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VICE PRESIDENT AND GROUP EXECUTIVE
SPECIAL SERVICES AND PURCHASING

September 27, 1979

U. S. Nuclear Regulatory Commission
Attn: Mr. James P. O'Reilly
Director
Region II
101 Marietta Street, NW
Atlanta, Georgia 30303

Subject: V. C. Summer Nuclear Station
Unit #1
Reported Items in Accordance
with 10CFR50.55(e)

Gentlemen:

The purpose of this letter is to provide a written report of six, either potential or reportable items in accordance with 10CFR50.55(e), that have been communicated to the NRC since August 31, 1979. It will also provide an update of previously reported items.

The report of new items is as follows:

1. On August 31, 1979, SCE&G identified to Region II concerns relative to Incorrect Cable Tray Splice Plates. In late September 1978, QC personnel discovered that vertical "riser" splice plates were being utilized by construction to splice horizontal runs of cable tray. The cause of the problem stemmed from arbitrary substitution of the vertical splice plates for the horizontal ones on the part of construction personnel, due to the lack of horizontal plates on Site when needed. To compound the problem, the physical configuration of the two types of splice plates are similar, with the difference being the horizontal plates having rolled edges for additional strength.

   When discovered, a Site Nonconformance Notice (NCN) was generated to document the problem. During the evaluation process, Engineering noted that there was not much difference in the two types of splice plates and suspected the use of vertical plates on horizontal runs may have provided sufficient strength. The tray manufacturer was contracted

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to perform tests to establish the strength of the vertical splice plates in a horizontal run. The test results were analyzed and the results concluded that using vertical plates in horizontal runs did not provide adequate strength. On this basis, Engineering dispositioned the NCN on April 24, 1979, to replace the existing incorrect plates with correct ones, or add an additional vertical plate to incorrect applications to provide strength.

At the time of final disposition, the NCN was determined not to constitute a significant deficiency as it appeared the QC program adequately detected the deficiency even though the safety of operations of the Plant could have been affected, had the condition gone uncorrected. However, during the execution of the disposition, it became apparent that a high quantity of splice plates (approximately 300) were involved in the changeout program. This fact became known in August, 1979, and predicated SCE&G actions of revaluating the discrepancy as a reportable item. The revaluation concluded that the detection of the condition by the QC program may not have been timely and may have constituted a breakdown. As such, the item was reported on August 31, 1979.

The status of this item, at present, shows that the deficiencies are totally documented by the site nonconformance control system and that actions to correct the problem have been determined and nearing completion. Based on this status, SCE&G considers this report a final report for this item.

2. On September 7, 1979, SCE&G identified to Region II a concern relative to 480 Volt Switchgear Lightning Arrestors. During a routine meggering of a 480 volt switchgear unit before re-energizing on 8/11/79, it was discovered that the reading was not in the 100 megohm range as recommended by the switchgear manufacturer. Further investigation revealed the problem was generic of all similar safety related switchgear and the cause of the problem was traced to low megger readings of the lightning arrestors supplied to the manufacturer by a sub-vendor. A Site Start-up Field Report (SFR) was initiated to document the nonconformance and obtain a correction. Engineering disposition of the SFR on 8/14/79, determined that the arrestors would have to be returned to the manufacturer for evaluation as to their acceptability and impact on the safety of operation of the Plant. At the point of SFR disposition, not enough information was available to conclude a reportable item defined in 10CFR50.55(e) existed. The lightning arrestors were returned to the manufacturer on 8/15/79 and 9/5/79. The Region II Resident Inspector was knowledgeable of activities taking place relative to the arrestors and SCE&G elected to formally notify Region II on 9/7/79 that this item was potentially reportable.

The lightning arrestors were received by the manufacturer, confirmed to megger low, and forwarded to the sub-vendor for further test and evaluation. SCE&G Engineering is tentatively planning to monitor sub-vendor activities during testing and obtain results in early October, 1979.

The test results will enable conclusions to be made relative to problem cause, relevancy as a 10CFR50.55(e) reportable item, and corrective actions to resolve whatever problems exist. Based on the current status, this report is considered interim. A final report will be provided reflecting the conclusions drawn after testing the arrestors.

3. On September 12, 1979, SCE&G identified to Region II concerns relative to ASCO NP-1 Solenoid Valves. During installation, a valve was observed to have a tag noting that the valve should not be used in applications where it would be exposed to oil base substances. Installation specifications specify the use of Fel-Pro N-1000 thread lubricant which has an oil base. Construction requested on 9/6/79, an Engineering evaluation of solenoid valve applications predicated on the tag information and specification requirements. Engineering personnel contacted ASCO and learned that the subject valves utilize ethylene propylene elastomers as standard equipment. This ethylene propylene expands or swells when contacted by oil, possibly causing the valve to fail. A determination was made to send some Fel-Pro to ASCO for a determination of its affect on the valves, and to notify the Region II Resident Inspector of a potential significant deficiency. SCE&G Engineering is pursuing the results of the tests, and in the interim, has directed Construction on 9/17/79, to discontinue the use of Fel-Pro in instrument air systems with solenoids. Based on present status of determining whether the safety of plant operations would have been affected had this condition gone uncorrected, this report is considered interim. A final report will be provided reflecting further evaluation.

4. On September 13, 1979, SCE&G identified to Region II concerns relative to Feedwater Check Valve and Pipe Break, that could have affected the safe operations of the Plant, had it gone uncorrected.

The evaluation of this item was initiated when SCE&G's Architect Engineer received communications from the NSSS supplier on December 13, 1978. This communication, based on a Rockwell Valve report, identified possible problems with a pipe rupture in the feedwater line followed by a check valve slam; a situation which would produce a large pressure peak that could damage the integrity of the piping system. The Architect Engineer and valve supplier for SCE&G feedwater check valves (Anchor Darling), were chartered to review existing analysis and develop new data for the SCE&G Plant based on the NSSS supplier information. A review of the analysis on September 12, 1979, reflected problems with the SCE&G Plant in this area. The Region II Resident Inspector was

notified at this point that a reportable item in accordance with 10CFR50.55(e) existed.

Present status is that Anchor Darling is re-analyzing their valve performance using new parameters and may recommend modifications to their valve to help decrease the pressure peak. The Architect Engineer will be using the new data to do a final redesign of the piping support system. Since a course of action is established, and the design control system is to be used to perform the design and translate it to the field by programmatic means (Engineering Change Notice), this report is considered a final report on this subject.

5. On September 13, 1979, SCE&G identified to Region II concerns relative to Welded Hilti Bolts. At present, this item is considered potentially reportable as inspection programs are under way to identify the extent of the problem. The inspection programs evolved because of certain specific nonconformances (documented by NCN's), that arose in recent months as follows:

   a) Based on an allegation, a Hilti bolt was discovered in a piping support to have been wedged by a piece of a file. Construction QC had not detected the condition, but Engineering evaluation determined that for this specific, strength of the support was not affected and there was no affect on the safety of operations to the Plant. The condition was documented for correction on DCC NCN No. 722 dated 4/25/79, and determined not reportable. A NRC Construction Inspector on Site at the time of this occurrence (Mr. W. Swann) was apprised of this situation (reference NRC Report 79-14).

   b) A Hilti bolt was found in a piping support, welded to the base plate and documented on DCC NCN No. 717, dated 4/23/79. This condition was detected during the normal course of inspection by the constructors QC organization and was not considered a 10CFR50.55(e) reportable item since no quality program breakdown occurred. Mr. Swan of Region II was also apprised of this situation.

   c) SCE&G/QA conferred with SCE&G/QC based on the DCC/QC finds in a) and b) above, and SCE&G/QC randomly re-inspected some electrical support Hilti bolt installations. A bolt was found welded to a plate that was not detected by prior QC inspections and a SCE&G NCN No. 831, dated 6/21/79, was initiated to document the condition for correction. At this time, Engineering evaluation determined this item was not reportable for the same reasons given in a) above.

The results of the three nonconformances indicated the need for further evaluation for extent. To accomplish the re-inspections, the dispositions of DCC NCN 722 and SCE&G NCN 831E, directed the Construction QC and SCE&G/QC organizations to establish re-inspection programs for piping supports and electrical supports respectively.

The cause of the problem has been established as arbitrary violation of procedures to provide apparently acceptable installations in lieu of correcting problems encountered during installation. The re-inspection programs at the time this item was reported as a potential 10CFR50.55(e) to the Region II Resident Inspector, revealed no additional welded bolts in piping supports, and six welded Hilti bolts in electrical supports. The re-inspection programs are still in progress and the results will receive an Engineering evaluation to determine the affect on the safety of operations of the Plant, had the conditions gone uncorrected. Based on present status, this is an interim report. A final report will be provided upon completion of re-inspection and Engineering evaluations.

6. On September 18, 1979, SCE&G identified to Region II concerns with 480 Volt Motor Termination Taping. During inspection of a 480 volt motor in the process of termination, a QC Inspector determined that an unqualified insulating tape was being used. The tape specified was Bishop Biseal No. 3, which was purchased as safety related in 1½" wide rolls, while the tape being used was 3/4" wide. The condition was documented on a SCE&G NCN No. 770E, dated 4/9/79. The cause of the problem stemmed from the fact that the 3/4" wide Bishop Biseal No. 3 tape was procured for Site use on non-safety related applications and was inadvertantly being used for this safety related application.

Efforts were made in the interim period prior to reporting to Region II to attempt to obtain qualification data on the 3/4" wide tape. This data could not be obtained. As a result, records were checked to determine if the 3/4" wide tape was ever used previous to the time it was discovered. Records could not establish usage and visual inspection was of no use since the tape on previously terminated motors had molded together. The date the 3/4" wide tape was delivered to the Site was determined, and records did establish which terminations were made between that date and the date of discovery. It was determined that four motors had the potential of having unqualified tape used for terminations. The NCN was dispositioned on August 29, 1979, to reterminate the suspect motors and in the interim, the 3/4" wide tape was removed from the field.

Engineering evaluation as to whether the condition could have affected the safety of operations of the Plant was considered indeterminate since there was no means to conclude the unqualified tape would have failed. Based on this conclusion, the Region II Resident Inspector was notified.

Due to the present status of this problem, and the fact that the four questionable motor terminations are being reworked within the QA program, this is a final report of this item.

Our update of previously reported items is as follows:

1. Pipe Hanger and Support Welding

No change in the status reported August 31, 1979.

2. 7300 Series Process I & C Cards

SCE&G has physically verified that it does not possess any of the faulty process cards identified in the 10CFR21 report by Westinghouse. As such, a reportable item did not exist and this is the final report on this item.

3. Condensate Storage Tank

No change in the status reported August 17, 1979.

4. Containment Airlock

No change in status reported August 17, 1979, except that the modifications have been tentatively rescheduled for November, 1979 in lieu of September, 1979.

5. Steam Generator Level Indication

No change in the status reported July 10, 1979.

6. Pipe Support Loadings, Velan Valves

No change in the status reported August 17, 1979.

7. RT Film Deficiencies

No change in the status reported June 18, 1979.

Documentation associated with the above items is available for NRC review during inspections at the Site. If any additional information is deemed necessary, please feel free to contact us.

Very truly yours,

DRM/MCJ/jls

cc: C. J. Fritz
G. C. Meetze
Office of Director
Inspection & Enforcement
Washington, D. C.