UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

July 22, 1981

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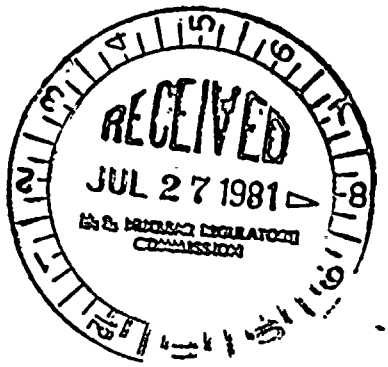
Docket No. 50-244
LS05-81-07-073



Mr. John E. Maier
Vice President
Electric and Steam Production
Rochester Gas & Electric Corp.
89 East Avenue
Rochester, New York 14649

Dear Mr. Maier:

SUBJECT: SEP TOPIC V-5, REACTOR COOLANT PRESSURE BOUNDARY LEAKAGE DETECTION
R.E. GINNA NUCLEAR POWER PLANT

Enclosed is a copy of our revised draft evaluation of SEP Topic V-5 for R.E. Ginna. This assessment compares your facility, as described in Docket No. 50-244, with the criteria currently used by the regulatory staff for licensing new facilities. This revised draft evaluation factors in the information contained in your March 23, 1981 letter on this subject, and pertinent information contained in SEP Topic V-10.A and available 10 CFR 50, Appendix I submittals for R.E. Ginna. Please inform us within 30 days whether or not your as-built facility differs from the licensing basis assumed in our assessment.

This evaluation will be a basic input to the integrated safety assessment for your facility unless you identify changes needed to reflect the as-built conditions at your facility. This assessment may be revised in the future if your facility design is changed or if NRC criteria relating to this subject are modified before the integrated assessment is completed.

Sincerely,

Dennis M. Crutchfield, Chief
Operating Reactors Branch No. 5
Division of Licensing

Add: Gary Stanley - ICY

Enclosure:
SEP Topic V-5

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cc w/enclosure:
See next page

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R.E. GINNA

SYSTEMATIC EVALUATION PROGRAM TOPIC V-5

REACTOR COOLANT PRESSURE
BOUNDARY (RCPB) LEAKAGE DETECTION

I. Introduction

The safety objective of Topic V-5 is to determine the reliability and sensitivity of the leak detection systems which monitor the reactor coolant pressure boundary to identify primary system leaks at an early stage before failures occur.

II. Review Criteria

The acceptance criteria for the detection of leakage from the reactor coolant pressure boundary is stated in the General Design Criteria of Appendix A, 10 CFR Part 50. Criterion 30, "Quality of Reactor Coolant Pressure Boundary," requires that means shall be provided for detecting and, to the extent practical, identifying the location of the source of leakage in the reactor coolant pressure boundary.

III. Review Guidelines

The acceptance criteria are described in the Nuclear Regulatory Commission Standard Review Plan Section 5.2.5, "Reactor Coolant Pressure Boundary Leakage Detection." The areas of the Safety Analysis Report and Technical Specifications are reviewed to establish that information submitted by the licensee is in compliance with Regulatory Guide 1.45, "Reactor Coolant Pressure Boundary Leakage Detection Systems."

IV. Evaluation

Safety Topic V-5 was evaluated in this review for compliance of the information submitted by the licensee with Regulatory Guide 1.45, "Reactor Coolant Pressure Boundary Leakage Detection Systems." The information in the Safety Analysis Report, Technical Specifications, the January 30, 1979 letter from RG&E to the NRC regarding SEP Topic V-10.A, the March 23, 1981 letter from RG&E to the NRC regarding SEP Topic V-5, and the available 10 CFR 50, Appendix I review information for R.E. Ginna was reviewed. Regulatory Guide 1.45 requires that at least three separate detection systems be installed in a nuclear power plant to detect an unidentified leakage from the reactor coolant pressure boundary to the primary containment of one gallon per minute within one hour. Leakage from identified sources must be isolated so that the flow rates may be monitored separately from unidentified leakage. The detection systems should be capable of performing their functions following certain seismic events and capable of being checked in the control room. Of the three separate leak detection methods required, two of the methods should be (1) sump level and flow monitoring and (2) airborne particulate radioactivity monitoring. The third method may be either monitoring of condensate flow rate from air coolers or monitoring

of airborne gaseous radioactivity. Other detection methods, such as humidity, temperature and pressure, should be considered to be alarms of indirect indication of leakage to the containment. In addition, provisions should be made to monitor systems interfacing with the reactor coolant pressure boundary for signs of intersystem leakage through methods such as radioactivity and water level or flow monitors. Plant incorportated systems and their corresponding features are tabulated in Enclosure 1. Detailed guidance for the leakage detection system is contained in Regulatory Guide 1.45.

Based upon our review of the referenced documents and the summaries presented in Enclosure 1, we have determined:

1) The systems employed for the detection of leakage from the reactor coolant pressure boundary to the containment consist of the minimum three required by Regulatory Guide 1.45 plus seven additional systems. All systems meet the criteria set forth for such as delineated in the guide. (See Table 1 of Enclosure 1.) However, the sensitivities of the leak detection systems are not properly reflected in the current Basis for Technical Specifications 3.1.5.3. Also, all leak detection systems which are present are not discussed in this Basis.

2) Provisions are made to monitor reactor coolant in-leakage to those systems listed in Table 2 of Enclosure 1. However, from the review of the referenced information it is not clear that this table includes all systems which interface with the reactor coolant pressure boundary. In addition, information concerning the leak detection methods, similar to that given for the detection systems in Table 1 of Enclosure 1, is incomplete for those in Table 2.

3) The March 23, 1981 letter from RG&E to the NRC regarding Topic V-5 indicates that CVCS Makeup Flowrate is included as a Plant Incorporated System for leak detection, however, information regarding this method is not given such that Table 3 of Enclosure 1 is incomplete.

4) The Ginna Technical Specification 3.1.5.3 does impose requirements concerning the operability of the leakage detection systems to monitor leakage to the primary containment, as required by Regulatory Guide 1.45. However, this does not conform to those given in current Standard Technical Specification 3/4.4.6. In addition, corresponding surveillance requirements in the Standard Technical Specifications are not contained in the Ginna Technical Specifications.

V. Conclusions

1) The leakage detection systems incorporated for measurement of leakage from the reactor coolant pressure boundary to the containment are in conformance with Regulatory Guide 1.45 criteria and therefore acceptable.

2) Standard Technical Specification 3/4.4.6 and the corresponding surveillance requirements concerning the operability of the reactor coolant pressure boundary to the containment leakage detection systems should be added to the R.E. Ginna Technical Specifications. Also, the current Basis for Ginna Technical Specification 3.1.5.3 and FSAR should be revised to state that the sensitivities of the reactor coolant pressure boundary to containment leakage detection systems are 1 gpm within 1 hour.

3) Information concerning the leakage detection systems for the detection of inter-system reactor coolant pressure boundary leakage and the CVCS Makeup Flowrate is incomplete. Therefore, we cannot determine the extent to which Regulatory Guide 1.45 is met. The necessity for any modifications in this area will be considered during the integrated safety assessment.

REACTOR COOLANT PRESSURE BOUNDARY LEAKAGE DETECTION SYSTEMS
Regulatory Guide 1.45 Requirements

Table 1: Plant: R. E. Ginna

RCPB to Containment System	Incorporated	Leak Rate Sensitivity	Time Req'd to Achieve Sensitivity	Earthquake For Which Function Is Assured	Control Room Indication For Alarms & Indicators	Documentation Reference **	Testable During Normal Operation
1) Sump Level Monitoring (Inventory)	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
2) Sump Pump Actuations Monitoring (Time Meters)	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
3) Airborne Particulate Radioactivity Monitoring	Yes	*1 gpm	1 hr.	SSE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
4) Airborne Gaseous Radioactivity Monitoring	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
5) Condensated Flow Rate from Air Coolers	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
6) Containment Atmosphere Pressure Monitoring	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
7) Containment Atmosphere Humidity Monitoring	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
8) Containment Atmosphere Temperature Monitoring	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
9) Accoustic Emissions (Portable UT Detectors)	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
10) Moisture Sensitive Tape							
11) Air Conditioner Coolant Temperature Rise	Yes	1 gpm	1 hr.	OBE	Yes	3/25/81 RG&E ltr. to NRC RE: Topic V-5	Yes

* .013 gpm within twenty minutes assuming the presence of corrosion product activity per Technical Specifications 3.1.5.3

** Discussions regarding instrumentation are also contained in the RG&E response to question 7.a contained in "Supplement 1 to Technical Supplement Accompanying Application for a Full-Term Operating License", dated December 20,1973.

REACTOR COOLANT PRESSURE BOUNDARY LEAKAGE DETECTION SYSTEMS
Regulatory Guide 1.45 Requirements

Table 2:

Plant: R.E. Ginna

Intersystem Leakage Systems Which Interface w/ RCPB	Methods to Measure RCPB In-Leakage	Leak Rate Sensitivity	Time Req'd to Achieve Sensitivity	Earthquake For Which Function Is Assured	Control Room Indication For Alarms & Indicators	Documentation Reference	Testable During Normal Operation
1) Secondary System	Condenser Air Ejector Rad. Monitor				Yes	FSAR Section 11.2	
2) Secondary Section	Liquid Sample Rad. Monitor				Yes	FSAR Section 11.2	
3) Component Cooling Water System	Surge Tank Level				Yes	1/30/79 RG&E ltr. to NRC RE: V-10.A	
4) Component Cooling Water System	Rad. Monitor				Yes	1/30/79 RG&E ltr. to NRC RE: V-10.A	
5)							
6)							
7)							
8)							
9)							
10)							
11)							
12)							

REACTOR COOLANT PRESSURE BOUNDARY LEAKAGE DETECTION SYSTEMS
Regulatory Guide 1.45 Requirements

Table 3: Plant: R.E. Ginna

RCS Inventory Balance

Leak Rate Sensitivity	.25 gpm						
Corresponding Time Required to Achieve Sensitivity							

*Normal Inventory Check

Instrumentation Required with Corresponding Location:

Earthquake For Which Instrumentation Hardware Functioning Is Assured:

Testable During Normal Operation:

Documentation Reference: Technical Specification 3.1.5.3

REACTOR COOLANT PRESSURE BOUNDARY LEAKAGE DETECTION SYSTEMS
Regulatory Guide 1.45 Requirements

Plant: R. E. Ginna

Table 1:

RCPB to Containment System	Incorporated	Leak Rate Sensitivity	Time Req'd to Achieve Sensitivity	Earthquake For Which Function Is Assured	Control Room Indication For Alarms & Indicators	Documentation Reference **	Testable During Normal Operation
1) Sump Level Monitoring (Inventory)	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
2) Sump Pump Actuations Monitoring (Time Meters)	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
3) Airborne Particulate Radioactivity Monitoring	Yes	*1 gpm	1 hr.	SSE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
4) Airborne Gaseous Radioactivity Monitoring	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
5) Condensated Flow Rate from Air Coolers	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
6) Containment Atmosphere Pressure Monitoring	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
7) Containment Atmosphere Humidity Monitoring	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
8) Containment Atmosphere Temperature Monitoring	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
9) Accoustic Emissions (Portable UT Detectors)	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
10) Moisture Sensitive Tape							
11) Air Conditioner Coolant Temperature Rise	Yes	1 gpm	1 hr.	OBE	Yes	3/25/81 RG&E ltr. to NRC RE: Topic V-5	Yes

* .013 gpm within twenty minutes assuming the presence of corrosion product activity per Technical Specifications 3.1.5.3

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REACTOR COOLANT PRESSURE BOUNDARY LEAKAGE DETECTION SYSTEMS
Regulatory Guide 1.45 Requirements

Table 2:

Plant: R.E. Ginna

Intersystem Leakage Systems Which Interface w/ RCPB	Methods to Measure RCPB In-Leakage	Leak Rate Sensitivity	Time Req'd to Achieve Sensitivity	Earthquake For Which Function Is Assured	Control Room Indication For Alarms & Indicators	Documentation Reference	Testable During Normal Operation
1) Secondary System	Condenser Air Ejector Rad. Monitor				Yes	FSAR Section 11.2	
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4) Component Cooling Water System	Rad. Monitor				Yes	1/30/79 RG&E ltr. to NRC RE: V-10.A	
5)							
6)							
7)							
8)							
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11)							
12)							

REACTOR COOLANT PRESSURE BOUNDARY LEAKAGE DETECTION SYSTEMS
Regulatory Guide 1.45 Requirements

Table 3:

Plant: R.E. Ginna

RCS Inventory Balance

Leak Rate Sensitivity	.25 gpm						
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Instrumentation Required with Corresponding Location:

Earthquake For Which Instrumentation Hardware Functioning Is Assured:

Testable During Normal Operation:

Documentation Reference: Technical Specification 3.1.5.3

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SUBJECT: Forwards revised draft evaluation of SEP Topic V-5,rel RCPB leakage detection.Leakage detection sys is acceptable.

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add: Gary Staley - 1 cy

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

July 22, 1981

Docket No. 50-244
LS05-81-07-073

Mr. John E. Maier
Vice President
Electric and Steam Production
Rochester Gas & Electric Corp.
89 East Avenue
Rochester, New York 14649

Dear Mr. Maier:

SUBJECT: SEP TOPIC V-5, REACTOR COOLANT PRESSURE BOUNDARY LEAKAGE DETECTION
R.E. GINNA NUCLEAR POWER PLANT

Enclosed is a copy of our revised draft evaluation of SEP Topic V-5 for R.E. Ginna. This assessment compares your facility, as described in Docket No. 50-244, with the criteria currently used by the regulatory staff for licensing new facilities. This revised draft evaluation factors in the information contained in your March 23, 1981 letter on this subject, and pertinent information contained in SEP Topic V-10.A and available 10 CFR 50, Appendix I submittals for R.E. Ginna. Please inform us within 30 days whether or not your as-built facility differs from the licensing basis assumed in our assessment.

This evaluation will be a basic input to the integrated safety assessment for your facility unless you identify changes needed to reflect the as-built conditions at your facility. This assessment may be revised in the future if your facility design is changed or if NRC criteria relating to this subject are modified before the integrated assessment is completed.

Sincerely,

Richard L. Baird for

Dennis M. Crutchfield, Chief
Operating Reactors Branch No. 5
Division of Licensing

Enclosure:
SEP Topic V-5

cc w/enclosure:
See next page

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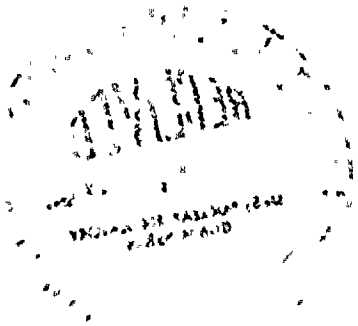

R.E. GINNA

SYSTEMATIC EVALUATION PROGRAM TOPIC V-5

REACTOR COOLANT PRESSURE
BOUNDARY (RCPB) LEAKAGE DETECTION

I. Introduction

The safety objective of Topic V-5 is to determine the reliability and sensitivity of the leak detection systems which monitor the reactor coolant pressure boundary to identify primary system leaks at an early stage before failures occur.

II. Review Criteria

The acceptance criteria for the detection of leakage from the reactor coolant pressure boundary is stated in the General Design Criteria of Appendix A, 10 CFR Part 50. Criterion 30, "Quality of Reactor Coolant Pressure Boundary," requires that means shall be provided for detecting and, to the extent practical, identifying the location of the source of leakage in the reactor coolant pressure boundary.

III. Review Guidelines

The acceptance criteria are described in the Nuclear Regulatory Commission Standard Review Plan Section 5.2.5, "Reactor Coolant Pressure Boundary Leakage Detection." The areas of the Safety Analysis Report and Technical Specifications are reviewed to establish that information submitted by the licensee is in compliance with Regulatory Guide 1.45, "Reactor Coolant Pressure Boundary Leakage Detection Systems."

IV. Evaluation

Safety Topic V-5 was evaluated in this review for compliance of the information submitted by the licensee with Regulatory Guide 1.45, "Reactor Coolant Pressure Boundary Leakage Detection Systems." The information in the Safety Analysis Report, Technical Specifications, the January 30, 1979 letter from RG&E to the NRC regarding SEP Topic V-10.A, the March 23, 1981 letter from RG&E to the NRC regarding SEP Topic V-5, and the available 10 CFR 50, Appendix I review information for R.E. Ginna was reviewed. Regulatory Guide 1.45 requires that at least three separate detection systems be installed in a nuclear power plant to detect an unidentified leakage from the reactor coolant pressure boundary to the primary containment of one gallon per minute within one hour. Leakage from identified sources must be isolated so that the flow rates may be monitored separately from unidentified leakage. The detection systems should be capable of performing their functions following certain seismic events and capable of being checked in the control room. Of the three separate leak detection methods required, two of the methods should be (1) sump level and flow monitoring and (2) airborne particulate radioactivity monitoring. The third method may be either monitoring of condensate flow rate from air coolers or monitoring

of airborne gaseous radioactivity. Other detection methods, such as humidity, temperature and pressure, should be considered to be alarms of indirect indication of leakage to the containment. In addition, provisions should be made to monitor systems interfacing with the reactor coolant pressure boundary for signs of intersystem leakage through methods such as radioactivity and water level or flow monitors. Plant incorportated systems and their corresponding features are tabulated in Enclosure 1. Detailed guidance for the leakage detection system is contained in Regulatory Guide 1.45.

Based upon our review of the referenced documents and the summaries presented in Enclosure 1, we have determined:

1) The systems employed for the detection of leakage from the reactor coolant pressure boundary to the containment consist of the minimum three required by Regulatory Guide 1.45 plus seven additional systems. All systems meet the criteria set forth for such as delineated in the guide. (See Table 1 of Enclosure 1.) However, the sensitivities of the leak detection systems are not properly reflected in the current Basis for Technical Specifications 3.1.5.3. Also, all leak detection systems which are present are not discussed in this Basis.

2) Provisions are made to monitor reactor coolant in-leakage to those systems listed in Table 2 of Enclosure 1. However, from the review of the referenced information it is not clear that this table includes all systems which interface with the reactor coolant pressure boundary. In addition, information concerning the leak detection methods, similar to that given for the detection systems in Table 1 of Enclosure 1, is incomplete for those in Table 2.

3) The March 23, 1981 letter from RG&E to the NRC regarding Topic V-5 indicates that CVCS Makeup Flowrate is included as a Plant Incorporated System for leak detection, however, information regarding this method is not given such that Table 3 of Enclosure 1 is incomplete.

4) The Ginna Technical Specification 3.1.5.3 does impose requirements concerning the operability of the leakage detection systems to monitor leakage to the primary containment, as required by Regulatory Guide 1.45. However, this does not conform to those given in current Standard Technical Specification 3/4.4.6. In addition, corresponding surveillance requirements in the Standard Technical Specifications are not contained in the Ginna Technical Specifications.

V. Conclusions

1) The leakage detection systems incorporated for measurement of leakage from the reactor coolant pressure boundary to the containment are in conformance with Regulatory Guide 1.45 criteria and therefore acceptable.

2) Standard Technical Specification 3/4.4.6 and the corresponding surveillance requirements concerning the operability of the reactor coolant pressure boundary to the containment leakage detection systems should be added to the R.E. Ginna Technical Specifications. Also, the current Basis for Ginna Technical Specification 3.1.5.3 and FSAR should be revised to state that the sensitivities of the reactor coolant pressure boundary to containment leakage detection systems are 1 gpm within 1 hour.

3) Information concerning the leakage detection systems for the detection of inter-system reactor coolant pressure boundary leakage and the CVCS Makeup Flowrate is incomplete. Therefore, we cannot determine the extent to which Regulatory Guide 1.45 is met. The necessity for any modifications in this area will be considered during the integrated safety assessment.

REACTOR COOLANT PRESSURE BOUNDARY LEAKAGE DETECTION SYSTEMS
Regulatory Guide 1.45 Requirements

Plant: R. E. Ginna

Table 1:

RCPB to Containment

System	Incorporated	Leak Rate Sensitivity	Time Req'd to Achieve Sensitivity	Earthquake For Which Function Is Assured	Control Room Indication For Alarms & Indicators	Documentation Reference **	Testable During Normal Operation
1) Sump Level Monitoring (Inventory)	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
2) Sump Pump Actuations Monitoring (Time Meters)	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
3) Airborne Particulate Radioactivity Monitoring	Yes	*1 gpm	1 hr.	SSE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
4) Airborne Gaseous Radioactivity Monitoring	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
5) Condensated Flow Rate from Air Coolers	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
6) Containment Atmosphere Pressure Monitoring	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
7) Containment Atmosphere Humidity Monitoring	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
8) Containment Atmosphere Temperature Monitoring	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
9) Accoustic Emissions (Portable UT Detectors)	Yes	1 gpm	1 hr.	OBE	Yes	3/23/81 RG&E ltr. to NRC RE: Topic V-5	Yes
10) Moisture Sensitive Tape							
11) Air Conditioner Coolant Temperature Rise	Yes	1 gpm	1 hr.	OBE	Yes	3/25/81 RG&E ltr. to NRC RE: Topic V-5	Yes

* .013 gpm within twenty minutes assuming the presence of corrosion product activity per Technical Specifications 3.1.5.3

** Discussions regarding instrumentation are also contained in the RG&E response to question 7.a contained in "Supplement 1 to Technical Supplement Accompanying Application for a Full-Term Operating License", dated December 20,1973.

REACTOR COOLANT PRESSURE BOUNDARY LEAKAGE DETECTION SYSTEMS
Regulatory Guide 1.45 Requirements

Table 2:

Plant: R.E. Ginna

Intersystem Leakage Systems Which Interface w/ RCPB	Methods to Measure RCPB In-Leakage	Leak Rate Sensitivity	Time Req'd to Achieve Sensitivity	Earthquake For Which Function Is Assured	Control Room Indication For Alarms & Indicators	Documentation Reference	Testable During Normal Operation
1) Secondary System	Condenser Air Ejector Rad. Monitor				Yes	FSAR Section 11.2	
2) Secondary Section	Liquid Sample Rad. Monitor				Yes	FSAR Section 11.2	
3) Component Cooling Water System	Surge Tank Level				Yes	1/30/79 RG&E ltr. to NRC RE: V-10.A	
4) Component Cooling Water System	Rad. Monitor				Yes	1/30/79 RG&E ltr. to NRC RE: V-10.A	
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7)							
8)							
9)							
10)							
11)							
12)							

REACTOR COOLANT PRESSURE BOUNDARY LEAKAGE DETECTION SYSTEMS
Regulatory Guide 1.45 Requirements

Table 3:

Plant: R.E. Ginna

RCS Inventory Balance

Leak Rate Sensitivity	.25 gpm						
Corresponding Time Required to Achieve Sensitivity							

*Normal Inventory Check

Instrumentation Required with Corresponding Location:

Earthquake For Which Instrumentation Hardware Functioning Is Assured:

Testable During Normal Operation:

Documentation Reference: Technical Specification 3.1.5.3