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Dan A. Nauman
 Vice President
 Nuclear Operations

May 25, 1988

Dr. J. Nelson Grace
 Regional Administrator
 U. S. Nuclear Regulatory Commission
 Region II, Suite 2900
 101 Marietta Street, NW
 Atlanta, Georgia 30323

Subject: Virgil C. Summer Nuclear Station
 Docket No. 50/395
 Operating License No. NPF-12
 Response to Notice of Violation
 NRC Inspection Report 88-01

Dear Dr. Grace:

Enclosed is the South Carolina Electric & Gas Company (SCE&G) response to the violations addressed in Enclosure 1 of NRC Inspection Report 50-395/88-01. SCE&G is in agreement with the alleged violations, and the enclosed response addresses the reasons for the violation and corrective actions taken to prevent recurrence. In addition, an updated Equipment Qualification Enhancement Program schedule is enclosed as discussed during a conversation with Mr. A. Ruff on May 18, 1988.

If you should have any questions, please advise.

Very truly yours,


 D. A. Nauman

HID:DAN/bgh
 Enclosures

c: J. G. Connelly, Jr./O. W. Dixon, Jr./T. C. Nichols, Jr.
 E. C. Roberts
 W. A. Williams, Jr.
 General Managers
 L. A. Blue
 C. A. Price
 R. B. Clary
 W. R. Higgins
 J. R. Proper
 R. M. Campbell, Jr.
 K. E. Nodland
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 G. O. Percival
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 NSRC
 RTS (IE 88001, 04, 05)
 NPCF
 File (815.01)

ENCLOSURE I

RESPONSE TO NOTICE OF VIOLATION
VIOLATION NUMBER 50-395/88-01-01

I. ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

South Carolina Electric & Gas Company (SCE&G) is in agreement with the alleged violation.

II. REASON FOR THE VIOLATION

A grace period was incorrectly applied to the lubrication schedule of the Emergency Feedwater (EFW) Pump, MPP0021A. This improper input into the "CHAMPS" program allowed a 25% grace period to be applied to the lubrication schedule for the EFW pump motor which requires lubrication every 12 months. This three (3) month grace period extended the maximum period to 15 months. Justification was provided to show that the motor remained qualified until the lubrication maintenance was performed.

III. CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The identified EFW Pump motor was lubricated on January 21, 1988.

IV. CORRECTIVE ACTION TAKEN TO AVOID FURTHER VIOLATION

SCE&G is in the process of reviewing the maintenance history of all 10 CFR 50.49 qualified equipment. In addition, SCE&G has reviewed the required maintenance for EQ equipment. Upon completion of these reviews, a comparison will be made between the maintenance that is required and the maintenance that has been performed. Any discrepancies will be resolved.

V. DATE OF FULL COMPLIANCE

The identification of all EQ equipment requiring maintenance was completed on May 15, 1988. The maintenance history review of 50.49 equipment and the incorporation of the requirements into an EQ maintenance manual is scheduled to be completed by August 15, 1988.

ENCLOSURE II

RESPONSE TO NOTICE OF VIOLATION
VIOLATION NUMBER 50-395/88-01-04

I. ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

South Carolina Electric & Gas Company (SCE&G) is in agreement with the alleged violation.

II. REASON FOR THE VIOLATION

During a review of the lubricant grease Equipment Qualification (EQ) file, the NRC inspection team noted a lack of documentation with respect to similarity between the Gulf lubricants and the other lubricants that replaced the Gulf lubricants. In addition, other lubricants were also omitted from the EQ file. The lack of programmatic controls allowed the EQ file to be affected by equal-to-or-better-than evaluations without being properly revised. Supporting documentation existed, but had not been properly incorporated into the EQ file.

III. CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The lubricant EQ file has been reviewed and will be revised to include the proper documentation.

IV. CORRECTIVE ACTION TAKEN TO AVOID FURTHER VIOLATION

Engineering procedures now provide for proper programmatic EQ file input and review. In addition, the Virgil C. Summer EQ file is being reconfigured/reformatted to make it more accessible.

V. DATE OF FULL COMPLIANCE

The lubricant EQ file will be revised by September 2, 1988. The programmatic controls for proper EQ file input and review are in place. The EQ procedure was created on March 1, 1988. The proper instructions for EQ input for equal-to-better-than evaluations was proceduralized on February 21, 1988

ENCLOSURE III

RESPONSE TO NOTICE OF VIOLATION
VIOLATION NUMBER 50-395/88-01-05

I. ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

South Carolina Electric & Gas Company (SCE&G) is in agreement with the alleged violation.

II. REASON FOR THE VIOLATION

The cause of the violation, relative to the D. G. O'Brien penetrations, was due to an incorrect assumption made during the insulation resistance (IR) calculations. It was assumed that the straight line extrapolation of test data would provide a valid result. This was later found to be incorrect. The use of incorrect IR values for the Conax penetrations was due to the incorrect report being referenced in the EQ file. This report did not contain the post LOCA data.

III. CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

SCE&G has elected to pursue additional test reports which provide IR readings taken during LOCA test conditions for both the Conax and D.G. O'Brien penetrations. These reports are being used for the basis in determining the IR values used in the instrument loop accuracy calculations. These reports will be entered and referenced in the EQ program. In cases where test reports were obtained from other utilities, a commonality analysis was performed to augment the EQ file to reflect the similarity of penetration connections and terminal blocks. The bounding document which provides analysis, calculations, and justification for the affect of IR on instrument loop accuracies will be the Instrument Loop Insulation Resistance (IR) calculations document (VCS-0423-DC15).

IV. CORRECTIVE ACTION TAKEN TO AVOID FURTHER VIOLATION

IR values used for calculations will be documented and controlled through the Instrument Loop Insulation Resistance (IR) calculations document (VCS-0423-DC15). The additional reports used in determining IR values during LOCA conditions will also be added to the EQ file.

V. DATE OF FULL COMPLIANCE

SCE&G will be in compliance with respect to the corrective actions as stated no later than September 15, 1988.

Enclosure IV to Dr. J. Nelson Grace Letter
May 25, 1988

ENVIRONMENTAL QUALIFICATION
ENHANCEMENT PROGRAM
ACTIVITIES AND SCHEDULE

A. TRAINING

ACTIVITY	RESPONSIBLE PERSON	3/88 4/88 5/88 6/88 7/88 8/88 9/88 10/88 11/88 12/88 1 89 3/89	STATUS
1. Upgrade EQ Training Program for Maintenance and QC Personnel +	Jim Loftin	(40) (Completed) 5/1	Complete
2. Establish EQ Training Program for Engineering +	Jim Loftin Steve Carroll	(40) → 6/30	Bids recieve week of 5/23/88. Under evaluation
3. Complete Initial Training For Engineering +	Jim Loftin Steve Carroll	(480)* → 8/1	See Item A.2 above
4. Complete Initial Training for Maintenance and QC +	Jim Loftin	(640)** → 9/1	Training in progress
5. Develop Program for Continuing EQ Training on a Regular Periodic Basis	Later		

Total Manhours: 1200

- * Includes course preparation time by training and manhours of course participants
- ** Includes course preparation time for training and manhours of course participants
- + Activity associated with a NRC Commitment

legend:

(ss)
estimated
SCE&G Manhours

(zz-c)
estimated contractor
manhours

→ x/yy = Projected
completion
date

-----> Completed Task

B. MAINTENANCE

Activity	Responsible Person	3/88 4/88 5/88 6/88 7/88 8/88 9/88 10/88 11/88 12/88 1/89 2/89 3/89												Status
1. Complete inspections of harsh environment equip. +	J. Yon	(11,715) → 12/15												Complete during refuel #4
2. Continue inspection of mild environment splices	J. Yon	(4,455) → 9/16												Progress to be evaluated prior to RF #4
3. Continue inspection of mild environ. equip. for other environmental qual. concerns	J. Yon	(***) → 9/16												Progress to be evaluated prior to RF #4
4. Issue MSIs for Instrumentation +	J. Yon	(60) completed 2/11												Initial issue complete. Revision in progress
5. Review Maint. history of all 50.49 qualified equip. & forward results to Engineering +	J. Yon	(100) → 4/6												Complete for Electrical group. I&C Review in progress
6. Issue MSIs for future disposition of NCN 2852	J. Yon	(40) → 6/1												Continuing as Required
7. Implement future disposition of NCN 2852 as issued **	J. Yon	(***) → 12/15												Complete during RF #4
8. Complete evaluation of potential mixed grease and report results to Engineering +	J. Yon	(40) → 11/1												Complete during RF #4 for 5 remaining vlvs that are inaccessible during ops
9. Revise EMPs, iCPs, & MMPs to incorporate EQ Concerns	J. Yon	(220) → 8/1												In progress

Total Manhours: 16,670

** See Engineer Activity 1-3

*** Included in Item B-2

+ Activity associated with a NRC commitment

B. MAINTENANCE (CONT'D.)

<u>ACTIVITY</u>	<u>Responsible Person</u>	3/88 4/88 5/88 6/88 7/88 8/88 9/88 10/88 11/88 12/88 1/89 2/89 3/89	<u>Status</u>
10. Develop temp. control methods to ensure maint. is done on qualified equip. or the replacement of qualified equip. is reflected in EQ files	J. Yon		MSI-34, Rev. 0 issued for review & comment 3/30 & I&C comments being resolved
11. Gen/Rev. Maint. Proc. to "Close Documentation Loop" to ensure EQ files are kept up to date	J. Yon	Later	

** See Engineer Activity 1-3

*** Included in Item B-2

Total Manhours: 16,670

C. ENGINEERING

I. Field Walkdowns

Activity	Responsible Person	<div style="text-align: center;"> 3/88 4/88 5/88 6/88 7/88 8/88 9/88 10/88 11/88 12/88 1/89 2/89 3/89 </div>	Status
1. Clarify insp. criteria for instrumentation +	J. Mundy→ (32) Completed 2/11	Complete
2. Determine need to continue mild EQ insp. (other than splices)	B. Waselus	→ (40) 8/15	Initial determination to continue inspections; will re-evaluate by 8/15
3. Provide insp. criteria for remaining items (7 2KV mtrs, Rotork vlvs, etc.) Review MSIs.	S. Carroll	→ (41) (160-C) 7/1	7.2 kv motor NCN disp. issued: Rotork MOV criteria to follow
4. Add motor drain information for RBCUs to NCN	J. Mundy→ (4) (16-C) Completed 4/6	Complete
5. Resolve RWST Pit Splice Box Flooding	J. Mundy	→ (120) (240-C) 6/15	G/C MRF issued for I/R on 5/2/88
6. Provide Engr. Support for eval. Field walkdowns during RF #4 +	B. Waselus	→ (680) (1,020 20 m/h per day @ 85 days) 12/31	
7. Generate simple/concise status list reflecting completed work & listing implementing documents (MSI, TS, etc.) of work left to be done	F. Thompson	→ (40) 6/15	In progress
8. Review MSIs & provide input (AW/OA comment resolution)	J. Mundy S. Carroll→ (Completed) (60) 5/1	Complete

↔ Activity associated with NRC commitment

II. EQUIPMENT QUALIFICATION FILE WORK

ACTIVITY	Responsible Person	Timeline (Months)												Status
		3/88	4/88	5/88	6/88	7/88	8/88	9/88	10/88	11/88	12/88	1/89	2/89	
1. Complete file revisions required as a result of followup action of the EQ Audit +	B. Waselus													To be completed during Impell EQ File Upgrade
2. Add field walkdown information to EQ Files	B. Waselus													To be completed during Impell EQ File Upgrade for available data - remainder to be added later
3. Incorporate summary evals. into files and consider reconfiguring files. As a min. include a summary of qual. parameters, req. installation parameters, & delete/relocate history data. +	B. Waselus													To be completed during Impell EQ File Upgrade
4. Resolve Impell "Open Items" in EQ Files	B. Waselus													To be completed during Impell EQ File Upgrade
5. Identify all required maint. for environmental qualified equip. not just that above the normal maint. specified elsewhere +	B. Waselus													Preliminary data base complete; see Item C.III.3
6. Add seismic test reports to EQ files	B. Waselus													To be completed during Impell EQ File Upgrade
7. Incorporate Item B-12 (maint. feedback of field work) into Eng. proc. & EQ files	Later													
8. Develop generic issues file	Later													
9. Rev. equip. class. based on actual environmental data & zone maps developed as part of Eng. Item VII-2	Later													
10. Establish seismic files for NSR equip. without existing EQ files	Later													

III. EQUIPMENT QUALIFICATION INDEX AND MAINTENANCE MANUAL

ACTIVITY	RESPONSIBLE PERSON	3/88 4/88 5/88 6/88 7/88 8/88 9/88 10/88 11/88 12/88 1/89 2/89 3/89												STATUS
1. Determine desirability to continue to maintain mild environment equip. in the equip. qual. index & maint. manual. Consider archiving mild environment equip. qualification files	B. Waselus	(24) → 6/15												Prelim. position is to maintain the Mild files; evaluate cost/benefits by 6/15
2. Resolve disagreements between the index & Champs, Master List, FSAR, etc.	S. Crumbo	(60) (100-C) → 6/15												In progress, also associated with Engr. Task V-2. Two (2) discrepancies still need resolution
3. Incorporate identified maint. requirements from Task II-5 into manual & issue to Maintenance; review results of item B5 and disposition as required. +	S. Crumbo	(40) (80-C) → 8/15												Impell Prelim. Maint. Manual received 5/16/88; Review in progress
4. Resolve discrepancies identified by review of PM tasks in CHAMPS compared to recommend vendor tasks +	S. Crumbo	(100) (200-C) → 9/2												
5. Incorporate Maintenance Require. into CHAMPS or Master List data base	Later													

+ Activity associated with a NRC commitment

IV. OPERABILITY REVIEWS, JCOs AND WALKDOWN EVALUATIONS

ACTIVITY	responsible Person	3/88 4/88 5/88 6/88 7/88 8/88 9/88 10/88 11/88 12/88 1/89 2/89 3/89	Status
1. Revise JCO for splice list + items to include new circuits from G/C	J. Mundy→ (10) (32-C) Completed 3/15	Complete
2. Complete Review of field + Walkdowns of harsh equip. for Reportability	S. Carroll	_____→ (284) (2,840-C) (10 hr per pkg) 1/31	Impell to provide Contractor Services for this review
3. Complete evaluation of 81 + additional potentially spliced terminations. Include in Disp. to NCN 2852.	J. Mundy→ Completed 3/15 (40) (160-C)	complete
4. Complete evaluation of group 10 valves & include in disp. to NCN 2852 (Six valves)	S. Crumbo→ Completed 4/22 (40)	Complete
5. Evaluate Limitorque Bolt Discrepancies	S. Crumbo	_____→ (60) (200-C) 6/15	On schedule
6. Complete review of field walk downs of mild equip. for reportability	S. Carroll	(160) (1,610-C) (10 hr per pkg) Later	

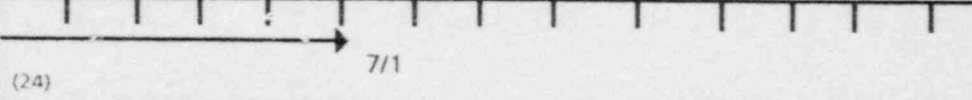
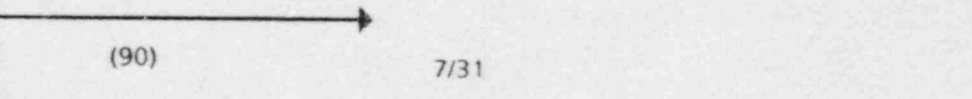
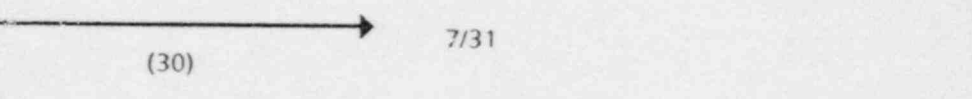
+ Activity associated with a NRC commitment

V. EQUIPMENT QUALIFICATION MASTER LIST

ACTIVITY	Responsible Person	3/88 4/88 5/88 6/88 7/88 8/88 9/88 10/88 11/88 12/88 1/89 2/89 3/89	Status
1. Update FSAR, Resolve R.G. + 1.97 Category 2 items	F. Thompson		G/C scope document to be issued by 6/3.
2. Complete & verify data base for new Master List (including sub components & sealing requirements)	S. Crumbo		G/C developing data base.
3. Resolve disagreements between data base and CHAMPS, FSAR, & G/C List	S. Crumbo		Associated with Eng. Item V.2
4. Develop procedure to control new Master List & issue as a controlled document	S. Crumbo		Not yet started
5. Rewrite FSAR Section 3.11 to be consistant with current regulations	Later		
6. Tie essential equipment list to data base	Later		
7. Tie Master List Data Base to CHAMPS	Later		

+ Activity associated with a NRC commitment

VI. PROCEDURE REVISIONS

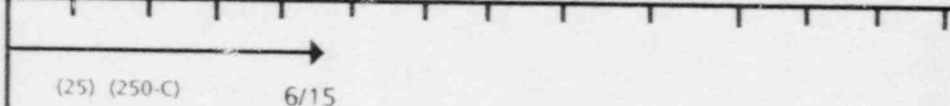
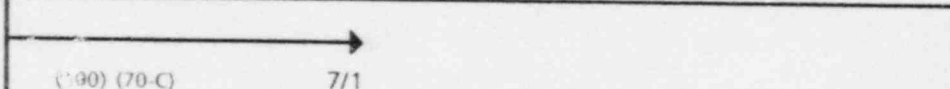
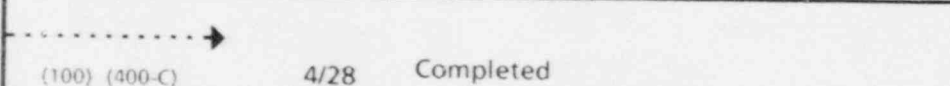
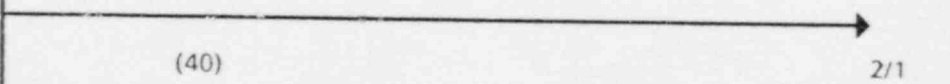
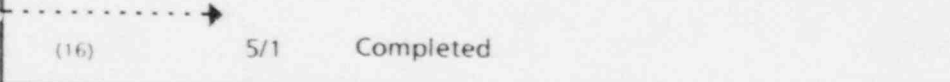

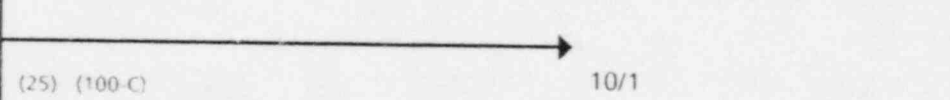

ACTIVITY	Responsible Person	3/88 4/88 5/88 6/88 7/88 8/88 9/88 10/88 11/88 12/88 1/89 2/89 3/89	Status
1. Revise TS-301 to include EQ concerns	M. Curtiss		Issued for comment
2. Revise TS-137, 114, & 144 to ensure EQ concerns are addressed & proper interfaces are covered	T. Curtin S. Carroll		TS-137 issue for comment-6/15 TS-144 issued for comment TS-114 issued for comment
3. Revise MD-#31 to better address EQ interfaces and functional responsibilities	B. Waselus		Not yet started

+ Activity associated with a NRC comment

VII. ENVIRONMENTAL PARAMETERS

ACTIVITY	Responsible Person		Status
1. Complete MRF on correcting over temperature conditions in IB 436	G. Baker		MRF written; G/C preparing scope to perform design
2. Develop Environment zone maps	B. Waselus		G/C Performing Task
3. Issue TRP on NNS HVAC Systems servicing areas containing environmental qualified equip.	S. Crumbo		G/C Scope estimate expected by 5/31/88
4. Review other parameters (radiation, humidity, etc) to determine need for field verification of design basis & log term monitoring program.	S. Crumbo		Not yet started
5. Obtain results of one year temp. monitoring program per MSI- 87T0293. Complete/evaluate data & continue or close monitor program.	S. Crumbo G. Baker		Monitoring program continuing. G/C reviewing MSI and will correlate/evaluate results
6. Retest E&W PA temp	S. Crumbo		WPA 436' el. test successful. - HVAC damper problems creating setback. MWR written to rework.
7. Review effects of temp. on 22 items identified in CGGS-37197	B. Waselus		Impell performing review

VIII OTHERS

ACTIVITY	Responsible Person	<p>3/88 4/88 5/88 6/88 7/88 8/88 9/88 10/88 11/88 12/88 1/89 2/89 3/89</p>	Status
1. Complete list of hermetic connectors & decide if additional (5) need to be added +	J. Mundy	 <p>(25) (250-C) 6/15</p>	List is complete - 5 hermetic connectors to be added - will request G/C for scope doc.
2. Process all analysis work done in preparation for & during the EQ Audit as formal calculations (G/C or SCE&G as appropriate)	S. Crumbo	 <p>(190) (70-C) 7/1</p>	Non Formal EQ File Calculations/Analysis will be processed formally under Impell's EQ File Upgrade Task. NCN 2852 Calc/analysis requiring formal processing have been identified (5). Of these, 4 calc. have been processed. 2 await assumption verification.
3. Resolve seismic concern with condulets mounted on ASCO vlvs	B. Waselus T. Lovett	 <p>(100) (400-C) 4/28 Completed</p>	Complete. NCN 2852 Disp. # 58 issued.
4. Review results of Maintenance Item #4 Mixed grease issue +	T. Effinger	 <p>(40) 2/1</p>	See Maint. Item B.8
5. Close NCN 2661 +	F. Thompson	 <p>(16) 5/1 Completed</p>	Complete
6. Complete & verify loop accuracy calculations +	T. Wessner	 <p>(500) (2134-C) 6/1</p>	G/C calcs. complete - ES reviewing for approval
7. Review Impell Supplementary Evaluations & EQ Update for impact on G/C Design Records	S. Carroll	 <p>(25) (100-C) 10/1</p>	To be completed as part of EQ File Upgrade project
8. Resolve Impell identified IMS vendor manual concerns	F. Thompson	 <p>(60) 8/1</p>	Not yet started

VIII. OTHERS (CONT'D)

ACTIVITY	Responsible Person	3/88 4/88 5/88 6/88 7/88 8/88 9/88 10/88 11/88 12/88 1/89 2/89 3/89	Status
9. Define long term resources & program needed to maintain effective EQ Proc.	Later		
10. Generate EQ DBD	Later		
11. Consider establishing separate EQ screen on Champs	Later		
12. Develop EQ DG Coordinate with Training Dept. Include History from TS-137	Later		

+ Activity associated with a NRC Commitment