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J. T. Beckham, Jr.
Vice President - Nuclear
Hatch Project

Georgia Power
the southern electric system

Docket No. 50-366

October 1, 1993

HL-2983
005123

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Edwin I. Hatch Nuclear Plant - Unit 2
Request to Revise Technical Specifications:
Increase in Allowable MSIV Leakage Rate and
Deletion of the MSIV Leakage Control System

Gentlemen:

In accordance with the provisions of 10 CFR 50.90, as required by 10 CFR 50.59(c)(1) Georgia Power Company (GPC) hereby proposes changes to the Plant Hatch Unit 2 Technical Specifications, Appendix A to Operating License NPF-5. The proposed Technical Specifications changes increase the allowable MSIV leakage and delete the requirements for an MSIV leakage control system (LCS).

Georgia Power Company proposes to utilize the main steam drain lines and the main condenser as an alternate MSIV leakage treatment method. While certain main steam piping and components are not currently classified as Seismic Category I, a detailed evaluation indicates that the main steam system piping and equipment are seismically rugged and satisfy the intent of Appendix A to 10 CFR 100 for seismic adequacy.

Specifically, the following Technical Specifications changes have been included in this proposed amendment:

The allowable leakage rate specified in Technical Specification 3.6.1.2.c and the associated Action condition are being increased from 11.5 standard cubic feet per hour (scfh) for any MSIV to 100 scfh for any MSIV. Any MSIV with a leakage exceeding 100 scfh would be restored to 1.5 scfh.

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1/1

2. Technical Specification 3/4 6.1.4 and Bases section 3/4.6.1.4 are being deleted to reflect the elimination of the LCS. GPC proposes to replace the MSIV LCS function with the more reliable main steam drain lines and the main condenser. It has been demonstrated that utilization of the main steam drain lines and the condenser as an alternate method for MSIV leakage treatment is more effective than the MSIV LCS in terms of reliability, and presents no undue risk to public health and safety.

3. The LCS isolation valves are being deleted from Technical Specifications Table 3.6.3-1. The LCS lines which connect to the main steam lines will be disconnected and permanently closed to preserve containment integrity.

4. The Technical Specifications Index and pages containing Technical Specifications 3/4.6.1.2 (and associated Actions) and 3/4.6.1.4, and Bases section 3/4.6.1.4 are being revised to rearrange the sections and page numbers as appropriate. In addition, an editorial change unrelated to proposed changes 1 through 4 revises Index page XII to reflect that Bases section 3/4.6.3 is on page B 3/4 6-4b rather than page B 3/4 6-4.

These proposed Technical Specifications changes are supported by work performed by the Boiling Water Reactor Owners' Group, with GPC participation. This work is documented in General Electric Company Report, NEDC-31858P, Rev. 1, entitled "BWROG Report for Increasing MSIV Leakage Rate Limits and Elimination of Leakage Control Systems." Please note that this submittal does not contain a request for a Plant Hatch Unit 1 Technical Specifications change to increase the MSIV leakage from 11.5 to 100 scfh. Since this submittal was complicated by the deletion of the Unit 2 MSIV LCS, which is not included in the design of Unit 1, it was determined that separate submittals should be made for Unit 1 and Unit 2.

Enclosure 1 provides detailed descriptions of the proposed changes and the justification for the change requests. Enclosure 2 details the bases for GPC's determination that the proposed changes do not involve significant hazards considerations, and Enclosure 3 provides page change instructions for incorporating the proposed changes. The proposed changed Technical Specifications pages, along with a marked-up copy of the current Technical Specifications pages, follow Enclosure 3.

Georgia Power

To allow time for procedural revisions, orderly incorporation of the changes into copies of the Technical Specifications, and completion of the plant modification to remove the LCS, GPC requests the proposed amendment, once approved by the NRC, be made effective on the date of issuance but the license condition be made effective 60 days after the date of issuance. GPC also requests the LCS hardware modifications associated with the amendment be implementable prior to startup following the next Unit 2 refueling outage scheduled to begin in March 1994. In order to assure completion of the LCS hardware modifications during that outage, NRC approval of the proposed Technical Specifications changes must be received by February 15, 1994. Other outage activities currently being planned could be impacted by a delay in the NRC review and approval of the proposed changes.

In accordance with the requirements of 10 CFR 50.91, a copy of this letter and all applicable enclosures will be sent to Mr. J. D. Tanner of the Environmental Protection Division of the Georgia Department of Natural Resources.

Mr. J. T. Beckham, Jr. states he is a Vice President of Georgia Power Company and is authorized to execute this oath on behalf of Georgia Power Company, and to the best of his knowledge and belief, the facts set forth in this letter are true.

Sincerely,

J. T. Beckham, Jr.

Sworn to and subscribed before me this 1st day of October 1993.

Elaine E. Bolton
Notary Public

My Commission Expires: Aug. 8, 1995

KWW/MCM/cr
005123

Reference: (See next page.)

Georgia Power

U.S. Nuclear Regulatory Commission
October 1, 1993

Reference:
NEDC-31858P, "BWROG Report for Increasing MSIV Leakage Rate Limits and Elimination of Leakage Control System," Rev. 1.

Enclosures:
1. Basis for Change Request
2. 10 CFR 50.92 Evaluation
3. Page Change Instructions

cc: Georgia Power Company
Mr. H. L. Sumner, General Manager - Nuclear Plant
NORMS

U.S. Nuclear Regulatory Commission, Washington, D.C.
Mr. K. Jabbour, Licensing Project Manager - Hatch

U.S. Nuclear Regulatory Commission, Region II
Mr. S. D. Ebneter, Regional Administrator
Mr. L. D. Wert, Senior Resident Inspector - Hatch

State of Georgia
Mr. J. D. Tanner, Commissioner - Department of Natural Resources

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Enclosure 1

Edwin I. Hatch Nuclear Plant - Unit 2
Request to Revise Technical Specifications:
Increase in Allowable MSIV Leakage Rate and
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Basis for Change Request

Proposed Change 1

This proposed change revises Technical Specification 3.6.1.2.c to increase the allowable main steam isolation valve (MSIV) leakage from "11.5 scf per hour for any one main steam isolation valve when tested at 28.8 psig" to "100 scf per hour for any one main steam isolation valve when tested at 28.8 psig." The proposed change also changes the associated Action for Technical Specification 3.6.1.2 from "11.5 scf per hour for any one MSIV" to "100 scf per hour for any one MSIV." If the leakage for any MSIV exceeds 100 standard cubic feet per hour (scfh), it will be restored to 11.5 scfh.

Basis for Proposed Change 1

The current Technical Specifications allowable MSIV leakage rate is extremely limiting and routinely requires repair and retest of the MSIVs. This significantly impacts the maintenance work load during plant outages and contributes to outage extensions. The outage planning group at Plant Hatch typically schedules several days of contingency for repair and retest of the MSIVs. The proposed increase in the allowable MSIV leakage would reduce the need for repair and, thereby, reduce dose exposures to maintenance personnel consistent with As Low As Reasonably Achievable principles. Finally, there have been many Licensee Event Reports (LERs) written within the industry for MSIV leakage which fails to meet the current Technical Specifications limit including a number for Plant Hatch. The generation of such LERs represents a needless expenditure of resources which could be better spent on issues of greater safety significance.

Failures of MSIVs to meet the current Technical Specifications leakage limit have been documented in response to surveys conducted by the NRC during the early 1980s and by the Boiling Water Reactor Owners' Group (BWROG) during the middle and late 1980s. As many as 50 percent of the total "as found" MSIV local leak rate test (LLRT) results were reported in the early NRC survey to exceed the leakage rate limit.

The BWROG, with Georgia Power Company (GPC) participation, studied the issues regarding MSIV leakage rates, their causes, and available alternatives. The results of the BWROG study are provided in NEDC-31858P, "BWROG Report for Increasing MSIV Leakage Rate Limits and Elimination of Leakage Control Systems," Revision 1 and are also summarized in NUREG-1169. In response

to Generic Issue C-8, "MSIV Leakage and LCS failure," the BWROG has recommended corrective actions and maintenance practices to reduce the MSIV leakage rates.

A survey conducted by the BWROG of MSIV LLRT results between 1984 and 1988 indicated the implementation of industry and BWROG actions has been effective in reducing the MSIV leakage rates. Of key importance was the reduction in the number of valves which experienced substantially high leakage rates. However, the survey also concluded about 23 percent of the total "as found" MSIV leakage rates still exceeded the limit of 11.5 scfh and about 10 percent exceeded 100 scfh. The MSIV leakage performance at Plant Hatch is representative of the generic MSIV leakage data collected by the NRC and the BWROG.

Despite the improvement in leakage performance, MSIV leakage rates still frequently exceed the current Technical Specifications limit and the resultant maintenance problems, although less severe, remain as a significant issue. Furthermore, based on extensive evaluation of valve leakage data, the BWROG has found disassembling and refurbishing the MSIVs to meet very low leakage limits frequently contributes to repeating failures. In most cases, machining of the valve seat is required to reduce the leakage to an acceptable level. Each time the seat is machined, the thickness is reduced, leading to earlier than necessary seat replacement. Disassembly and assembly also cause wear on the various components removed and replaced. By not having to disassemble the valves and refurbish them for minor leakage, the utility may avoid introducing one of the root causes of recurring valve leakage problems which lead to later LLRT failures and the possibility of compromising plant safety.

The current Technical Specifications allowable MSIV leakage rate (11.5 scfh) is excessively conservative considering the valve's physical size and operating characteristics (large size and fast-acting). Additionally, the existing turbine building equipment was not considered at the time the leakage limit was established. Based on the in-depth evaluation of MSIV leakages, the BWROG has concluded leakage rates up to 500 scfh are not indicative of substantial mechanical defects in the valves which would challenge the capability of the valves to fulfill their safety function of isolating the steam lines. Furthermore, valve manufacturers have stated leakage rates up to 200 scfh can occur without having a major valve defect. Therefore, the proposed increase from 11.5 scfh per MSIV to 100 scfh per MSIV will not affect the MSIV's isolation function performance. Additionally, processing the post LOCA releases through the steam line drains and the condenser is highly effective, resulting in no significant impact on the health and safety of the public.

This proposed increase in the allowable MSIV leakage rate provides a more realistic, but still conservative, limit for the MSIVs. Based on the BWROG study, the proposed increase in the allowable leakage rate will increase the chance for successful LLRT results to greater than 90 percent, up from the 77 percent success rate at the current limit of 11.5 scfh. At Plant Hatch, the increase in successful local leak rate testing will significantly reduce MSIV maintenance cost, reduce dose exposure to maintenance personnel, reduce outage durations, extend the effective service life of the MSIVs, and minimize the potential for outage extensions.

New control room, technical support center (TSC) and offsite doses have recently been recalculated for a postulated loss of coolant accident (LOCA), as described under the justification for Change 2 on Page E1-7. Those new doses are presented in Table 1. The radiological dose methodology developed by General Electric (GE) for the BWROG was used to calculate the effects of the 100 scfh MSIV leakage rate. The revised LOCA doses are the sum of the recalculated doses and the newly calculated MSIV leakage doses as shown in Table 2. These analyses demonstrate that an MSIV leakage rate of 100 scfh per MSIV results in acceptable dose exposures for the control room, TSC, and offsite boundaries.

Proposed Change 2

This proposed change deletes Technical Specification 3/4.6.1.4 and Bases section 3/4.6.1.4 and permits elimination of the MSIV leakage control system (LCS). A more reliable alternative treatment method of MSIV leakage is proposed.

Basis for Proposed Change 2

As a condition for obtaining an operating license for Plant Hatch Unit 2, a safety-related LCS was required to be installed which satisfied the guidance of Regulatory Guide 1.96, "Design of Main Steam Isolation Valve Leakage Control Systems for Boiling Water Reactor Nuclear Power Plants," in order to reduce the potential radiological consequences of post accident MSIV leakage.

In 1983, Generic Issue C-8 was established to track the resolution of an NRC concern that MSIV leakage rates, as determined by conservative local leak rate tests, were too high and the LCS would not function at high MSIV leakage rates. A 1981 NRC survey of the industry indicated 33 percent of the total "as found" LLRT conditions for MSIVs exceeded leakage rates of 100 scfh. Since the process capability of the LCS at Plant Hatch is designed for MSIV leakage rates of no more than 100 scfh, the potential exists for the LCS not to function as analyzed for a design basis LOCA as described in section 15.1.39 of the Final Safety Analysis Report (FSAR).

Enclosure 1
Basis for Change Request

Georgia Power Company proposes to delete the LCS requirements from the Technical Specifications and to use the main steam drain lines and the isolated main condenser as an alternate method for MSIV leakage treatment. The BWROG, with GPC participation, has evaluated several alternate MSIV leakage treatment methods and has recommended the isolated condenser for MSIV leakage treatment. This leakage treatment method takes advantage of the large volume in the isolated main condenser to hold up the release of any fission products potentially leaking from the closed MSIVs. The main steam drain lines are employed to convey leakage to the condenser. Since simpler and less equipment is employed, the alternate method is more reliable than the LCS. As supported by the BWROG, this proposed change will resolve the concern associated with LCS performance capability at high MSIV leakage rates, and will assure a reliable and effective method is available for treating any potential MSIV leakage during a postulated LOCA. GPC will also incorporate the applicable alternate leakage treatment methods into the Operating and/or Emergency Operating Procedures as appropriate.

There are two motor operated valves in the main steam line drain header downstream of the MSIVs. One of the valves is normally closed. However, it is powered from an emergency AC power bus and can be opened during a loss of offsite power. The other valve is a normally open valve which is powered from the normal power system. Since this valve is normally open and will fail "as is" on loss of power, it is very unlikely it would ever be in the closed position if the main steam line drains were required for treatment of MSIV leakage.

In addition to resolving the concern identified in Generic Issue C-8, the proposed deletion of the LCS requirements from the Technical Specifications will result in significant operational and maintenance benefits. LCS equipment is located in a high temperature, high radiation area and is required to be environmentally qualified necessitating extensive preventive maintenance. The system has extensive logic and instrumentation which requires frequent calibration to meet the Technical Specifications requirements. The BWROG has evaluated recent LCS performance data and the results are shown in NEDC-31858P. The evaluation indicates the LCS is extremely difficult to maintain, and as a result of maintenance requirements, plant shutdowns and startup delays have occurred within the industry.

While the LCS has not caused any plant shutdowns at Plant Hatch, it has caused the plant to be placed in a limiting condition for operation (LCO) on a number of occasions. There have been 29 component failures in the LCS which required reporting under the Nuclear Plant Reliability Data System. Many of the failures required extensive component out of service times, and significant cost in the form of resources and personnel exposure was incurred.

Enclosure 1
Basis for Change Request

An event involving the failure of an LCS blower in 1989 is an example of the high cost of maintaining the system. The blower failure required entry into a 30-day LCO. A replacement assembly was not available at the plant site or within the GPC system. The motor/blower assembly was manufactured by Siemens for General Electric (GE); however, Siemens discontinued the manufacturing of the motor/blower in the mid 1970s. A search throughout the industry for a replacement unit was initiated concurrently with efforts to repair the existing unit. GE was able to locate and dedicate the necessary parts to assemble a qualified replacement unit. The cost of the replacement unit delivered on site was approximately $270,000. A similar failure in the future could create an even worse condition since GE has indicated that no more units are available. Only a few spare units exist, and utilities who own them are unwilling to release them to other BWR owners.

The BWROG has evaluated the availability of the main steam system piping and condenser alternate treatment pathway for processing MSIV leakage. It was determined the probability of a near coincident LOCA and seismic event is much smaller than other plant safety risks. The BWROG has also determined that main steam piping and condenser designs are extremely rugged, and the B31.1 design requirements typically used for nuclear plant system designs contain a good deal of margin. The Plant Hatch Unit 2 main steam lines are seismically qualified up to the turbine stop valves

In order to further justify the capability of the main steam piping and condenser alternate treatment pathway, the BWROG has reviewed limited earthquake experience data on the performance of non-seismically designed piping and condensers (in past earthquakes). That study summarized the data on the performance of main steam piping and condensers in non-nuclear applications which experienced strong motion earthquakes and compared those piping and condenser systems with the piping and condenser systems typically used in GE boiling water reactors in the United States. The results of the comparison strengthen the position that main steam piping and condensers employed in GE BWRs would maintain their pressure retention function during a design basis earthquake. It is, therefore, concluded the possibility of a failure which could cause a loss of steam or condensate in the Plant Hatch main steam piping or condensers in the event of a design basis earthquake is extremely low, and such a failure would also be contrary to a large body of historical earthquake experience data, and thus unprecedented. This conclusion is consistent with NUREG/CR 4407, "Pipe Break Frequency Estimation for Nuclear Power Plants," dated May, 1987, which reported no observed failures in main steam piping over 313 reactor years of operation. Therefore, the isolated condenser alternate MSIV leakage treatment path at Plant Hatch is considered appropriate for the minimization of potential radiological consequences of a design basis LOCA.

Enclosure 1
Basis for Change Request

As additional verification of the seismic adequacy of the proposed alternate MSIV leakage treatment system, the main steam lines downstream of the outboard MSIVs, main steam drain lines, main steam branch lines, and condenser at Plant Hatch Unit 2 have been walked down by seismic review teams composed of members with extensive seismic evaluation and analyses experience. Five of the six individuals who participated in the walkdown had, at the time of the walkdown, received the Seismic Qualification Utility Group (SQUG) training as specified in the Generic Implementation Procedure (GIP). Conditions considered during the walkdown include failure and proximity impact, differential seismic anchor motions, and equipment anchorage. The potential outliers identified during the walkdown have been resolved or will be resolved prior to implementation of the modification to remove the LCS. A report of the equipment walkdown, including a description of the outliers and their resolution, is provided as an attachment to this enclosure. In addition, the condenser installed at Plant Hatch was confirmed to fall within the bounds of design characteristics found in selected conventional power plant condensers included in the earthquake experience data base of Appendix D to NEDC-31858P. The main steam line piping including the piping between the outboard MSIVs and the turbine stop valves is seismically qualified for a design basis earthquake. Therefore, the main steam lines, the condenser, and the main steam drain lines proposed to be used in the alternate MSIV leakage treatment process at Plant Hatch are believed to be seismically rugged and capable of performing the proposed passive function. Based on the above information, it is concluded that the main steam lines, main steam drain lines, and the condenser meet the general intent of Appendix A to 10 CFR 100 to perform their safety function during and following a potential design basis earthquake.

Standard conservative assumptions were used to calculate offsite, control room, and TSC doses, including the doses due to MSIV leakage, which could potentially result from a postulated design basis LOCA at Plant Hatch. The results of those calculations are currently described in section 15.1.39 of the Hatch Unit 2 FSAR. The calculated control room, TSC, and offsite doses due to a LOCA are shown in FSAR Tables 15.1-28, 15.1-28a, and 15.1-36, respectively. The control room, TSC, and offsite doses resulting from a postulated LOCA have recently been recalculated using currently accepted iodine dose conversion factors. The control room and TSC doses were calculated using the guidance in Regulatory Guide 1.109, "Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance With 10 CFR Part 50, Appendix I." The offsite doses were calculated using the guidance contained in EPA Federal Guidance Report No. 11, "EPA-520/1-88-020 Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation,

Submersion, and Ingestion." The results of the recalculations are presented in Table 1 of this submittal. An FSAR revision to incorporate the newly calculated values is being prepared and will be issued following NRC approval of this license amendment request.

The radiological dose methodology developed by GE for the BWROG is documented in Appendix C of NEDC-31858P. This radiological analysis was used to calculate the effects of the proposed allowable MSIV leakage rate in terms of control room, TSC, and offsite doses. The revised LOCA doses are the sum of the recalculated LOCA doses as shown in Table 1 and the newly calculated doses due to the increased allowable MSIV leakage. The TSC doses due to MSIV leakage are considered to be very conservative. It is not expected there will be any radioactive releases to the TSC due to MSIV leakage during the first 30 minutes following a LOCA event since it would take considerable time for the MSIV leakage to travel through the main steam lines and main steam line drain system to the condenser, into the turbine building, and finally to the atmosphere and TSC. However, it was conservatively assumed the 30 day integrated dose of 4.38 rem due to MSIV leakage of 100 scfh could be received by personnel who start the filter system 30 minutes after the LOCA occurs and immediately enter the TSC. The dose calculations were made using control room occupancy factors specified in SRP 6.4.

Table 2 shows the calculated dose exposures from the BWROG radiological analysis for Plant Hatch. Regulatory limits and calculated doses from LOCA radiological analysis are also included in Table 2 for comparison purposes. This analysis demonstrates that a leakage rate of 100 scfh per MSIV (with the deletion of the LCS) results in an acceptable increase in the dose exposures previously calculated for the control room, TSC, exclusion area boundary (EAB), and low population zone (LPZ). The revised LOCA doses remain within the guidelines of 10 CFR 100 for offsite doses and 10 CFR 50, Appendix A, (General Design Criterion 19) for the control room and TSC doses.

Deletion of the LCS will reduce the overall dose rates and eliminate the system's impact on refueling and maintenance outage activities at Plant Hatch. The proposed alternate method (main steam lines and condenser) for MSIV leakage treatment will also eliminate the concern regarding LCS effectiveness at higher MSIV leakage rates.

Proposed Change 3

This change deletes valves 2E32-F001B, 2E32-F001F, 2E32-F001K, and 2E32-F001P from Technical Specifications Table 3.6.3-1.

Basis for Proposed Change 3

The change is necessary to support Change 2 since the valves will be physically removed and the piping permanently capped as part of the deletion of the LCS.

Proposed Change 4

This change revises the Technical Specifications Index and the pages containing Technical Specifications 3/4.6.1.2 (and associated Actions), and 3/4.6.1.4 and Bases section 3/4.6.1.4 to rearrange the sections and page numbers as appropriate. In addition, an editorial change unrelated to proposed changes 1 through 4 revises Index page XII to reflect that Bases section 3/4.6.3 is on page B 3/4 6-4b rather than page B 3/4 6-4.

Basis for Proposed Change 4

The change is administrative in nature and is made in order to maintain the proper Technical Specifications page numbers, format, and content.

TABLE 1

RECALCULATED LOSS-OF-COOLANT ACCIDENT DOSES (REM) EXCLUDING MSIV LEAKAGE

HATCH NUCLEAR PLANT

CONTROL ROOM

Thyroid	10.0
Whole Body	0.066

TECHNICAL SUPPORT CENTER

FILTER START TIME*	THYROID	WHOLE BODY
0 MINUTES	2.96	0.0328
10 MINUTES	21.06	0.0316
30 MINUTES	17.46	0.0286

* In all cases, doses are based on no personnel entry into the TSC until after filter initiation unless protective respirators are worn.

OFFSITE

Pathway	(2 hours)EAB Thyroid	(2 hours)EAB Whole Body	(30 days)LPZ Thyroid	(30 days)LPZ Whole Body
Drawdown (120 s)	64.30	0.970	64.3	0.97
Containment leakage (1.2 percent)	0.77	0.053	5.45	0.11
Bypass (0.9 percent of 1.2 percent)	25.40	0.200	100.70	0.36
TOTAL	90.47	1.223	170.45	1.44

TABLE 2 (Sheet 1)

CONTRIBUTION TO THE LOCA DOSE EXPOSURES FOR A MAXIMUM MSIV LEAK RATE OF 100 SCFH

HATCH NUCLEAR PLANT

		Whole Body (rem)	Thyroid (rem)	Beta (rem)
Exclusion Area Boundary (2 hours)	A) 10 CFR 100 Limit	25	300	**
	B) Previous Calculated Doses *	1.223	90.47	
	C) Contribution From MSIVs at 100 scfh	0.009	0.161	
	D) New Calculated Doses	1.232	90.631	
Low Population Zone (30 Days)	A) 10 CFR 100 Limit	25	300	**
	B) Previous Calculated Doses *	1.44	170.45	
	C) Contribution From MSIVs at 100 scfh	0.46	89.03	
	D) New Calculated Doses	1.90	259.48	
Control Room (30 Days)	A) GDC-19	5	30	30/75 ***
	B) Previous Calculated Doses *	0.066	10.0	1.0
	C) Contribution From MSIVs at 100 scfh	0.24	10.29	3.35
	D) New Calculated Doses	0.306	20.29	4.35

TABLE 2 (Sheet 2)

CONTRIBUTION TO THE LOCA DOSE EXPOSURES FOR A MAXIMUM MSIV LEAK RATE OF 100 SCFH

HATCH NUCLEAR PLANT

		Whole Body (rem)	Thyroid (rem)	Beta (rem)
Technical Support Center (Filter started at time of accident)	A) GDC-19	5	30	30/75 ***
	B) Previous Calculated Doses *	0.0328	2.96	0.996
	C) Contribution From MSIVs at 100 scfh	0.0	0.0	0.0
	D) New Calculated Doses	0.0328	2.96	0.996
Technical Support Center (Filter started 10 Min. after accident)	A) Previous Calculated Doses *	0.0316	21.06****	0.944
	B) Contribution From MSIVs at 100 scfh	0.0	0.0	0.0
	C) New Calculated Doses	0.0316	21.06	0.944
Technical Support Center (Filter Started 30 Min. after accident)	A) Previous Calculated Doses *	0.0286	17.46	0.854
	B) Contribution From MSIVs at 100 scfh	0.13	6.16	3.46
	C) New Calculated Doses	0.1586	23.62	4.314

* Recalculated doses from table 1.
** No limit specified.
*** 75 if prior commitment has been made to use protective clothing.
**** The peak calculated dose at the TSC of 22.76 rem occurs at 2 minutes.

ATTACHMENT TO ENCLOSURE 1

REPORT OF WALKDOWN TO VERIFY SEISMIC ADEQUACY OF
MAIN STEAM DRAIN LINE AND CONDENSER FOR USE AS
THE ALTERNATE MSIV LEAKAGE TREATMENT SYSTEM