).

With respect to power train separation, attached is a one-line diagram that illustrates that the power for the two new radiation monitoring systems is fed by independent Class 1E power trains, via our 120 VAC Instrument Power system. Normally supplied by the inverters fed from station DC systems, the system will switch to AC supply with diesel generator backup if required. The Class 1E power trains are addressed in the Ginna Technical Specifications (LCO 3.8.7 and 3.8.9)

2. **Single Failure Criteria / Fail Safe Design**

The attached sketch illustrates the redundant logic and the crossovers between the automatic and manual initiation of isolation to ensure that both trains provide an initiation signal in the event that either train receives a high radiation level or manual initiation.

Loss of power to any component (detector, ratemeter, or control relay), will also result in automatic isolation. Redundant Manual Isolation pushbuttons on the Auxiliary Benchboard will initiate isolation in both control logic trains. Additionally, all of the dampers that are used to isolate the Control Room are in a "fail to isolation" configuration.

3. **Seismic**

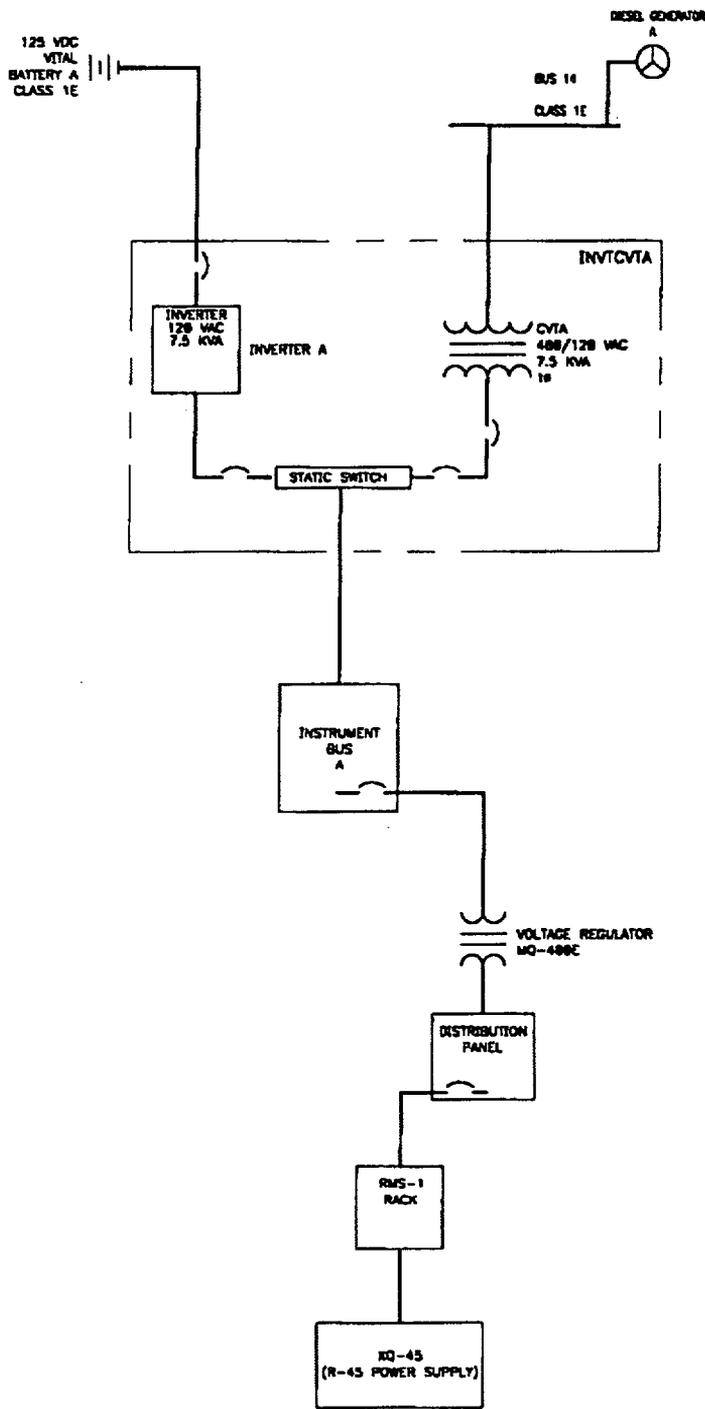
The seismic qualification of the installation in the Turbine Building has been addressed to demonstrate the installation will not be compromised by a seismic-event. The Turbine Building is not classified as a Seismic Category I building, but it was evaluated during the Systematic Evaluation Program (SEP) and bracing was upgraded as part of the Structural Upgrade Program. Portions of existing structures, systems, and components with failure consequences described in position C.2 of Regulatory Guide 1.29 are designed and constructed to seismic requirements specified in the UFSAR (Sections 3.7, 3.8, and 3.10). New structures, systems, and components, and configuration changes meet the design and construction seismic requirements of the UFSAR or Regulatory Guide 1.29. All new equipment has been procured and is being installed to standards to operate during and following a seismic event. A review of the air intake duct and the mounting of the detectors in the duct demonstrate seismic integrity. Where necessary, protection has been installed above critical components to provide protection from damage from falling debris that is not seismically installed in the Turbine Building.

4. **Quality Assurance**

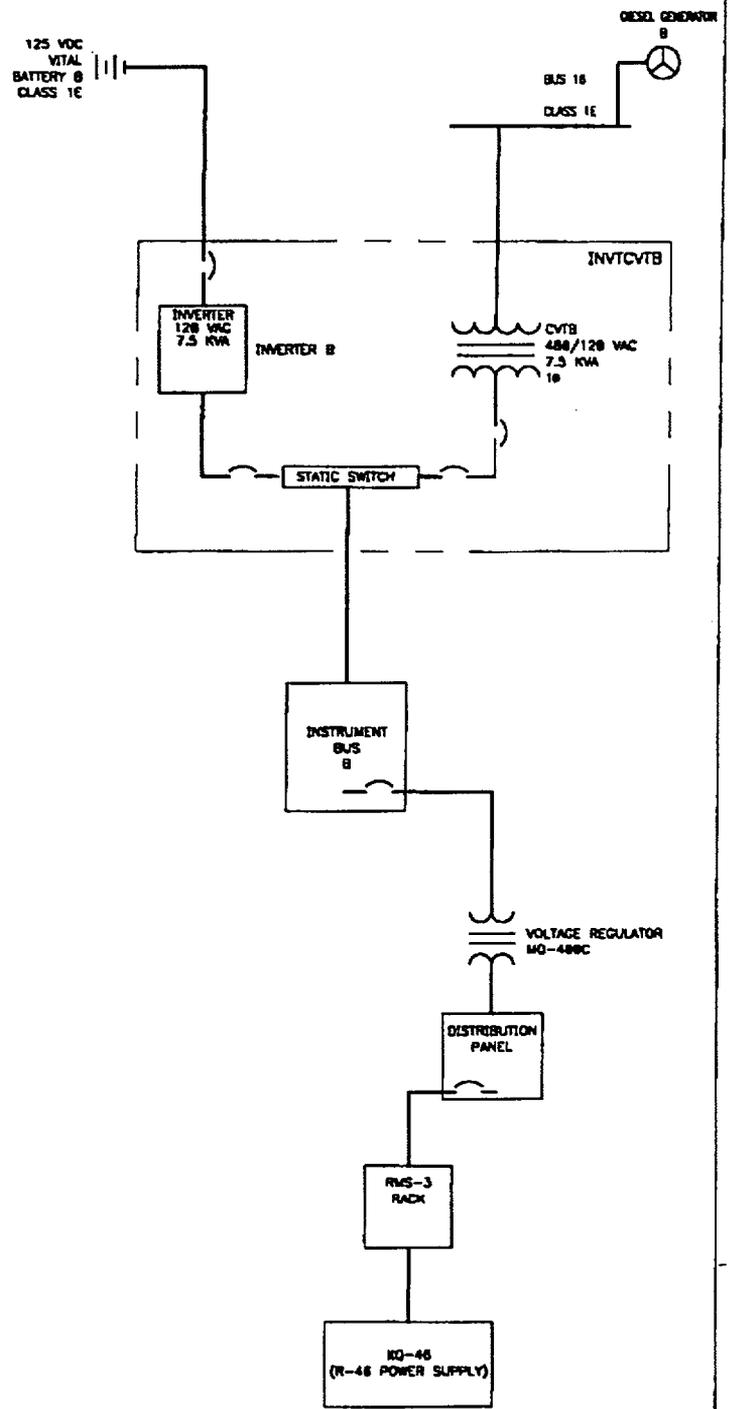
The new CREATS Actuation Instrumentation modification is being performed Safety Related. All components are being procured, installed, and tested per the requirements of the Ginna Station Quality Assurance Program (QAPSO) and Regulatory Guide 1.30.

5. **Instrument Bus Loading**

A modification specific design analysis demonstrates that the additional loading from the new CREATS Actuation Instrumentation modification will remain within the existing margins. Instrument bus loading on the A and C Instrument buses is presently controlled by a detailed design analysis that lists all loads fed by these buses and determines loading margins for all supply equipment. The new radiation monitoring system will have maximum power requirements of 1.98 amps per train. This includes power supplies for the radiation monitoring system, toxic gas system, control relays, signal isolation modules, and indicating lights. This additional load, when added to existing instrument bus loads, is within the ratings of all equipment shown in the attached one-line diagram: panel ratings, breaker ratings of the instrument buses and MQ-400 distribution panels, inverter, and voltage regulating transformers. The analysis performed specific to this modification demonstrates that the changes do not result in exceeding the loading margins.



A TRAIN



B TRAIN

POWER TO CONTROL ROOM
 RADIATION MONITOR R45 & R46
 ONE-LINE DIAGRAM

CR RADIATION INTAKE MONITORING INSTRUMENTATION (PROPOSED)

